Pillar 3, Liquidity Coverage Ratio ("LCR") and Net Stable Funding Ratio ("NSFR") Disclosures

Fourth Quarter 2019

DBS Group Holdings Ltd
Incorporated in the Republic of Singapore
Company Registration Number: 199901152M

DBS GROUP HOLDINGS LTD AND ITS SUBSIDIARIES

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PART A : PILLAR 3 DISCLOSURES

1 INTRODUCTION

This part contains Pillar 3 disclosures of DBS Group Holdings Ltd and its Subsidiaries (Group) and is made pursuant to the Monetary Authority of Singapore Notice to Banks No. 637 “Notice on Risk Based Capital Adequacy Requirements for Banks incorporated in Singapore" (MAS Notice 637).

The Group views the Basel framework as part of continuing efforts to strengthen its risk management culture and ensure that the Group pursues business growth across segments and markets with the appropriate risk management discipline, practices and processes in place.

For the purpose of calculating its risk-weighted assets, the Group applies the Foundation Internal Ratings-Based Approach to certain wholesale credit exposures, the Advanced Internal Ratings-Based Approach to certain retail credit exposures and the Standardised Approach to all other credit exposures. The Group applies the respective Standardised Approaches for operational and market risks.

The numbers in this document are presented in Singapore dollars and rounded to the nearest million, unless otherwise stated.

2 SCOPE OF CONSOLIDATION

The Group's capital requirements are based on the principles of consolidation adopted in the preparation of its financial statements. The Group’s regulatory scope of consolidation is identical to its accounting scope of consolidation. Please refer to the financial statements in the latest available annual report for the principles of consolidation.

3 DISCLOSURE POLICY

Pillar 3 disclosures are prepared in accordance with:

- The principles outlined in the Group Disclosure Policy, which specify that all disclosures must be timely, complete and accurate; as well as
- The governance required and the internal control processes prescribed in the Pillar 3 Disclosure Standard, which have been established to ensure that the Pillar 3 disclosures will meet key stakeholders' expectations.

4 OVERVIEW OF KEY PRUDENTIAL REGULATORY METRICS

The following table provides an overview of key prudential regulatory metrics for the Group.

		a	b	c	d	e
$'m		**31 Dec 19**	**30 Sep 19**	**30 Jun 19**	**31 Mar 19**	**31 Dec 18**
Available capital (amounts)						
1	CET1 capital	42,870	42,412	41,172	41,865	40,241
2	Tier 1 capital	45,460	45,011	43,773	45,252	43,635
3	Total capital	50,693	50,279	49,037	50,482	48,868
Risk-weighted assets (amounts)						
4	Total RWA	303,771	306,248	302,445	296,961	289,636
Risk-based capital ratios as a percentage of RWA						
5	CET1 ratio (%)	14.1	13.8	13.6	14.1	13.9
6	Tier 1 ratio (%)	15.0	14.7	14.5	15.2	15.1
7	Total capital ratio (%)	16.7	16.4	16.2	17.0	16.9
Additional CET1 buffer requirements as a percentage of RWA						
8	Capital conservation buffer requirement (2.5% from 2019) (%)	2.5	2.5	2.5	2.5	1.875
9	Countercyclical buffer requirement (%)	0.3	0.4	0.4	0.4	0.3
10	Bank G-SIB and/or D-SIB additional requirements (%)	-	-	-	-	-
11	Total of bank CET1 specific buffer requirements (%) (row 8 + row 9 + row 10)	2.8	2.9	2.9	2.9	2.2
12	CET1 available after meeting the Reporting Bank's minimum capital requirements (%)	6.7	6.4	6.2	7.0	6.9
Leverage Ratio						
13	Total Leverage Ratio exposure measure	646,317	646,452	631,550	621,115	610,957
14	Leverage Ratio (%) (row 2 / row 13)	7.0	7.0	6.9	7.3	7.1
Liquidity Coverage Ratio (1)						
15	Total High Quality Liquid Assets	91,922	91,967	92,057	89,712	85,944
16	Total net cash outflow	66,170	70,347	67,163	65,973	62,212
17	Liquidity Coverage Ratio (%)	139	131	137	137	138
Net Stable Funding Ratio (2)						
18	Total available stable funding	347,093	341,972	335,717	334,116	330,573
19	Total required stable funding	314,822	311,954	308,767	301,839	304,180
20	Net Stable Funding Ratio (%)	110	110	109	111	109

(1) LCR is calculated based on average for the quarter. Please also refer to footnote 1 on Page B-1 of this document.

(2) Please refer to footnote 1 on Page C-1 of this document. Total available stable funding for December 2019 has been adjusted to reflect the residual maturity of a callable capital instrument.

Commentaries for the quarter explaining significant changes in the above metrics, if any, have been included in subsequent sections of this document.

5 CAPITAL ADEQUACY

5.1 Capital Resources and Capital Adequacy Ratios

$m	31 Dec 2019	30 Sep 2019
Share capital	11,205	11,205
Disclosed reserves and others	37,369	36,946
Total regulatory adjustments to Common Equity Tier 1 capital	(5,704)	(5,739)
Common Equity Tier 1 capital	42,870	42,412
Additional Tier 1 capital instruments	2,590	2,599
Tier 1 capital	45,460	45,011
Total allowances eligible as Tier 2 capital	1,662	1,663
Tier 2 capital instruments	3,571	3,605
Total capital	50,693	50,279
Risk-Weighted Assets (RWA)		
Credit RWA	252,402	253,931
Market RWA	28,696	29,960
Operational RWA	22,673	22,357
Total RWA	303,771	306,248
Capital Adequacy Ratio (CAR) (%)		
Common Equity Tier 1	14.1	13.8
Tier 1	15.0	14.7
Total	16.7	16.4
Minimum CAR including Buffer Requirements (%)[1]		
Common Equity Tier 1	9.3	9.4
Effective Tier 1	10.8	10.9
Effective Total	12.8	12.9
Of which: Buffer Requirements (%)		
Capital Conservation Buffer	2.5	2.5
Countercyclical Buffer	0.3	0.4

Notes:

1 Includes minimum Common Equity Tier 1, Tier 1 and Total CAR of 6.5%, 8.0% and 10.0% respectively.

Compared to the previous quarter, capital adequacy ratios improved due mainly to net profit accretion, partly offset by dividend paid in the quarter.

5.2 Geographical Distribution of Credit Exposures used in the Countercyclical Capital Buffer

The table below sets out the geographical distribution of the RWA of private sector credit exposures relevant for the calculation of the countercyclical capital buffer.

	31 Dec 19			
	(a)	(b)	(c)	(d)
Geographical breakdown	Jurisdiction-specific countercyclical buffer requirement (%)	RWA for private sector credit exposures used in the computation of the countercyclical buffer ($m)	Bank-specific countercyclical buffer requirement (%)	Countercyclical buffer amount ($m)
Hong Kong	2.00	30,826		
Sweden	2.50	186		
United Kingdom	1.00	8,042		
France	0.25	353		
Others		186,561		
Total		225,968	0.3	944

The Basel III countercyclical capital buffer is calculated as the weighted average of the buffers in effect in the jurisdictions to which banks have private sector credit exposures. The Group attributes private sector credit exposures to jurisdictions based primarily on the jurisdiction of risk of each obligor or, if applicable, its guarantor. The determination of an obligor's jurisdiction of risk is based on the look-through approach taking into consideration factors such as the economic activity and availability of parental support.

6 COMPOSITION OF CAPITAL

6.1 Financial Statements and Regulatory Scope of Consolidation

$m	31 Dec 2019 Amount	Cross Reference to Section 6.2
ASSETS		
Cash and balances with central banks	26,362	
Government securities and treasury bills	49,729	
Due from banks	39,336	
Derivatives	17,235	
Bank and corporate securities	63,746	
of which: PE/VC investments held beyond the relevant holding periods	1	a
Loan and advances to customers	357,884	
of which: Total allowances admitted as eligible T2 Capital	(1,662)	b
Other assets	15,424	
of which: Deferred tax assets	313	c
Re-grossing of deferred tax assets and deferred tax liabilities as required under MAS Notice 637	117	d
Associates	835	
of which: Goodwill on acquisition(1)	15	e
Properties and other fixed assets	3,225	
Goodwill and intangibles	5,170	
of which: Goodwill	5,170	f
of which: Intangibles	-	g
TOTAL ASSETS	**578,946**	
LIABILITIES		
Due to banks	23,773	
Deposits and balances from customers	404,289	
Derivatives	17,512	
Other liabilities	20,907	
Re-grossing of deferred tax assets and deferred tax liabilities as required under MAS Notice 637	117	
Other debt securities	57,128	
Subordinated term debts	3,538	h
TOTAL LIABILITIES	**527,147**	
NET ASSETS	**51,799**	

6.1 Financial Statements and Regulatory Scope of Consolidation (continued)

	31 Dec 2019	
$m	**Amount**	**Cross Reference to Section 6.2**
EQUITY		
Share capital	10,948	
of which: Amount eligible as CET1 Capital	11,205	i
of which: Treasury shares	(257)	j
Other equity instruments	2,009	k
Other reserves	4,102	l
of which: Cash flow hedge reserve	156	m
Revenue reserves	33,922	n
of which: Regulatory loss allowance reserves	404	o
of which: Unrealised fair value gains/losses on financial liabilities and derivative liabilities arising from changes in own credit risk	(71)	p
SHAREHOLDERS' FUNDS	50,981	
Non-controlling interests	818	
of which: Eligible for recognition as CET1 Capital under transitional arrangements	6	q
of which: Eligible for recognition as AT1 Capital under transitional arrangements	581	r
of which: Eligible for recognition as T2 Capital under transitional arrangements	33	s
TOTAL EQUITY	**51,799**	

[(1)] Not adjusted for subsequent share of losses or impairment losses (Refer to page A-5).

The Group's regulatory scope of consolidation is identical to its accounting scope of consolidation.

There were no significant changes in the expanded balance sheet items during the second half of 2019.

6.2 Capital Adequacy and Reconciliation of Regulatory Capital to the Balance Sheet

The following disclosure is made according to the template prescribed in MAS Notice 637 Annex 11B.

The alphabetic cross-references in the column "Cross Reference to Section 6.1" relate to those used in the balance sheet reconciliation in Section 6.1.

Row 64 "Bank-specific buffer requirement" and row 68 "Common Equity Tier 1 available after meeting the Reporting Bank's minimum capital requirements" are not directly comparable. Row 64 is the sum of row 69 and rows 65 to 67. Row 68 is the CET1 CAR, less the minimum CET1 CAR requirement (Row 69) and any CET1 CAR used to meet the Tier 1 and Total capital requirements, expressed as a percentage of risk-weighted assets.

$m		31 Dec 2019 Amount	31 Dec 2019 Cross Reference to Section 6.1
Common Equity Tier 1 capital: instruments and reserves			
1	Paid-up ordinary shares and share premium (if applicable)	11,205	i
2	Retained earnings	33,518	n-o
3#	Accumulated other comprehensive income and other disclosed reserves	3,845	j+l
4	Directly issued capital subject to phase out from CET1 (only applicable to non-joint stock companies)	-	
5	Minority interest that meets criteria for inclusion	6	q
6	**Common Equity Tier 1 capital before regulatory adjustments**	**48,574**	
Common Equity Tier 1 capital: regulatory adjustments			
7	Valuation adjustment pursuant to Part VIII of MAS Notice 637	3	
8	Goodwill, net of associated deferred tax liability	5,185	e+f
9#	Intangible assets, net of associated deferred tax liability	-	g
10#	Deferred tax assets that rely on future profitability	430	c+d
11	Cash flow hedge reserve	156	m
12	Shortfall of TEP relative to EL under IRBA	-	
13	Increase in equity capital resulting from securitisation transactions	-	
14	Unrealised fair value gains/losses on financial liabilities and derivative liabilities arising from changes in own credit risk	(71)	p
15	Defined benefit pension fund assets, net of associated deferred tax liability	-	
16	Investments in own shares	0	
17	Reciprocal cross-holdings in ordinary shares of financial institutions	-	
18	Investments in ordinary shares of unconsolidated financial institutions in which the Reporting Bank does not hold a major stake	-	
19	Investments in ordinary shares of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries) (amount above 10% threshold)	-	
20#	Mortgage servicing rights (amount above 10% threshold)	-	
21#	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of associated deferred tax liability)	-	
22	Amount exceeding the 15% threshold	-	
23	of which: investments in ordinary shares of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries)	-	
24#	of which: mortgage servicing rights	-	
25#	of which: deferred tax assets arising from temporary differences	-	
26	National specific regulatory adjustments	1	

$m		31 Dec 2019 Amount	Cross Reference to Section 6.1
26A	PE/VC investments held beyond the relevant holding periods set out in MAS Notice 630	1	a
26B	Capital deficits in subsidiaries and associates that are regulated financial institutions	-	
26C	Any other items which the Authority may specify	-	
27	Regulatory adjustments applied in calculation of CET1 Capital due to insufficient AT1 Capital to satisfy required deductions	-	
28	**Total regulatory adjustments to CET1 Capital**	**5,704**	
29	**Common Equity Tier 1 capital (CET1)**	**42,870**	
Additional Tier 1 capital: instruments			
30	AT1 capital instruments and share premium (if applicable)	2,009	k
31	of which: classified as equity under the Accounting Standards	2,009	
32	of which: classified as liabilities under the Accounting Standards	-	
33	Transitional: Ineligible capital instruments (pursuant to paragraphs 6.5.3 and 6.5.4)	-	
34	AT1 capital instruments issued by fully-consolidated subsidiaries that meet criteria for inclusion	581	r
35	of which: instruments issued by subsidiaries subject to phase out	581	
36	**Additional Tier 1 capital before regulatory adjustments**	**2,590**	
Additional Tier 1 capital: regulatory adjustments			
37	Investments in own AT1 capital instruments	-	
38	Reciprocal cross-holdings in AT1 capital instruments of financial institutions	-	
39	Investments in AT1 capital instruments of unconsolidated financial institutions in which the Reporting Bank does not hold a major stake	-	
40	Investments in AT1 capital instruments of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries)	-	
41	National specific regulatory adjustments which the Authority may specify	-	
42	Regulatory adjustments applied in calculation of AT1 Capital due to insufficient Tier 2 Capital to satisfy required deductions	-	
43	**Total regulatory adjustments to Additional Tier 1 capital**	**-**	
44	**Additional Tier 1 capital (AT1)**	**2,590**	
45	**Tier 1 capital (T1 = CET1 + AT1)**	**45,460**	
Tier 2 capital: instruments and provisions			
46	Tier 2 capital instruments and share premium (if applicable)	3,538	h
47	Transitional: Ineligible capital instruments (pursuant to paragraphs 6.5.3 and 6.5.4)	-	
48	Tier 2 capital instruments issued by fully-consolidated subsidiaries that meet criteria for inclusion	33	s
49	of which: instruments issued by subsidiaries subject to phase out	33	
50	Provisions	1,662	b
51	**Tier 2 capital before regulatory adjustments**	**5,233**	

$m		31 Dec 2019 Amount	Cross Reference to Section 6.1
Tier 2 capital: regulatory adjustments			
52	Investments in own Tier 2 instruments	-	
53	Reciprocal cross-holdings in Tier 2 capital instruments of financial institutions	-	
54	Investments in Tier 2 capital instruments and other TLAC liabilities of unconsolidated financial institutions in which the Reporting Bank does not hold a major stake	-	
54a[#]	Investments in other TLAC liabilities of unconsolidated financial institutions in which the Reporting Bank does not hold a major stake: amount previously designated for the 5% threshold but that no longer meets the conditions	-	
55	Investments in Tier 2 capital instruments and other TLAC liabilities of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries)	-	
56	National specific regulatory adjustments which the Authority may specify	-	
57	**Total regulatory adjustments to Tier 2 capital**	**-**	
58	**Tier 2 capital (T2)**	**5,233**	
59	**Total capital (TC = T1 + T2)**	**50,693**	
60	**Floor–adjusted total risk weighted assets**	**303,771**	
Capital ratios (as a percentage of floor-adjusted risk weighted assets)			
61	**Common Equity Tier 1 CAR**	**14.1%**	
62	**Tier 1 CAR**	**15.0%**	
63	**Total CAR**	**16.7%**	
64	Bank-specific buffer requirement	9.3%	
65	of which: capital conservation buffer requirement	2.5%	
66	of which: bank specific countercyclical buffer requirement	0.3%	
67	of which: G-SIB and/or D-SIB buffer requirement (if applicable)	-	
68	Common Equity Tier 1 available after meeting the Reporting Bank's minimum capital requirements	6.7%	
National minima			
69	Minimum CET1 CAR	6.5%	
70	Minimum Tier 1 CAR	8.0%	
71	Minimum Total CAR	10.0%	
Amounts below the thresholds for deduction (before risk weighting)			
72	Investments in ordinary shares, AT1 capital and Tier 2 capital and other TLAC liabilities of unconsolidated financial institutions in which the Reporting Bank does not hold a major stake	2,079	
73	Investments in ordinary shares of unconsolidated financial institutions in which the Reporting Bank holds a major stake (including insurance subsidiaries)	320	
74	Mortgage servicing rights (net of associated deferred tax liability)	-	
75	Deferred tax assets arising from temporary differences (net of associated deferred tax liability)	-	

$m		31 Dec 2019 Amount	Cross Reference to Section 6.1
Applicable caps on the inclusion of provisions in Tier 2			
76	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to standardised approach (prior to application of cap)	529	
77	Cap on inclusion of provisions in Tier 2 under standardised approach	558	
78	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (prior to application of cap)	1,166	
79	Cap for inclusion of provisions in Tier 2 under internal ratings-based approach	1,133	
Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2013 and 1 Jan 2022)			
80	Current cap on CET1 instruments subject to phase out arrangements	-	
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	-	
82	Current cap on AT1 instruments subject to phase out arrangements	1,249	
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	-	
84	Current cap on T2 instruments subject to phase out arrangements	1,652	
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	-	

For regulatory adjustments, deductions from capital are reported as positive numbers and additions to capital are reported as negative numbers.

Items marked with a hash [#] are elements where a more conservative definition has been applied in MAS Notice 637 relative to those set out under the Basel III capital standards.

Deferred tax assets relating to temporary differences in excess of specified thresholds c.f. row 21 and 25 are to be deducted under the Basel Committee capital rules (paragraph 69). Under MAS Notice 637, they are deducted in full. If the Basel Committee capital rules were to be applied, eligible capital would have been $0.4 billion and risk-weighted assets $1.0 billion higher.

6.3 Main Features of Capital Instruments

The following disclosures are made solely pursuant to the requirements of MAS Notice 637 Annex 11D. They are not a summary of the terms, do not purport to be complete, and should be read in conjunction with, and are qualified in their entirety by, the relevant transaction documents available at https://www.dbs.com/investors/capital-and-other-disclosures/capital-disclosures. This includes the issuances made over the previous period.

Since 30 June 2019, the Group has not issued any new capital instrument.

31 Dec 2019		**DBS Group Holdings Ltd Ordinary Shares**	**US$750,000,000 3.60% Non-Cumulative Non-Convertible Perpetual Capital Securities First Callable in 2021 issued pursuant to the US$30,000,000,000 Global Medium Term Note Programme**
1	Issuer	DBS Group Holdings Ltd	DBS Group Holdings Ltd
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	SGX Name: DBS GROUP HOLDINGS LTD ISIN Code: SG1L01001701	SGX Name: DBSGrp 3.6%PerCapSec S ISIN Code: XS1484844656
3	Governing law(s) of the instrument	Singapore	English Law (Singapore Law for Subordination)
4	Transitional Basel III rules	Common Equity Tier 1	Additional Tier 1
5	Post-transitional Basel III rules	Common Equity Tier 1	Additional Tier 1
6	Eligible at Solo/Group/Group & Solo	Group	Group
7	Instrument type (types to be specified by each jurisdiction)	Ordinary Shares	Non-Cumulative Non-Convertible Perpetual Capital Securities
8	Amount recognized in regulatory capital (Currency in millions, as of most recent reporting date)	S$11,205 million	S$1,009 million
9	Par value of instrument	NA	US$750 million
10	Accounting classification	Shareholders' equity	Shareholders' equity
11	Original date of issuance	9 Mar 1999	7 Sep 2016
12	Perpetual or dated	Perpetual	Perpetual
13	Original maturity date	No maturity	No maturity
14	Issuer call subject to prior supervisory approval	No	Yes
15	Optional call date	NA	07 Sep 2021
	Contingent call dates	NA	Change of Qualification Event, or Tax Event
	Redemption amount	NA	Principal amount together with, subject to certain conditions, accrued but unpaid Distributions
16	Subsequent call dates, if applicable	NA	Optional - Any Distribution Payment Date after 7 Sep 2021
	Coupons/dividends		
17	Fixed or floating dividend/coupon	Discretionary dividend amount	Fixed to floating
18	Coupon rate and any related index	NA	3.60% p.a. up to 7 Sep 2021. 5Y USD Swap Rate plus 2.39% p.a. thereafter, reset every 5 years
19	Existence of a dividend stopper	NA	Yes
20	Fully discretionary, partially discretionally or mandatory	Fully discretionary	Fully discretionary
21	Existence of step up or incentive to redeem	No	No
22	Noncumulative or cumulative	Noncumulative	Noncumulative
23	Convertible or non-convertible	Nonconvertible	Nonconvertible
24	If convertible, conversion trigger(s)	NA	NA
25	If convertible, fully or partially	NA	NA
26	If convertible, conversion rate	NA	NA
27	If convertible, mandatory or optional conversion	NA	NA
28	If convertible, specify instrument type convertible into	NA	NA
29	If convertible, specify issuer of instrument it converts into	NA	NA
30	Write-down feature	No	Yes
31	If write-down, write-down trigger(s)	NA	Contractual write-down. The earlier of: (i) the MAS notifying the Issuer in writing that it is of the opinion that a Write-off is necessary, without which the Issuer or the Group would become non-viable; and (ii) a decision by the MAS to make a public sector injection of capital, or equivalent support, without which the Issuer or the Group would have become non-viable, as determined by the MAS
32	If write-down, full or partial	NA	Fully or partially
33	If write-down, permanent or temporary	NA	Permanent
34	If temporary write-down, description of write-up mechanism	NA	NA
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument in the insolvency creditor hierarchy of the legal entity concerned)	Immediately subordinated to Additional Tier 1 capital instruments	Immediately subordinated to Tier 2 capital instruments
36	Non-compliant transitioned features	No	No
37	If yes, specify non-compliant features	NA	NA

6.3 Main Features of Capital Instruments (continued)

31 Dec 2019		S$1,000,000,000 3.98% Non-Cumulative, Non-Convertible, Perpetual Capital Securities First Callable in 2025, issued pursuant to the US$30,000,000,000 Global Medium Term Note Programme	S$800,000,000 4.70% Non-Cumulative, Non-Convertible, Non-Voting Preference Shares Callable in 2020
1	Issuer	DBS Group Holdings Ltd	DBS Bank Ltd.
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	SGX Name: DBSGrp 3.98%PerCapSec S ISIN Code: SGXF11720293	SGX Name: DBS S$800M 4.7% NCPS ISIN Code: SG2C54964409
3	Governing law(s) of the instrument	Singapore	Singapore
4	Transitional Basel III rules	Additional Tier 1	Additional Tier 1
5	Post-transitional Basel III rules	Additional Tier 1	Ineligible
6	Eligible at Solo/Group/Group & Solo	Group	Solo and Group
7	Instrument type (types to be specified by each jurisdiction)	Non-Cumulative Non-Convertible Perpetual Capital Securities	Preference Shares
8	Amount recognized in regulatory capital (Currency in millions, as of most recent reporting date)	S$1,000 million	S$581 million
9	Par value of instrument	S$1,000 million	S$800 million
10	Accounting classification	Shareholders' equity	Non-controlling interest in consolidated subsidiary
11	Original date of issuance	12 Sep 2018	22 Nov 2010
12	Perpetual or dated	Perpetual	Perpetual
13	Original maturity date	No maturity	No maturity
14	Issuer call subject to prior supervisory approval	Yes	Yes
15	Optional call date	12 Sep 2025	22 Nov 2020
	Contingent call dates	Change of Qualification Event, or Tax Event	Change of Qualification Event, or Tax Event
	Redemption amount	Principal amount together with, subject to certain conditions, accrued but unpaid Distributions	Liquidation Preference together with, subject to certain limitations and qualifications, accrued but unpaid Dividends
16	Subsequent call dates, if applicable	Optional - Any Distribution Payment Date after 12 Sep 2025	Optional – Any date after 22 Nov 2020
	Coupons/dividends		
17	Fixed or floating dividend/coupon	Fixed to floating	Fixed
18	Coupon rate and any related index	3.98% p.a. up to 12 Sep 2025. 7Y SGD Swap Rate plus 1.65% p.a. thereafter, reset every 7 years	4.70% p.a.
19	Existence of a dividend stopper	Yes	Yes
20	Fully discretionary, partially discretionally or mandatory	Fully discretionary	Fully discretionary
21	Existence of step up or incentive to redeem	No	No
22	Noncumulative or cumulative	Noncumulative	Noncumulative
23	Convertible or non-convertible	Nonconvertible	Nonconvertible
24	If convertible, conversion trigger(s)	NA	NA
25	If convertible, fully or partially	NA	NA
26	If convertible, conversion rate	NA	NA
27	If convertible, mandatory or optional conversion	NA	NA
28	If convertible, specify instrument type convertible into	NA	NA
29	If convertible, specify issuer of instrument it converts into	NA	NA
30	Write-down feature	Yes	No
31	If write-down, write-down trigger(s)	Contractual write-down. The earlier of: (i) the MAS notifying the Issuer in writing that it is of the opinion that a Write-off is necessary, without which the Issuer or the Group would become non-viable; and (ii) a decision by the MAS to make a public sector injection of capital, or equivalent support, without which the Issuer or the Group would have become non-viable, as determined by the MAS	NA
32	If write-down, full or partial	Fully or partially	NA
33	If write-down, permanent or temporary	Permanent	NA
34	If temporary write-down, description of write-up mechanism	NA	NA
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument in the insolvency creditor hierarchy of the legal entity concerned)	Immediately subordinated to Tier 2 capital instruments	Immediately subordinated to Tier 2 capital instruments
36	Non-compliant transitioned features	No	Yes
37	If yes, specify non-compliant features	NA	Has no loss-absorbency at point of non-viability

6.3 Main Features of Capital Instruments (continued)

31 Dec 2019		S$250,000,000 3.80% Subordinated Notes due 2028 Callable in 2023 issued pursuant to the US$30,000,000,000 Global Medium Term Note Programme	JPY10,000,000,000 0.918% Subordinated Notes due 2026 issued pursuant to the US$30,000,000,000 Global Medium Term Note Programme
1	Issuer	DBS Group Holdings Ltd	DBS Group Holdings Ltd
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	SGX Name: DBS GRP S$250M3.8% N280120 ISIN Code: SG71A5000002	ISIN Code: XS1376555865
3	Governing law(s) of the instrument	Singapore	Singapore
4	Transitional Basel lll rules	Tier 2	Tier 2
5	Post-transitional Basel lll rules	Tier 2	Tier 2
6	Eligible at Solo/Group/Group & Solo	Group	Group
7	Instrument type (types to be specified by each jurisdiction)	Subordinated Notes	Subordinated Notes
8	Amount recognized in regulatory capital (Currency in millions, as of most recent reporting date)	S$260 million	S$125 million
9	Par value of instrument	S$250 million	JPY10,000 million
10	Accounting classification	Liability - amortised cost	Liability - amortised cost
11	Original date of issuance	20 Jan 2016	8 Mar 2016
12	Perpetual or dated	Dated	Dated
13	Original maturity date	20 Jan 2028	8 Mar 2026
14	Issuer call subject to prior supervisory approval	Yes	Yes
15	Optional call date	20 Jan 2023	NA
	Contingent call dates	Change of Qualification Event, or Tax Event	Change of Qualification Event, or Tax Event
	Redemption amount	Principal amount together with accrued but unpaid interest	Principal amount together with accrued but unpaid interest
16	Subsequent call dates, if applicable	Optional – Any Interest Payment Date after 20 Jan 2023	NA
	Coupons/dividends		
17	Fixed or floating dividend/coupon	Fixed	Fixed
18	Coupon rate and any related index	3.80% p.a. up to 20 Jan 2023. 5Y SGD SOR plus 1.10% p.a. thereafter, 1-time reset	0.918% p.a.
19	Existence of a dividend stopper	No	No
20	Fully discretionary, partially discretionally or mandatory	Mandatory	Mandatory
21	Existence of step up or incentive to redeem	No	No
22	Noncumulative or cumulative	Cumulative	Cumulative
23	Convertible or non-convertible	Nonconvertible	Nonconvertible
24	If convertible, conversion trigger(s)	NA	NA
25	If convertible, fully or partially	NA	NA
26	If convertible, conversion rate	NA	NA
27	If convertible, mandatory or optional conversion	NA	NA
28	If convertible, specify instrument type convertible into	NA	NA
29	If convertible, specify issuer of instrument it converts into	NA	NA
30	Write-down feature	Yes	Yes
31	If write-down, write-down trigger(s)	Contractual write-down. The earlier of: (i) the MAS notifying the Issuer in writing that it is of the opinion that a Write-off is necessary, without which the Issuer or the Group would become non-viable; and (ii) a decision by the MAS to make a public sector injection of capital, or equivalent support, without which the Issuer or the Group would have become non-viable, as determined by the MAS	Contractual write-down. The earlier of: (i) the MAS notifying the Issuer in writing that it is of the opinion that a Write-off is necessary, without which the Issuer or the Group would become non-viable; and (ii) a decision by the MAS to make a public sector injection of capital, or equivalent support, without which the Issuer or the Group would have become non-viable, as determined by the MAS
32	If write-down, full or partial	Fully or partially	Fully or partially
33	If write-down, permanent or temporary	Permanent	Permanent
34	If temporary write-down, description of write-up mechanism	NA	NA
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument in the insolvency creditor hierarchy of the legal entity concerned)	Immediately subordinated to senior creditors	Immediately subordinated to senior creditors
36	Non-compliant transitioned features	No	No
37	If yes, specify non-compliant features	NA	NA

6.3 Main Features of Capital Instruments (continued)

31 Dec 2019		HK$1,500,000,000 3.24% Subordinated Notes due 2026 Callable in 2021 issued pursuant to the US$30,000,000,000 Global Medium Term Note Programme	A$750,000,000 Floating Rate Subordinated Notes due 2028 Callable in 2023 issued pursuant to the U.S.$30,000,000,000 Global Medium Term Note Programme
1	Issuer	DBS Group Holdings Ltd	DBS Group Holdings Ltd
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	SGX Name: DBS GRP HKD1.5B3.24% N260419 ISIN Code: XS1397782860	SGX Name: DBS GRP A$750M F280316 ISIN Code: AU3FN0041406
3	Governing law(s) of the instrument	Singapore	Laws of New South Wales, Australia (Singapore Law for Subordination)
4	Transitional Basel lll rules	Tier 2	Tier 2
5	Post-transitional Basel lll rules	Tier 2	Tier 2
6	Eligible at Solo/Group/Group & Solo	Group	Group
7	Instrument type (types to be specified by each jurisdiction)	Subordinated Notes	Subordinated Notes
8	Amount recognized in regulatory capital (Currency in millions, as of most recent reporting date)	S$257 million	S$708 million
9	Par value of instrument	HK$1,500 million	A$750 million
10	Accounting classification	Liability - amortised cost	Liability - amortised cost
11	Original date of issuance	19 Apr 2016	16 Mar 2018
12	Perpetual or dated	Dated	Dated
13	Original maturity date	19 Apr 2026	16 Mar 2028
14	Issuer call subject to prior supervisory approval	Yes	Yes
15	Optional call date	19 Apr 2021	16 Mar 2023
	Contingent call dates	Change of Qualification Event, or Tax Event	Change of Qualification Event, or Tax Event
	Redemption amount	Principal amount together with accrued but unpaid interest	Principal amount together with accrued but unpaid interest
16	Subsequent call dates, if applicable	Optional – Any Interest Payment Date after 19 Apr 2021	Optional – Any Interest Payment Date after 16 Mar 2023
	Coupons/dividends		
17	Fixed or floating dividend/coupon	Fixed	Floating
18	Coupon rate and any related index	3.24% p.a. up to 19 Apr 2021. 5Y HKD Swap Rate plus 1.90% p.a. thereafter, 1-time reset	3 month BBSW + 158 bps up to maturity
19	Existence of a dividend stopper	No	No
20	Fully discretionary, partially discretionally or mandatory	Mandatory	Mandatory
21	Existence of step up or incentive to redeem	No	No
22	Noncumulative or cumulative	Cumulative	Cumulative
23	Convertible or non-convertible	Nonconvertible	Nonconvertible
24	If convertible, conversion trigger(s)	NA	NA
25	If convertible, fully or partially	NA	NA
26	If convertible, conversion rate	NA	NA
27	If convertible, mandatory or optional conversion	NA	NA
28	If convertible, specify instrument type convertible into	NA	NA
29	If convertible, specify issuer of instrument it converts into	NA	NA
30	Write-down feature	Yes	Yes
31	If write-down, write-down trigger(s)	Contractual write-down. The earlier of: (i) the MAS notifying the Issuer in writing that it is of the opinion that a Write-off is necessary, without which the Issuer or the Group would become non-viable; and (ii) a decision by the MAS to make a public sector injection of capital, or equivalent support, without which the Issuer or the Group would have become non-viable, as determined by the MAS	Contractual write-down. The earlier of: (i) the MAS notifying the Issuer in writing that it is of the opinion that a Write-off is necessary, without which the Issuer or the Group would become non-viable; and (ii) a decision by the MAS to make a public sector injection of capital, or equivalent support, without which the Issuer or the Group would have become non-viable, as determined by the MAS
32	If write-down, full or partial	Fully or partially	Fully or partially
33	If write-down, permanent or temporary	Permanent	Permanent
34	If temporary write-down, description of write-up mechanism	NA	NA
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument in the insolvency creditor hierarchy of the legal entity concerned)	Immediately subordinated to senior creditors	Immediately subordinated to senior creditors
36	Non-compliant transitioned features	No	No
37	If yes, specify non-compliant features	NA	NA

6.3 Main Features of Capital Instruments (continued)

31 Dec 2019		EUR600,000,000 1.5% Subordinated Notes due 2028 Callable in 2023 issued pursuant to the U.S.$30,000,000,000 Global Medium Term Note Programme	RMB950,000,000 5.25% Subordinated Notes due 2028 Callable in 2023 issued pursuant to the U.S.$30,000,000,000 Global Medium Term Note Programme
1	Issuer	DBS Group Holdings Ltd	DBS Group Holdings Ltd
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	SGX Name: DBS GRP EUR600M1.5%N280411 ISIN Code: XS1802465846	SGX Name: DBS GRP RMB950M5.25%N280515 ISIN Code: XS1821439368
3	Governing law(s) of the instrument	English Law (Singapore Law for Subordination)	Singapore
4	Transitional Basel III rules	Tier 2	Tier 2
5	Post-transitional Basel III rules	Tier 2	Tier 2
6	Eligible at Solo/Group/Group & Solo	Group	Group
7	Instrument type (types to be specified by each jurisdiction)	Subordinated Notes	Subordinated Notes
8	Amount recognized in regulatory capital (Currency in millions, as of most recent reporting date)	S$904 million	S$183 million
9	Par value of instrument	EUR600 million	RMB950 million
10	Accounting classification	Liability - amortised cost	Liability - amortised cost
11	Original date of issuance	11 Apr 2018	15 May 2018
12	Perpetual or dated	Dated	Dated
13	Original maturity date	11 Apr 2028	15 May 2028
14	Issuer call subject to prior supervisory approval	Yes	Yes
15	Optional call date	11 Apr 2023	15 May 2023
	Contingent call dates	Change of Qualification Event, or Tax Event	Change of Qualification Event, or Tax Event
	Redemption amount	Principal amount together with accrued but unpaid interest	Principal amount together with accrued but unpaid interest
16	Subsequent call dates, if applicable	Optional – Any Interest Payment Date after 11 Apr 2023	Optional – Any Interest Payment Date after 15 May 2023
	Coupons/dividends		
17	Fixed or floating dividend/coupon	Fixed	Fixed
18	Coupon rate and any related index	1.50% p.a. up to 11 Apr 2023. 5Y EUR Mid-Swap Rate + 120 bp p.a. thereafter, 1-time reset	5.25% p.a.
19	Existence of a dividend stopper	No	No
20	Fully discretionary, partially discretionally or mandatory	Mandatory	Mandatory
21	Existence of step up or incentive to redeem	No	No
22	Noncumulative or cumulative	Cumulative	Cumulative
23	Convertible or non-convertible	Nonconvertible	Nonconvertible
24	If convertible, conversion trigger(s)	NA	NA
25	If convertible, fully or partially	NA	NA
26	If convertible, conversion rate	NA	NA
27	If convertible, mandatory or optional conversion	NA	NA
28	If convertible, specify instrument type convertible into	NA	NA
29	If convertible, specify issuer of instrument it converts into	NA	NA
30	Write-down feature	Yes	Yes
31	If write-down, write-down trigger(s)	Contractual write-down. The earlier of: (i) the MAS notifying the Issuer in writing that it is of the opinion that a Write-off is necessary, without which the Issuer or the Group would become non-viable; and (ii) a decision by the MAS to make a public sector injection of capital, or equivalent support, without which the Issuer or the Group would have become non-viable, as determined by the MAS	Contractual write-down. The earlier of: (i) the MAS notifying the Issuer in writing that it is of the opinion that a Write-off is necessary, without which the Issuer or the Group would become non-viable; and (ii) a decision by the MAS to make a public sector injection of capital, or equivalent support, without which the Issuer or the Group would have become non-viable, as determined by the MAS
32	If write-down, full or partial	Fully or partially	Fully or partially
33	If write-down, permanent or temporary	Permanent	Permanent
34	If temporary write-down, description of write-up mechanism	NA	NA
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument in the insolvency creditor hierarchy of the legal entity concerned)	Immediately subordinated to senior creditors	Immediately subordinated to senior creditors
36	Non-compliant transitioned features	No	No
37	If yes, specify non-compliant features	NA	NA

6.3 Main Features of Capital Instruments (continued)

31 Dec 2019		USD750,000,000 4.52% Subordinated Notes due 2028 Callable in 2023 issued pursuant to the U.S.$30,000,000,000 Global Medium Term Note Programme	JPY7,300,000,000 0.85% Subordinated Notes due 2028 Callable in 2023 issued pursuant to the U.S.$30,000,000,000 Global Medium Term Note Programme
1	Issuer	DBS Group Holdings Ltd	DBS Group Holdings Ltd
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	SGX Name: DBS GRP US$750M4.52%N281211A/ N281211R ISIN Code: US24023MAA27/ US24023NAA00	ISIN Code: XS1844087087
3	Governing law(s) of the instrument	English Law (Singapore Law for Subordination)	Singapore
4	Transitional Basel III rules	Tier 2	Tier 2
5	Post-transitional Basel III rules	Tier 2	Tier 2
6	Eligible at Solo/Group/Group & Solo	Group	Group
7	Instrument type (types to be specified by each jurisdiction)	Subordinated Notes	Subordinated Notes
8	Amount recognized in regulatory capital (Currency in millions, as of most recent reporting date)	S$1,010 million	S$91 million
9	Par value of instrument	USD750 million	JPY7,300 million
10	Accounting classification	Liability - amortised cost	Liability - amortised cost
11	Original date of issuance	11 Jun 2018	25 Jun 2018
12	Perpetual or dated	Dated	Dated
13	Original maturity date	11 Dec 2028	25 Jun 2028
14	Issuer call subject to prior supervisory approval	Yes	Yes
15	Optional call date	11 Dec 2023	25 Jun 2023
	Contingent call dates	Change of Qualification Event, or Tax Event	Change of Qualification Event, or Tax Event
	Redemption amount	Principal amount together with accrued but unpaid interest	Principal amount together with accrued but unpaid interest
16	Subsequent call dates, if applicable	Optional – Any Interest Payment Date after 11 Dec 2023	Optional – Any Interest Payment Date after 25 June 2023
	Coupons/dividends		
17	Fixed or floating dividend/coupon	Fixed	Fixed
18	Coupon rate and any related index	4.52% p.a. up to 11 Dec 2023. 5-year USD Mid-Swap Rate plus 159 bp p.a. thereafter, 1-time reset	0.85% p.a. up to 25 June 2023. 6-month JPY Libor + 74.375bp p.a. thereafter, 1-time reset
19	Existence of a dividend stopper	No	No
20	Fully discretionary, partially discretionally or mandatory	Mandatory	Mandatory
21	Existence of step up or incentive to redeem	No	No
22	Noncumulative or cumulative	Cumulative	Cumulative
23	Convertible or non-convertible	Nonconvertible	Nonconvertible
24	If convertible, conversion trigger(s)	NA	NA
25	If convertible, fully or partially	NA	NA
26	If convertible, conversion rate	NA	NA
27	If convertible, mandatory or optional conversion	NA	NA
28	If convertible, specify instrument type convertible into	NA	NA
29	If convertible, specify issuer of instrument it converts into	NA	NA
30	Write-down feature	Yes	Yes
31	If write-down, write-down trigger(s)	Contractual write-down. The earlier of: (i) the MAS notifying the Issuer in writing that it is of the opinion that a Write-off is necessary, without which the Issuer or the Group would become non-viable; and (ii) a decision by the MAS to make a public sector injection of capital, or equivalent support, without which the Issuer or the Group would have become non-viable, as determined by the MAS	Contractual write-down. The earlier of: (i) the MAS notifying the Issuer in writing that it is of the opinion that a Write-off is necessary, without which the Issuer or the Group would become non-viable; and (ii) a decision by the MAS to make a public sector injection of capital, or equivalent support, without which the Issuer or the Group would have become non-viable, as determined by the MAS
32	If write-down, full or partial	Fully or partially	Fully or partially
33	If write-down, permanent or temporary	Permanent	Permanent
34	If temporary write-down, description of write-up mechanism	NA	NA
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument in the insolvency creditor hierarchy of the legal entity concerned)	Immediately subordinated to senior creditors	Immediately subordinated to senior creditors
36	Non-compliant transitioned features	No	No
37	If yes, specify non-compliant features	NA	NA

7 LINKAGES BETWEEN FINANCIAL STATEMENTS AND REGULATORY EXPOSURES

7.1 Differences between Accounting and Regulatory Scopes of Consolidation and Mapping of Financial Statement Categories with Regulatory Risk Categories

The following table shows the breakdown of the amount reported in the financial statements by regulatory risk categories.

	31 Dec 19					
	a	b	c	d	e	f
		Carrying amounts of items -				
$m	Carrying amounts as reported in balance sheet of published financial statements	Subject to credit risk requirements	Subject to CCR requirements	Subject to securitisation framework	Subject to market risk requirements	Not subject to capital requirements or subject to deduction from regulatory capital
Assets						
Cash and balances with central banks	26,362	25,861	501	-	501	-
Government securities & treasury bills	49,729	39,807	-	-	9,922	-
Due from banks	39,336	24,295	5,349	-	10,719	-
Derivatives	17,235	-	17,115	-	17,214	-
Bank & corporate securities	63,746	45,438	-	2,604	15,703	1
Loans & advances to customers	357,884	351,597	6,208	40	448	-
Other assets	15,424	11,708	3,334	-	-	382
Associates	835	820	-	-	-	15
Properties and other fixed assets	3,225	3,225	-	-	-	-
Goodwill & intangibles	5,170	-	-	-	-	5,170
Total assets	**578,946**	**502,751**	**32,507**	**2,644**	**54,507**	**5,568**
Liabilities						
Due to banks	23,773	-	6,018	-	1,708	17,756
Deposits and balances from customers	404,289	-	-	-	913	403,376
Derivatives	17,512	-	17,487	-	17,512	-
Other liabilities	20,907	327	-	-	1,440	19,140
Other debt securities	57,128	-	-	-	9,333	47,795
Subordinated term debts	3,538	-	-	-	-	3,538
Total liabilities	**527,147**	**327**	**23,505**	**-**	**30,906**	**491,605**

The Group's regulatory scope of consolidation is identical to its accounting scope of consolidation.

The sum of amounts disclosed under columns (b) to (f) above can be more than amounts disclosed in column (a) as some of the assets and liabilities, such as derivatives, amounts due to/from banks etc. can be subject to regulatory capital charges for credit risk, counterparty credit risk and market risk.

7.2 Main Sources of Differences between Regulatory Exposure Amounts and Carrying Amounts in Financial Statements

The following table provides information on the main sources of differences between regulatory exposure amounts and carrying amounts in the financial statements.

	31 Dec 19			
	a	b	c	d
		Items subject to -		
$m	Total	Credit risk requirements	CCR requirements	Securitisation framework
Assets carrying amount under regulatory scope of consolidation	573,378	502,751	32,507	2,644
Liabilities carrying amount under regulatory scope of consolidation	35,542	327	23,505	-
Total net amount under regulatory scope of consolidation	**537,836**	**502,424**	**9,002**	**2,644**
Off-balance sheet amounts	326,168	61,494	-	402
Differences due to netting and potential future exposures for derivatives	-	-	24,555	-
Differences due to allowances[(1)]	-	4,820	-	-
Other differences	-	(7,365)	11,658	(50)
Exposure amounts considered for regulatory purposes	**609,584**	**561,373**	**45,215**	**2,996**

Items subject to market risk requirements have not been included in the table above as these are computed based on notional positions in the relevant underlying instruments.

7.3 Qualitative Disclosure of Differences between Carrying Amounts in Financial Statements and Regulatory Exposure Amounts

The Group's regulatory scope of consolidation is identical to its accounting scope of consolidation.

The key differences between accounting amounts and regulatory exposure amounts are:

(i) Off-balance sheet amounts: Off-balance sheet amounts include contingent liabilities and undrawn portions of committed facilities after application of credit conversion factors;

(ii) Differences due to netting and potential future exposures for derivatives: Derivative regulatory exposures are netted (where an enforceable master netting agreement is in place) and also include potential future exposures;

(iii) Differences due to allowances[(1)]: The carrying values of assets in the financial statements are net of allowances. However, regulatory exposures under IRBA are gross of all allowances, while those under SA are net of specific allowances; and

(iv) Other differences: These mainly include differences arising from the recognition of credit risk mitigation, the inclusion of repurchase agreement for counterparty credit risk etc.

[(1)] Allowances refers to specific allowances (Expected Credit Loss Stage 3) and general allowances (Expected Credit Loss Stage 1 and 2)

7.3 Qualitative Disclosure of Differences between Carrying Amounts in Financial Statements and Regulatory Exposure Amounts (continued)

Valuation Process

The valuation processes within the Group are governed by the Valuation Policy and supporting standards, which are approved by the Audit Committee and Head of Group Product & Valuation Control respectively. The policy and standards apply to financial assets and liabilities classified as "fair value through profit or loss" (FVPL) and "fair value through other comprehensive income" (FVOCI).

The Valuation Policy and supporting standards govern the revaluation of all financial assets and liabilities that are measured at fair value, covering both market prices as well as model inputs. Financial assets and liabilities are marked directly using reliable and independent market prices (e.g. cash equities, fixed income securities and exchange traded futures) or by using reliable and independent market parameters (as model inputs) in conjunction with a valuation model (e.g. options and other derivatives valued using the Black Scholes model, discounted cash flows or other models). These valuation models go through an assurance process carried out by the Risk Management Group (RMG), independent of the model developers. Where necessary, the Group also imposes model reserves and other adjustments in determining fair value. Models are approved by the Group Market and Liquidity Risk Committee.

A process of independent price verification (IPV) is in place to establish the accuracy of the market parameters used when the marking is performed by the Front Office. The IPV process entails independent checks to compare traders' marks to independent sources such as broker/dealer sources or market consensus providers. For illiquid financial instruments where mark-to-market is not possible, the Group will value these products using an approved valuation model. Prices and parameters used as inputs to the model or to any intermediate technique involving a transformation process must be derived using approved market sources. Where possible, the inputs must be checked against multiple sources for reliability and accuracy.

Where significant unobservable inputs are used in these models, valuation adjustments or reserves are taken to provide for any uncertainty in valuations. Valuation adjustments or reserve methodologies are also used to substantiate the significance of unobservable inputs. Such methodologies are governed by the Valuation Policy and supporting standards. Group Product and Valuation Control, a unit within Group Finance and independent of any business unit, is responsible for determining valuation adjustments, including prudent valuation adjustments (PVA), and ensuring compliance with MAS Notice 637 Annex 8N. These activities are overseen by the Group Market and Liquidity Risk Committee and the Valuation Committee.

MAS Notice 637 Annex 8N sets out the standards for valuing financial instruments that are accounted for at fair value, regardless of whether these are booked in the trading or banking book, for the purpose of determining capital requirements. Banks are required to apply prudence and make appropriate adjustments, taking into account valuation uncertainties. Valuation adjustments taken in addition to that which has been incorporated into the financial statements are known as prudent valuation adjustments (PVA). PVA is deducted from CET1 capital.

The Group maintains policies, systems and controls for the calculation of valuation adjustments, including PVA. The Group's PVA methodology addresses fair value uncertainties arising from the following factors (where relevant): concentrated positions, unearned credit spreads, close out costs, operational risks, early termination costs, investing and funding costs, future administrative costs and model risk.

7.4 Prudent Valuation Adjustments

The following table provides a breakdown of the elements of PVA.

	31 Dec 19							
	a	b	c	d	e	f	g	h
$m	**Equity**	**Interest rates**	**FX**	**Credit**	**Commodities**	**Total**	**of which in the trading book**	**of which in the banking book**
Closeout uncertainty	-	-	-	3	-	3	2	1
of which: midmarket value	-	-	-	-	-	-	-	-
of which: closeout cost	-	-	-	-	-	-	-	-
of which: concentration	-	-	-	3	-	3	2	1
Early termination	-	-	-	-	-	-	-	-
Model risk	-	-	-	-	-	-	-	-
Operational risk	-	-	-	-	-	-	-	-
Investing and funding costs	-	-	-	-	-	-	-	-
Unearned credit spreads	-	-	-	-	-	-	-	-
Future administrative costs	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Total adjustment	-	-	-	3	-	3	2	1

	31 Dec 18							
	a	b	c	d	e	f	g	h
$m	**Equity**	**Interest rates**	**FX**	**Credit**	**Commodities**	**Total**	**of which in the trading book**	**of which in the banking book**
Closeout uncertainty	-	#	1	3	-	4	2	2
of which: midmarket value	-	-	-	-	-	-	-	-
of which: closeout cost	-	-	-	-	-	-	-	-
of which: concentration	-	#	1	3	-	4	2	2
Early termination	-	-	-	-	-	-	-	-
Model risk	-	-	-	-	-	-	-	-
Operational risk	-	-	-	-	-	-	-	-
Investing and funding costs	-	-	-	-	-	-	-	-
Unearned credit spreads	-	-	-	-	-	-	-	-
Future administrative costs	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Total adjustment	-	#	1	3	-	4	2	2

\# Numbers below 0.5.

There were no significant movements in 2019.

8 LEVERAGE RATIO

The following tables provide the breakdown of the Group's leverage ratio regulatory elements and a reconciliation of the Group's balance sheet assets with the leverage ratio exposure measure.

Leverage Ratio Common Disclosure Template

	Item	Amount[(1)] ($m) 31 Dec 2019	30 Sep 2019
	Exposure measures of on-balance sheet items		
1	On-balance sheet items (excluding derivative transactions and SFTs, but including on-balance sheet collateral for derivative transactions or SFTs)	548,243	545,331
2	Asset amounts deducted in determining Tier 1 capital	(5,775)	(5,763)
3	**Total exposure measures of on-balance sheet items** (excluding derivative transactions and SFTs)	**542,468**	**539,568**
	Derivative exposure measures		
4	Replacement cost associated with all derivative transactions (net of the eligible cash portion of variation margins)	7,072	9,581
5	Potential future exposure associated with all derivative transactions	17,088	18,038
6	Gross-up for derivative collaterals provided where deducted from the balance sheet assets in accordance with the Accounting Standards	-	-
7	Deductions of receivables for the cash portion of variation margins provided in derivative transactions	-	-
8	CCP leg of trade exposures excluded	-	-
9	Adjusted effective notional amount of written credit derivatives	4,019	3,864
10	Further adjustments in effective notional amounts and deductions from potential future exposures of written credit derivatives	-	-
11	**Total derivative exposure measures**	**28,179**	**31,483**
	SFT exposure measures		
12	Gross SFT assets (with no recognition of accounting netting), after adjusting for sales accounting	13,496	13,318
13	Eligible netting of cash payables and cash receivables	-	-
14	SFT counterparty exposures	287	136
15	SFT exposure measures where a Reporting Bank acts as an agent in the SFTs	-	-
16	**Total SFT exposure measures**	**13,783**	**13,454**
	Exposure measures of off-balance sheet items		
17	Off-balance sheet items at notional amount	326,168	323,612
18	Adjustments for calculation of exposure measures of off-balance sheet items	(264,281)	(261,665)
19	**Total exposure measures of off-balance sheet items**	**61,887**	**61,947**
	Capital and Total exposures		
20	Tier 1 capital	45,460	45,011
21	Total exposures	646,317	646,452
	Leverage Ratio		
22	**Leverage Ratio**	**7.0%**	**7.0%**

[(1)] Leverage ratio is computed using quarter-end balances.

The Group’s leverage ratio as at 31 December 2019 remained at 7.0%. The ratio is well above the 3% minimum requirement.

Leverage Ratio Summary Comparison Table

	Item	31 Dec 2019 Amount[1] ($m)
1	Total consolidated assets as per published financial statements	578,946
2	Adjustment for investments in entities that are consolidated for accounting purposes but are outside the regulatory scope of consolidation	-
3	Adjustment for fiduciary assets recognised on the balance sheet in accordance with the Accounting Standards but excluded from the calculation of the exposure measure	-
4	Adjustment for derivative transactions	10,944
5	Adjustment for SFTs	287
6	Adjustment for off-balance sheet items	61,887
7	Other adjustments	(5,747)
8	**Exposure measure**	**646,317**

(1) Leverage ratio is computed using quarter-end balances.

9 RISK MANAGEMENT APPROACH

In executing our strategic priorities and business opportunities, the Group is faced with economic, financial and other types of risks. These risks are interdependent and require a holistic approach to risk management. Very broadly, these risks can be aligned around the following risk categories:
(i) Credit
(ii) Market
(iii) Liquidity
(iv) Operational
(v) Reputational
(vi) Business and Strategic

The Board oversees the Group's affairs and provides sound leadership for the CEO and management. Authorised by the Board, various board committees oversee specific responsibilities based on clearly defined terms of reference.

Under our risk management approaches, the Board, through the Board Risk Management Committee (BRMC), sets our risk appetite, oversees the establishment of enterprise-wide risk management policies and processes, and sets risk appetite limits to guide the Group's risk-taking. The BRMC also oversees the identification, monitoring, management and reporting of credit, market, liquidity, operational and reputational risks.

To facilitate the BRMC's risk oversight, the following risk management committees have been established:

Risk Management Committees

Risk Executive Committee (Risk ExCo)	As the overall executive body regarding risk matters, the Risk ExCo oversees the Group's risk management as a whole.
Group Credit Risk Committee (GCRC) **Group Credit Policy Committee (GCPC)** **Group Credit Risk Models Committee (GCRMC)** **Group Market and Liquidity Risk Committee (GMLRC)** **Group Operational Risk Committee (GORC)** **Group Scenario and Stress Testing Committee (GSSTC)**	Each of the committees reports to the Risk ExCo, and the committees as a whole serve as an executive forum to discuss and implement the Group's risk management. Key responsibilities: • Assess and approve risk-taking activities • Oversee the Group's risk management infrastructure, which includes frameworks, decision criteria, authorities, people, policies, standards, processes, information and systems • Approve risk policies such as model governance standards, stress testing scenarios, and the evaluation and endorsement of risk models • Assess and monitor specific credit concentration • Recommend stress testing scenarios (including macroeconomic variable projections) and review the results The members in these committees comprise representatives from the Risk Management Group (RMG) as well as key business and support units.
Product Approval Committee (PAC)	The PAC oversees new product approvals, which are vital for mitigating risk within the Group. The committee assesses the reputational risk and suitability of products. In addition, the committee assesses whether we have the appropriate systems to monitor and manage the resulting risks.

Our risk appetite takes into account a spectrum of risk types, and it is implemented using thresholds, policies, processes and controls.

Threshold structures are essential in making the Group's risk appetite an intrinsic part of our businesses, because they help to keep all our risks within acceptable levels. Portfolio risk limits for the quantifiable risk types reach all parts of the bank from the top down, and these are implemented using formal frameworks. As for the non-quantifiable risk types, these are controlled using qualitative principles.

We manage these risks by diversifying our risks across industries and individual exposures. In addition, the Group relies on specialist knowledge of our regional markets and industry segments to effectively assess our risks.

Please refer to sections 11, 14 and 15 for details on how we manage the risks under each risk type.

Risk appetite is managed through a capital allocation structure to monitor internal capital demand. The Group manages risks along the dimensions of customer-facing and non customer-facing units. To ensure that the thresholds pertaining to our risk appetite are completely risk-sensitive, we have adopted economic capital (EC) as our primary risk metric. EC is also a core component in our Internal Capital Adequacy Assessment Process (ICAAP).

9 RISK MANAGEMENT APPROACH (CONTINUED)

As a commercial bank, the Group allocates more EC to our customer-facing units, as compared to non customer-facing units. A buffer is also maintained for other risks, such as country, reputational, model risks, etc.

The Group has three lines of defence when it comes to risk taking where each line of defence has a clear responsibility. Our business and support units are our first line of defence. Their responsibilities include the identification and management of risks arising from and relating to their respective areas of responsibilities and ensuring that our operations remain within approved boundaries of our risk appetite and policies.

Risk Management Group, Group Legal and Compliance and parts of Group Technology & Operations and Group Finance form the second line of defence. They are responsible for the development and maintenance of risk management policies and processes and they provide objective review and challenge on the activities undertaken by business and support units.

Group Audit forms the third line of defence. It provides an independent assessment and assurance on the reliability, adequacy and effectiveness of our system of internal controls, risk management, governance framework and processes.

The Group believes that effective safeguards against undesired business conduct have to go beyond a "tick-the-box" mentality. Other than relying on published codes of conduct, the Group also advocates the following organisational safeguards to maintain a strong risk and governance culture:

- Tone from the top
- Aligning strategies and incentives via the balanced scorecard. Performance is assessed against the scorecard to determine remuneration, providing a clear line of sight between employee goals and organisational imperatives
- Respecting voice of control functions
- Risk ownership
- Having established escalation protocols
- Encouraging constructive challenges at all levels
- Reinforcing cultural alignment

In addition to cultivating a strong risk and governance culture, robust internal control processes and systems have been designed and implemented to support the respective risk management approaches. These are reviewed regularly by the respective risk units to assess and ensure their effectiveness.

Please refer to sections 11.1.2 and 14.1 for details relating to strategies and processes that the Group uses to manage, hedge and mitigate risks and for monitoring the continuing effectiveness of hedges and mitigants.

Risk management reports including exposure and position information for all significant risk areas are provided to the BRMC and management on a regular basis, as deemed appropriate. The Group, through various committees, determines the risk reporting requirements that best suit the business.

This includes the following:
(i) risk exposures and profile against risk limits and risk strategy
(ii) large risk events and subsequent remedial action plans
(iii) market developments such as macro-economic, credit, industry, country risks, emerging risk concentrations and stress tests related to these developments

Stress testing is an integral part of the Group's risk management process. It includes both sensitivity analysis and scenario analysis and is conducted regularly. In particular, the ICAAP (a group-wide exercise spanning risk types) is performed annually. On top of this, additional stress tests are carried out in response to microeconomic and macroeconomic conditions or portfolio developments. Every stress test is documented and the results are discussed at the BRMC.

Stress testing alerts the management to our potential vulnerability to exceptional but plausible adverse events. As such, stress testing enables us to assess capital adequacy and identify potentially risky portfolio segments as well as inherent systematic risks. This then allows us to develop the right contingency plans, exit strategies and mitigating actions beforehand.

The ICAAP ensures our business plans are consistent with our risk appetite. This is done by comparing the projected demand for capital to the projected supply of capital under various scenarios, including severe macroeconomic stress.

10 OVERVIEW OF RISK-WEIGHTED ASSETS

The following table sets out the Group's RWA and capital requirements.

		a	b	c
		RWA		**Minimum capital requirements**[1]
$m		**31 Dec 2019**	**30 Sep 2019**	**31 Dec 2019**
1	**Credit risk (excluding CCR)**	234,591	234,821	23,459
2	*of which: Standardised Approach*	*42,736*	*43,285*	*4,274*
3	*of which: F-IRBA*	*141,582*	*141,613*	*14,158*
4	*of which: supervisory slotting approach*	*39,685*	*39,390*	*3,968*
5	*of which: A-IRBA*	*10,588*	*10,533*	*1,059*
6	**CCR**	10,109	10,258	1,011
7	*of which: Current Exposure Method*	*7,285*	*8,234*	*728*
8	*of which: CCR Internal Models Method*	-	-	-
9	*of which: other CCR*	*2,007*	*1,117*	*201*
9a	*of which: CCP*	*817*	*907*	*82*
10	CVA	5,912	6,930	591
11	Equity exposures under the simple risk weight method	-	-	-
11a	Equity exposures under the IMM	-	-	-
12	Equity investments in funds – look-through approach	84	100	8
13	Equity investments in funds – mandate-based approach	17	20	2
14	Equity investments in funds – fall-back approach	#	#	#
14a	Equity investment in funds – partial use of an approach	-	-	-
15	**Unsettled transactions**	38	60	4
16	**Securitisation exposures in banking book**	851	956	85
17	*of which: SEC-IRBA*	-	-	-
18	*of which: SEC-ERBA, including IAA*	*851*	*956*	*85*
19	*of which: SEC-SA*	-	-	-
20	**Market risk**	28,696	29,960	2,870
21	*of which: SA(MR)*	*28,696*	*29,960*	*2,870*
22	*of which: IMA*	-	-	-
23	**Operational risk**	22,673	22,357	2,267
24	**Amounts below the thresholds for deduction (subject to 250% risk weight)**	800	786	80
25	**Floor adjustment**	-	-	-
26	**Total**	303,771	306,248	30,377

\# Numbers below 0.5.

(1) Minimum capital requirements in this column correspond to 10% of the RWA in column "(a)" which is 2.0 percentage points higher than the Basel Committee’s requirement.

Compared to the previous quarter, credit risk-weighted assets declined due mainly to foreign currency translation and lower derivative assets, partially offset by an increase in other exposures. Market risk-weighted assets declined mainly due to a reduction in interest rate risk.

11 CREDIT RISK

11.1 Qualitative Disclosures

11.1.1 General Qualitative Disclosures

Credit risk arises from borrowers or counterparties failing to meet their debt or contractual obligations. It includes both the risk of lending, as well as the pre-settlement and settlement risk of foreign exchange, derivatives and debt securities.

RMG-Credit Risk unit, acts as a second line of defence responsible for the development and maintenance of credit risk management and internal control frameworks. It provides an independent review and challenges the first line of defence (e.g. Business Units) who, together with RMG-Credit Risk Unit, are responsible for the identification, assessment and management of risk on an end-to-end basis and in conformity with approved risk appetite and policies.

Various functions under RMG-Credit Risk unit reports to the Chief Credit Officer (CCO):

- Credit risk managers approve and control credit risk and portfolio quality and ensure compliance with all applicable credit policies and procedures
- Credit control units monitor compliance with credit risk policies and standards of the Group and perform independent checks on completeness of documentation and compliance of credit conditions
- Credit remediation units are responsible for establishing, formalising and standardising the end-to-end process to identify, categorise, review and monitor problem credits

RMG-Credit Risk unit also partners the Group Legal and Compliance units to ensure all risk-taking activities abide by regulations, while Group Audit unit serves as a third line of defence to provide an independent assessment and assurance on the reliability, adequacy and effectiveness of our system of internal controls, risk management procedures, governance framework and processes.

The Group’s credit risk management is supported by policies which cover credit risk management process and establish a consistent Group-wide approach for managing credit risk in a structured, systematic and consistent manner.

These policies, supplemented by a number of operational standards and guidelines, ensure consistency in identifying, assessing, underwriting, measuring, reporting and controlling credit risk across the Group and provide guidance in the formulation of business-specific and/or location-specific credit risk policies and standards.

Day-to-day monitoring of credit exposures, portfolio performance and external environmental factors potentially affecting credit risk profiles is key to the Group's philosophy of effective credit risk management. Credit trends, which may include industry analysis, early warning alerts and significant weak credits are submitted to the various risk committees. Please refer to section 9 on the risk management committees established to discuss the various risk types.

In managing its portfolio risk profile, the Group has put in place the Target Market & Risk Acceptance Criteria (TMRAC) that support the Group's portfolio strategy and ensure well-defined and consistent customer onboarding standards across the Group.

The Delegation of Authority (DOA) Standard sets out the level of credit authority required for approval of credit extension to a DOA group, taking into consideration the risk rating and total credit facility limits extended on a groupwide basis. The Group's ultimate credit authority is vested with the Board and the Group Credit Committee is delegated with the authority to approve large exposures and is the highest level of approving authority required before exposures above its DOA are recommended for approval by the Group Board Executive Committee.

The Group engages in various types of credit stress testing, and these are driven either by regulators or internal requirements and management. Independent risk management functions that report to the Chief Risk Officer (CRO) are jointly responsible for developing and maintaining a robust credit stress testing programme. These units oversee the implementation of credit stress tests as well as the analysis of the results, of which the management, various risk committees and regulators are informed.

11.1.2 Qualitative Disclosures related to CRM Techniques

The Group's policies provide detailed policy requirements and references on:
- Eligible collaterals
- Collateral valuation and valuation method
- Appointment of valuers / appraisers
- Loan-to-valuation / margin calls

Core processes for collateral evaluation include:
- Frequency of valuation for the various asset classes
- In the case of classified credits, the minimum discount to be applied to the Net Book Value / Fair Market Value
- Ownership and approving authority
- Deviations

Where possible, the Group takes collateral as a secondary source of repayment. This includes, but is not limited to, cash, marketable securities, real estate, trade receivables, inventory, equipment and other physical and/or financial collateral. The Group may also take fixed and floating charges on the assets of borrowers.

The Group's collateral is generally diversified and periodic valuations of collateral are required. Real estate constitutes the bulk of the Group's collateral, while marketable securities and cash are immaterial.

For derivatives, repurchase agreements (repo) and other repo-style transactions with financial market counterparties, collateral arrangements are typically covered under market-standard documentation, such as International Swaps & Derivatives Association (ISDA) Agreements and Master Repurchase Agreements. The collateral received is marked-to-market on a frequency that the Group and the counterparties have mutually agreed upon. This is governed by internal guidelines with respect to collateral eligibility. In the event of a default, the credit risk exposure is reduced by master-netting arrangements where the Group is allowed to offset what is owed to a counterparty against what is due from that counterparty in a netting-eligible jurisdiction.

Collateral held against derivatives generally consists of cash in major currencies and highly rated government or quasi-government bonds. Exceptions may arise in certain countries, where due to domestic capital markets and business conditions, the Group may be required to accept less highly rated or liquid government bonds and currencies. Reverse repo-transactions are generally limited to large institutions with reasonably good credit standing. The Group takes haircuts against the underlying collateral of these transactions that commensurate with collateral quality to ensure credit risks are adequately mitigated.

In times of difficulty, the Group will review the customers' specific situation and circumstance to assist them in restructuring their financial obligations. However, should the need arise, disposal and recovery processes are in place to dispose of collateral held. The Group maintains a panel of agents and solicitors to assist in the disposal of non-liquid assets and specialised equipment quickly.

The Group also accepts guarantees as credit risk mitigants. Internal requirements for considering the eligibility of guarantors for credit risk mitigation are in place.

11.1.3 Qualitative Disclosures on the use of External Credit Ratings under SA(CR)

The Group uses external ratings for credit exposures under the Standardized Approach where relevant and only accepts ratings from Standard & Poor's Ratings Services, Moody’s Investor Services and Fitch Ratings. There has been no change in this regard during the reporting period. The Group follows the processes prescribed in MAS Notice 637 to map the ratings to the relevant risk weights across the various asset classes under the Standardised Approach.

Where the SA(CR) exposure has an issue-specific external credit assessment, the Group uses such an assessment for calculating the applicable risk weights. Where the SA(CR) exposure does not have an issue-specific external credit assessment, a process is in place to use the available external credit ratings of comparable assets as prescribed in MAS Notice 637.

11.1.4 Qualitative Disclosures for IRBA Models

The Group adopts rating systems for the different asset classes under the IRBA. There is a robust governance process for the development, independent validation and approval of any credit risk model. The roles and responsibilities between various stakeholders in the model development and management process are articulated in the Model Risk Policy. This policy applies to the Group, including its banking subsidiaries on a global basis.

The models go through a rigorous review process before they are endorsed by the GCRMC and the Risk ExCo. They must be approved by the BRMC before being used. The key risk measures generated by the internal credit risk rating models to quantify regulatory capital include Probability of Default (PD), Loss Given Default (LGD) and Exposure at Default (EAD). PD measures the likelihood that a borrower defaults on its credit obligation over a period of one year. LGD is the loss likely to be incurred on an exposure upon default of an obligor relative to the amount outstanding at default, i.e., EAD. EAD is the expected amount of an exposure that the Group is exposed to upon the default of an obligor. It is measured gross of specific provisions and adjusted for the risk mitigating effects of valid bilateral netting arrangements. Credit rating systems used for regulatory capital reporting under the IRBA are subject to regulatory approvals.

For portfolios under the F-IRBA, internal estimates of PD are used while the supervisory LGD and EAD estimates are applied. For retail portfolios under the A-IRBA, internal estimates of PD, LGD and EAD are used. Relevant regulatory floors are applied in regulatory capital calculation and reporting.

The performance of the rating systems is monitored regularly and reported to the GCRMC, Risk Exco and the BRMC to ensure their ongoing effectiveness. To provide assurance to the approving authority, models are periodically reviewed and/or validated by RMG-Model Validation unit. RMG-Model Validation unit also conducts formal validations for the respective rating systems annually. The validation processes are also independently reviewed by Group Audit.

Retail Portfolios

Retail portfolios are categorised into the following asset classes under the A-IRBA: residential mortgages, qualifying revolving retail exposures and other retail exposures.

A-IRBA portfolios constitute 14% of the Group's Credit EAD and 4% of Group's Credit RWA. Within each asset class, exposures are managed on a portfolio basis. Each customer or account is assigned to a risk pool, considering factors such as borrower characteristics and collateral type. PD, EAD and LGD estimates are based on internal historical default, utilisation and realised losses within a defined period. Default is identified at facility level.

Product-specific credit risk elements such as underwriting criteria, scoring models, approving authorities and asset quality and business strategy reviews, as well as systems, processes and techniques to monitor portfolio performance, are in place. Credit risk models for secured and unsecured portfolios are also used to update the risk level of each loan on a monthly basis, reflecting the broad usage of risk models in portfolio quality reviews.

For LGD, a downturn component is explicitly estimated for each model segment using specific macroeconomic variables to time periods considered representative of downturn conditions. For on-balance sheet items (e.g., term loans or mortgage loans), EAD is equal to the current book value of the facility. For off-balance sheet transactions, (e.g., undrawn amount of revolving facility), EAD consists of the amount currently drawn and the expected utilisation of committed and undrawn amount at the time of default.

Wholesale Portfolios

Wholesale exposures are under F-IRBA for capital computation. They include sovereign, bank and corporate. Specialised lending exposures are under IRBA using supervisory slotting citeria specified in Annex 7V of MAS Notice 637.

Portfolios on F-IRB approach (excluding Specialised Lending) constitute 65% of the Group's Credit EAD and 59% of Group's Credit RWA. Portfolios on SA(CR) account for 9% of Group's Credit EAD and 16% of Group's Credit RWA. Equity Exposures under SA(EQ) account for 0.5% of Group's Credit EAD and 2% of Group's Credit RWA.

Sovereign exposures are risk-rated using internal risk-rating models. The models are built through statistical methods using external data (e.g., macroeconomic information and external ratings). Factors related to country-specific macroeconomic risk, political risk, social risk and liquidity risk are included in the sovereign rating models to assess the sovereign credit risk in an objective and systematic manner.

11.1.4 Qualitative Disclosures for IRBA Models (continued)

Bank exposures are assessed using the bank rating model, a statistical model that considers both external information (financial statements, external ratings) and internal information (qualitative factors). The model considers both quantitative and qualitative factors such as capital levels and liquidity, asset quality, earnings, management and market sensitivity.

Large corporate exposures are assessed using internal rating models. It is a statistical model built based on internal data and calibrated to internal default experience, incorporating the impact of economic cycle(s). Factors considered in the risk assessment process include the counterparty's financial strength and qualitative factors such as industry risk, access to funding, market standing and management strength.

SME credit rating model is a statistical model including risk factors on the counterparty's financial strength, qualitative factors as well as account performance. The models are calibrated to internal default experience, incorporating the impact of economic cycle(s). Credit risk ratings under the IRBA portfolios are, at a minimum, reviewed by designated officer on an annual basis unless credit conditions require more frequent assessment.

11.1.5 Additional Disclosures related to the Credit Quality of Assets

The Group's credit facilities are classified as "Performing assets" or "Non-performing assets" (NPA), in accordance with the MAS Notice to Banks No. 612 "Credit Files, Grading and Provisioning" (MAS Notice 612). This is the same basis that is adopted for the Group's financial statements.

Credit exposures are categorised into one of the following five categories, according to the Group's assessment of a borrower's ability to repay a credit facility from its normal sources of income and/ or the repayment behaviour of the borrower.

Classification grade	Description
Performing assets	
Pass	Indicates that the timely repayment of the outstanding credit facilities is not in doubt.
Special Mention	Indicates that the borrower exhibits potential weaknesses that, if not corrected in a timely manner, may adversely affect future repayments and warrant close attention by the Group.
Classified or NPA	
Substandard	Indicates that the borrower exhibits definable weaknesses in its business, cash flow or financial position that may jeopardise repayment on existing terms.
Doubtful	Indicates that the borrower exhibits severe weaknesses such that the prospect of full recovery of the outstanding credit facilities is questionable and the prospect of a loss is high, but the exact amount remains undeterminable as yet.
Loss	Indicates that the outstanding credit facility is not collectable, and little or nothing can be done to recover the outstanding amount from any collateral or from the assets of the borrower generally.

A default is considered to have occurred with regard to a particular borrower when either or both of the following events have taken place:

- Subjective default: Borrower is considered to be unlikely to pay its credit obligations in full, without the Group taking action such as realising security (if held)
- Technical default: Borrower is more than 90 days past due on any credit obligation to the Group

For retail borrower, the categorisation into the respective MAS loan grades is at facility level and consistent with MAS Notice 612.

The above approach is consistent with the guidance provided under MAS Notice 637.

In estimating specific allowances, the Group assesses the gap between the borrowers' obligations to the Group and their repayment ability. The assessment takes into account various factors, including the economic or business outlook, the future cashflows of the borrowers and the liquidation value of collateral.

11.1.5 Additional Disclosures related to the Credit Quality of Assets (continued)

Credit facilities are classified as restructured assets when the Group grants non-commercial concessions to a borrower because its financial position has deteriorated or is unable to meet the original repayment schedule. A restructured credit facility is classified into the appropriate non-performing grade based on the assessment of the borrower's financial condition and its ability to repay according to the restructured terms.

Such credit facilities are not returned to the performing status until there are reasonable grounds to conclude that the borrower will be able to service all future principal and interest payments on the credit facility in accordance with the restructured terms and MAS Notice 612.

A new methodology for general allowances was implemented in 2018 as part of the adoption of SFRS(I) 9. Computation of general allowances is now based on an expected credit loss (ECL) balance derived from risk models, loss experience and macroeconomic forecasts.

ECLs are unbiased estimates of credit losses determined by evaluating a range of possible outcomes, considering past events, current conditions and assessments of future economic conditions. The ECL associated with a financial instrument is typically a product of its probability of default (PD), loss given default (LGD) and exposure at default (EAD) discounted using the original effective interest rate to the reporting date.

The Group leverages the models and parameters implemented under the IRBA where possible, with appropriate modifications to meet SFRS(I) 9 requirements. These include:
- conversion of Basel Through-the-Cycle PDs to Point-in-Time PDs and application of forward-looking elements
- modifications to LGDs to better reflect emerging market conditions

Other relevant historical information, loss experience or proxies will be utilised for portfolios without appropriate Basel models and parameters, with a view to maximise the use of available information that is reliable and supportable.

At the same time, the Group is required to maintain a general allowance of at least 1% of the gross carrying amount of selected credit exposures net of collaterals per MAS Notice 612. When general allowances fall below 1%, the shortfall is apportioned from retained earnings in the shareholders' funds into a non-distributable Regulatory Loss Allowance Reserve (RLAR) account.

Please refer to the Notes to the Financial Statements in the latest available annual report for more information on impairment requirements under SFRS(I) 9.

11.2 Quantitative Disclosures

11.2.1 Credit Quality of Assets

The following table provides an overview of the credit quality of the Group's on and off-balance sheet assets. Figures are based on carrying amounts as reported in the financial statements.

		31 Dec 2019						
		a	b	c	d	e	f	g
		Gross carrying amount of		Allowances and impairments	of which: allowances for standardised approach exposures		of which: allowances for IRBA exposures	Net values (a+b-c)
$m		Defaulted exposures	Non-defaulted exposures		of which: specific allowances	of which: general allowances		
1	Loans[1]	5,480	412,933	4,655	189	451	4,015	413,758
2	Debt Securities	40	83,453	28	-	#	28	83,465
3	Off-balance sheet exposures	253	76,804	327	-	4	323	76,730
4	**Total**	**5,773**	**573,190**	**5,010**	**189**	**455**	**4,366**	**573,953**

		30 Jun 2019						
		a	b	c	d	e	f	g
		Gross carrying amount of		Allowances and impairments	of which: allowances for standardised approach exposures		of which: allowances for IRBA exposures	Net values (a+b-c)
$m		Defaulted exposures	Non-defaulted exposures		of which: specific allowances	of which: general allowances		
1	Loans[1]	5,482	397,363	4,980	185	451	4,344	397,865
2	Debt Securities	46	80,849	29	-	#	29	80,866
3	Off-balance sheet exposures	293	72,039	349	-	4	345	71,983
4	**Total**	**5,821**	**550,251**	**5,358**	**185**	**455**	**4,718**	**550,714**

A default is considered to have occurred with regard to a particular borrower when either or both of the following events have taken place:

a) Subjective default: Borrower is considered to be unlikely to pay its credit obligations in full, without the Group taking action such as realising security (if held).

b) Technical default: Borrower is more than 90 days past due on any credit obligation to the Group.

Specific allowances (column d) are ascribed to the identified standardised approach exposures, while the categorisation of general allowances (column e) is consistent with the methods set out in MAS Notice 637.

11.2.2 Changes in Stock of Defaulted Loans[1] and Debt Securities

The following table provides the changes in the Group's defaulted loans and debt securities (excluding off-balance sheet exposures), including any (i) return to non-defaulted status, and (ii) reduction in defaulted exposures due to write-off. Figures are based on carrying amounts as reported in the financial statements.

		31 Dec 2019
$m		a
1	**Defaulted loans and debt securities at end of the previous semi-annual reporting period**	**5,528**
2	Loans and debt securities that have defaulted since the previous semi-annual reporting period	986
3	Returned to non-defaulted status	(22)
4	Amounts written off	(794)
5	Other changes	(178)
6	**Defaulted loans and debt securities at end of the semi-annual reporting period**	**5,520**

Defaulted loans and debt securities decreased marginally in the second half of 2019 as new defaulted loans and debt securities were offset by recoveries and write offs. “Other changes” (as shown above) include mainly recoveries and foreign exchange translation differences.

Numbers below 0.5.

[1] Loans include loans and advances to customers and other assets which give rise to credit exposures.

11.2.3 Additional Quantitative Disclosures related to Credit Quality of Assets

The following tables show the breakdown of credit risk exposures by geographical areas, industry and residual maturity.

Breakdown by geographical areas

	31 Dec 2019	31 Dec 2018
$m	**Total**	
Singapore	241,687	224,053
Hong Kong	68,051	69,004
Rest of Greater China	85,681	81,536
South and Southeast Asia	47,343	46,150
Rest of the world	136,201	119,361
Total	**578,963**	**540,104**

Breakdown by industry

	31 Dec 2019	31 Dec 2018
$m	**Total**	
Manufacturing	57,897	53,200
Building and construction	105,097	93,534
Housing loans	79,280	79,748
General commerce	65,558	65,711
Transportation, storage and communications	41,637	40,527
Financial institutions, investment and holding companies	94,262	90,256
Government	41,524	38,261
Professional and private individuals(excluding housing loans)	31,208	27,039
Others	62,500	51,828
Total	**578,963**	**540,104**

Breakdown by residual maturity

	31 Dec 2019	31 Dec 2018
$m	**Total**	
Up to 1 year	293,203	265,304
More than 1 year	281,893	271,868
No specific maturity	3,867	2,932
Total	**578,963**	**540,104**

11.2.3 Additional Quantitative Disclosures related to Credit Quality of Assets (continued)

The following tables show the breakdown of impaired exposures, specific allowances[(1)] and write-offs (during the year)[(2)] by geographical areas and industry.

Breakdown by geographical areas

	31 Dec 2019		
$m	Impaired exposures	Specific allowances	Write-offs (during year 2019)[(2)]
Singapore	3,722	1,405	424
Hong Kong	492	279	37
Rest of Greater China	357	130	36
South and Southeast Asia	751	463	326
Rest of the world	80	28	18
Sub-total	5,402	2,305	841
Debt Securities, contingent liabilities and others	371	197	28
Total	**5,773**	**2,502**	**869**

	31 Dec 2018		
$m	Impaired exposures	Specific allowances	Write-offs (during year 2018)[(2)]
Singapore	3,335	1,488	170
Hong Kong	511	258	58
Rest of Greater China	411	130	107
South and Southeast Asia	908	521	249
Rest of the world	86	43	34
Sub-total	5,251	2,440	618
Debt Securities, contingent liabilities and others	433	172	41
Total	**5,684**	**2,612**	**659**

[(1)] Specific allowances refers to Expected Credit Loss Stage 3.

[(2)] Net of recoveries

11.2.3 Additional Quantitative Disclosures related to Credit Quality of Assets (continued)

Breakdown by industry

	31 Dec 2019		
$m	**Impaired exposures**	**Specific allowances**	**Write-offs (during year 2019)[1]**
Manufacturing	551	296	50
Building and construction	308	140	16
Housing loans	195	11	-
General commerce	586	313	120
Transportation, storage and communications	3,099	1,346	381
Financial institutions, investment and holding companies	65	19	(2)
Professional and private individuals(excluding housing loans)	498	138	188
Others	100	42	88
Sub-total	5,402	2,305	841
Debt Securities, contingent liabilities and others	371	197	28
Total	**5,773**	**2,502**	**869**

	31 Dec 2018		
$m	**Impaired exposures**	**Specific allowances**	**Write-offs (during year 2018)[1]**
Manufacturing	572	302	190
Building and construction	248	127	34
Housing loans	182	10	3
General commerce	645	268	79
Transportation, storage and communications	2,869	1,506	63
Financial institutions, investment and holding companies	48	18	5
Professional and private individuals(excluding housing loans)	504	129	210
Others	183	80	34
Sub-total	5,251	2,440	618
Debt Securities, contingent liabilities and others	433	172	41
Total	**5,684**	**2,612**	**659**

[1] Net of recoveries

The following table shows the breakdown of the ageing analysis of past due exposures.

	31 Dec 2019	31 Dec 2018
$m	**Total**	
Within 90 days	3,056	2,617
Over 90 to 180 days	601	437
Over 180 days	3,473	3,545
Total	**7,130**	**6,599**

Credit facilities are classified as restructured assets when the Group grants non-commercial concessions to a borrower because its financial position has deteriorated or is unable to meet the original repayment schedule. A restructured credit facility is classified into the appropriate non-performing grade based on the assessment of the borrower's financial condition and its ability to repay according to the restructured terms.

The amount of impaired restructured credit exposures as at 31 December 2019 was S$1,431 million.

11.2.4 Overview of CRM Techniques

The following table provides an overview on the Group's usage of CRM techniques.

		31 Dec 2019				
		a	b	c	d	e
$m		Exposures unsecured	Exposures secured	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1	Loans	284,121	129,637	99,798	12,895	-
2	Debt securities	79,833	3,632	446	3,186	-
3	**Total**	**363,954**	**133,269**	**100,244**	**16,081**	**-**
4	Of which: defaulted	1,267	1,851	1,645	122	-

		30 Jun 2019				
		a	b	c	d	e
$m		Exposures unsecured	Exposures secured	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1	Loans	268,757	129,108	99,042	13,411	-
2	Debt securities	77,840	3,026	487	2,540	-
3	**Total**	**346,597**	**132,134**	**99,529**	**15,951**	**-**
4	Of which: defaulted	1,391	1,424	1,318	59	-

The effects of credit risk mitigation techniques are presented in accordance with the requirements, including collateral eligibility and prescribed haircuts, outlined in MAS Notice 637. As such, the reported collateral value is a subset of the total collateral value and would have excluded, as an illustration, ineligible collateral types such as industrial properties located outside of Singapore, plant and machinery as well as the underlying assets financed through specialised lending.

The increase in the overall balances of loans and debt securities in the second half of 2019 was in line with the balance sheet growth.

11.2.5 SA(CR) and SA(EQ) - Credit Risk Exposure and CRM Effects

The following table provides the effects of CRM on the calculation of the Group's capital requirements for SA(CR).

		31 Dec 2019					
		a	b	c	d	e	f
		Exposures before CCF and CRM		Exposures post-CCF and post-CRM		RWA and RWA density[(1)]	
		On-balance sheet amount ($m)	Off-balance sheet amount ($m)	On-balance sheet amount ($m)	Off-balance sheet amount ($m)	RWA ($m)	RWA density (%)
	Asset classes and others						
1	Cash items	5,738	-	5,738	-	13	#
2	Central government and central bank	88	-	225	-	-	-
3	PSE	357	148	800	1	318	40
4	MDB	3,924	-	3,924	-	30	#
5	Bank	238	8	277	2	123	44
6	Corporate	9,360	19,048	7,243	175	7,418	100
7	Regulatory retail	2,477	504	2,242	48	1,717	75
8	Residential mortgage	10,937	1,896	10,811	341	4,001	36
9	CRE	620	246	611	16	627	100
10	Equity - SA(EQ)	2,756	76	2,756	15	4,444	160
11	Past due exposures	344	#	341	#	447	131
12	Higher-risk categories	-	-	-	-	-	-
13	Other exposures	30,569	81,676	23,427	171	23,598	100
14	**Total**	**67,408**	**103,602**	**58,395**	**769**	**42,736**	**72**

		30 Jun 2019					
		a	b	c	d	e	f
		Exposures before CCF and CRM		Exposures post-CCF and post-CRM		RWA and RWA density[(1)]	
		On-balance sheet amount ($m)	Off-balance sheet amount ($m)	On-balance sheet amount ($m)	Off-balance sheet amount ($m)	RWA ($m)	RWA density (%)
	Asset classes and others						
1	Cash items	4,112	-	4,112	-	12	#
2	Central government and central bank	80	-	81	-	#	#
3	PSE	182	-	545	1	255	47
4	MDB	4,854	-	4,854	-	7	#
5	Bank	221	1	264	#	114	43
6	Corporate	9,227	19,350	7,109	212	7,310	100
7	Regulatory retail	2,372	485	2,354	37	1,793	75
8	Residential mortgage	10,678	1,580	10,547	296	3,888	36
9	CRE	580	301	571	22	593	100
10	Equity - SA(EQ)	2,747	-	2,747	-	4,407	160
11	Past due exposures	411	#	411	-	533	130
12	Higher-risk categories	-	-	-	-	-	-
13	Other exposures	29,608	77,238	22,925	119	23,044	100
14	**Total**	**65,072**	**98,955**	**56,520**	**687**	**41,956**	**73**

\# Numbers below 0.5.

(1) RWA density is calculated as total RWA divided by the exposures post-CCF and post-CRM, expressed as a percentage.

Total exposures increased in the second half of 2019 mainly driven by an increase in cash items.

11.2.6 SA(CR) and SA(EQ) - Exposures by Asset Classes and Risk Weights

The following table provides the breakdown of Group's credit risk exposures under the SA(CR) and SA(EQ) by asset class and risk weight.

		31 Dec 2019									
		a	b	c	d	e	f	g	h	i	j
		Risk weight									Total credit exposure amount (post-CCF and post-CRM)
$m		0%	10%	20%	35%	50%	75%	100%	150%	Others	
	Asset class and others										
1	Cash items	5,674	-	64	-	-	-	-	-	-	5,738
2	Central government and central bank	225	-	#	-	#	-	-	-	-	225
3	PSE	-	-	276	-	525	-	-	-	-	801
4	MDB	3,796	-	114	-	14	-	-	-	-	3,924
5	Bank	-	-	90	-	168	-	21	-	-	279
6	Corporate	-	-	-	-	-	-	7,418	-	-	7,418
7	Regulatory retail	-	-	-	-	-	2,290	-	-	-	2,290
8	Residential mortgage	-	-	-	10,967	-	92	93	-	-	11,152
9	CRE	-	-	-	-	-	-	627	-	-	627
10	Equity - SA(EQ)	-	-	-	-	-	-	-	-	2,771	2,771
11	Past due exposures	-	-	-	-	-	-	130	211	-	341
12	Higher-risk categories	-	-	-	-	-	-	-	-	-	-
13	Other exposures	-	-	-	-	-	-	23,598	-	-	23,598
14	**Total**	**9,695**	**-**	**544**	**10,967**	**707**	**2,382**	**31,887**	**211**	**2,771**	**59,164**

		30 Jun 2019									
		a	b	c	d	e	f	g	h	i	j
		Risk weight									Total credit exposure amount (post-CCF and post-CRM)
$m		0%	10%	20%	35%	50%	75%	100%	150%	Others	
	Asset class and others										
1	Cash items	4,052	-	60	-	-	-	-	-	-	4,112
2	Central government and central bank	81	-	#	-	#	-	-	-	-	81
3	PSE	-	-	59	-	487	-	-	-	-	546
4	MDB	4,821	-	33	-	-	-	-	-	-	4,854
5	Bank	-	-	72	-	185	-	7	-	-	264
6	Corporate	-	-	2	-	19	-	7,300	-	-	7,321
7	Regulatory retail	-	-	-	-	-	2,391	-	-	-	2,391
8	Residential mortgage	-	-	-	10,672	-	74	97	-	-	10,843
9	CRE	-	-	-	-	-	-	593	-	-	593
10	Equity - SA(EQ)	-	-	-	-	-	-	-	-	2,747	2,747
11	Past due exposures	-	-	-	-	-	-	167	244	-	411
12	Higher-risk categories	-	-	-	-	-	-	-	-	-	-
13	Other exposures	-	-	-	-	-	-	23,044	-	-	23,044
14	**Total**	**8,954**	**-**	**226**	**10,672**	**691**	**2,465**	**31,208**	**244**	**2,747**	**57,207**

Numbers below 0.5.

Total exposures increased in the second half of 2019 mainly driven by an increase in cash items.

11.2.7 IRBA - Credit Risk Exposures by Portfolio and PD Range

The following tables provide the main parameters used to calculate the Group's capital requirements for its IRBA models[1].

11.2.7.1 Advanced IRBA

	31 Dec 2019											
	a	b	c	d	e	f	g	h	i	j	k	l
PD Range (%)	Original on-balance sheet gross exposures ($m)	Off-balance sheet exposures pre CCF ($m)	Average CCF (%)	EAD post CRM and post-CCF ($m)	Average PD (%)	Number of obligors[2]	Average LGD (%)	Average maturity (years)	RWA ($m)	RWA density[3] (%)	EL ($m)	TEP ($m)
Retail - QRRE												
0.00 to <0.15	353	6,425	34	2,559	0.09	372,064	84		130	5	2	
0.15 to <0.25	765	9,544	52	5,717	0.18	558,607	97		575	10	10	
0.25 to <0.50	922	4,374	46	2,922	0.38	340,324	91		500	17	10	
0.50 to <0.75	-	-	-	-	-	-	-		-	-	-	
0.75 to <2.50	1,355	4,956	51	3,901	1.52	400,397	95		2,060	53	57	
2.50 to <10.00	980	408	82	1,316	4.55	99,550	86		1,348	102	52	
10.00 to <100.00	519	115	117	653	22.40	38,591	92		1,612	247	134	
100.00 (Default)[4]	210	-	-	210	100.00	24,015	92		-	-	194	
Sub-total	**5,104**	**25,822**	**47**	**17,278**	**2.89**	**1,833,548**	**92**		**6,225**	**36**	**459**	**599**
Retail - Residential mortgage												
0.00 to <0.15	14,013	4,307	100	18,320	0.14	22,162	11		652	4	3	
0.15 to <0.25	8,508	24	100	8,532	0.18	23,589	12		403	5	2	
0.25 to <0.50	34,624	273	100	34,897	0.27	75,553	11		2,063	6	11	
0.50 to <0.75	778	-	-	778	0.63	1,152	13		100	13	1	
0.75 to <2.50	2,021	381	100	2,401	0.81	8,025	11		319	13	2	
2.50 to <10.00	712	2	100	714	3.67	1,639	12		254	36	3	
10.00 to <100.00	400	1	100	401	24.77	1,070	14		342	85	14	
100.00 (Default)[4]	126	#	100	127	100.00	430	26		-	-	33	
Sub-total	**61,182**	**4,988**	**100**	**66,170**	**0.62**	**133,620**	**11**		**4,133**	**6**	**69**	**89**
Other retail exposures												
0.00 to <0.15	-	-	-	-	-	-	-		-	-	-	
0.15 to <0.25	1,598	-	-	1,598	0.16	37,734	20		113	7	#	
0.25 to <0.50	745	-	-	745	0.28	10,828	18		73	10	#	
0.50 to <0.75	1	-	-	1	0.64	9	40		#	35	#	
0.75 to <2.50	134	-	-	134	1.16	3,292	22		33	25	#	
2.50 to <10.00	-	-	-	-	-	-	-		-	-	-	
10.00 to <100.00	19	-	-	19	14.64	480	27		11	56	1	
100.00 (Default)[4]	1	-	-	1	100.00	22	46		-	-	#	
Sub-total	**2,498**	**-**	**-**	**2,498**	**0.40**	**52,365**	**19**		**230**	**9**	**1**	**3**
Total (all portfolios)	**68,784**	**30,810**	**56**	**85,946**	**1.07**	**2,019,533**	**28**		**10,588**	**12**	**529**	**691**

\# Numbers below 0.5.

[1] As at the reporting date, the Group does not have any credit derivative used as CRM in its Banking book.

[2] Number of obligors or accounts used in the respective asset classes as per the Group's A-IRBA models.

[3] For definition of RWA density, refer to footnote of 11.2.5.

[4] For definition of default, refer to 11.2.1.

11.2.7.1 Advanced IRBA (continued)

	30 Jun 2019											
	a	b	c	d	e	f	g	h	i	j	k	l
PD Range (%)	Original on-balance sheet gross exposures ($m)	Off-balance sheet exposures pre CCF ($m)	Average CCF (%)	EAD post CRM and post-CCF ($m)	Average PD (%)	Number of obligors[2]	Average LGD (%)	Average maturity (years)	RWA ($m)	RWA density[3] (%)	EL ($m)	TEP ($m)
Retail - QRRE												
0.00 to <0.15	339	6,508	35	2,591	0.09	383,801	84		131	5	2	
0.15 to <0.25	699	9,037	52	5,401	0.18	524,217	97		544	10	9	
0.25 to <0.50	880	4,282	46	2,851	0.38	330,792	91		488	17	10	
0.50 to <0.75	-	-	-	-	-	-	-		-	-	-	
0.75 to <2.50	1,303	4,870	52	3,830	1.53	391,439	95		2,026	53	56	
2.50 to <10.00	999	418	82	1,341	4.58	102,987	86		1,378	103	53	
10.00 to <100.00	528	110	120	660	22.54	39,826	92		1,627	246	136	
100.00 (Default)[4]	195	-	-	195	100.00	23,186	92		-	-	180	
Sub-total	**4,943**	**25,225**	**47**	**16,869**	**2.89**	**1,796,248**	**92**		**6,194**	**37**	**446**	**606**
Retail - Residential mortgage												
0.00 to <0.15	15,180	3,298	100	18,479	0.14	22,423	11		658	4	3	
0.15 to <0.25	8,143	34	100	8,177	0.18	22,838	12		393	5	2	
0.25 to <0.50	34,469	348	100	34,817	0.27	74,845	11		2,068	6	11	
0.50 to <0.75	502	-	-	502	0.63	816	13		65	13	#	
0.75 to <2.50	2,177	805	100	2,982	0.94	8,873	11		420	14	3	
2.50 to <10.00	936	2	100	938	5.52	2,428	13		413	44	7	
10.00 to <100.00	401	3	100	404	24.79	1,121	12		306	76	12	
100.00 (Default)[4]	148	#	100	148	100.00	437	27		-	-	41	
Sub-total	**61,956**	**4,490**	**100**	**66,447**	**0.70**	**133,781**	**11**		**4,323**	**7**	**79**	**106**
Other retail exposures												
0.00 to <0.15	-	-	-	-	-	-	-		-	-	-	
0.15 to <0.25	1,406	-	-	1,406	0.16	34,251	21		105	7	#	
0.25 to <0.50	911	-	-	911	0.28	14,132	18		87	10	#	
0.50 to <0.75	1	-	-	1	0.64	6	43		#	37	#	
0.75 to <2.50	136	-	-	136	1.16	3,461	24		37	27	#	
2.50 to <10.00	-	-	-	-	-	-	-		-	-	-	
10.00 to <100.00	23	-	-	23	14.92	591	29		14	61	1	
100.00 (Default)[4]	1	-	-	1	100.00	29	46		-	-	#	
Sub-total	**2,478**	**-**	**-**	**2,478**	**0.44**	**52,470**	**20**		**243**	**10**	**1**	**4**
Total (all portfolios)	**69,377**	**29,715**	**55**	**85,794**	**1.12**	**1,982,499**	**27**		**10,760**	**13**	**526**	**716**

\# Numbers below 0.5.

[1] As at the reporting date, the Group does not have any credit derivative used as CRM in its Banking book.

[2] Number of obligors or accounts used in the respective asset classes as per the Group's A-IRBA models.

[3] For definition of RWA density, refer to footnote of 11.2.5.

[4] For definition of default, refer to 11.2.1.

Total exposures and RWA density were relatively stable in the second half of 2019.

11.2.7.2 Foundation IRBA

	31 Dec 2019											
	a	b	c	d	e	f	g	h	i	j	k	l
PD Range (%)	Original on-balance sheet gross exposures ($m)	Off-balance sheet exposures pre CCF ($m)	Average CCF (%)	EAD post CRM and post-CCF ($m)	Average PD (%)	Number of obligors	Average LGD (%)	Average maturity (years)	RWA ($m)	RWA density[1] (%)	EL ($m)	TEP ($m)
Sovereign												
0.00 to <0.15	58,227	46	78	61,197	0.01	23	45	2	4,020	7	3	
0.15 to <0.25	1,785	-	-	1,785	0.24	4	45	2	883	49	2	
0.25 to <0.50	3,555	-	-	3,555	0.38	2	45	2	2,219	62	6	
0.50 to <0.75	-	-	-	-	-	-	-	-	-	-	-	
0.75 to <2.50	70	-	-	70	0.99	3	45	2	61	87	#	
2.50 to <10.00	-	-	-	-	-	-	-	-	-	-	-	
10.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	
100.00 (Default)[2]	-	-	-	-	-	-	-	-	-	-	-	
Sub-total	**63,637**	**46**	**78**	**66,607**	**0.04**	**32**	**45**	**2**	**7,183**	**11**	**11**	**14**
Banks												
0.00 to <0.15	52,078	5,198	23	51,480	0.05	152	45	1	8,297	16	13	
0.15 to <0.25	2,130	110	29	2,193	0.24	31	46	1	1,008	46	2	
0.25 to <0.50	3,245	586	57	3,609	0.38	31	41	1	1,714	47	6	
0.50 to <0.75	631	178	30	677	0.61	15	35	1	349	52	1	
0.75 to <2.50	2,006	307	25	2,016	1.37	58	40	1	1,428	71	11	
2.50 to <10.00	232	85	4	227	3.15	15	45	#	246	108	3	
10.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	
100.00 (Default)[2]	-	-	-	-	-	-	-	-	-	-	-	
Sub-total	**60,322**	**6,464**	**26**	**60,202**	**0.14**	**302**	**45**	**1**	**13,042**	**22**	**36**	**48**
Corporate												
0.00 to <0.15	61,482	44,235	29	77,297	0.04	497	45	2	13,984	18	15	
0.15 to <0.25	32,340	32,532	26	40,347	0.22	419	43	2	16,608	41	38	
0.25 to <0.50	39,453	39,985	20	46,210	0.33	875	45	2	24,812	54	69	
0.50 to <0.75	16,200	13,210	19	18,819	0.56	713	44	2	12,988	69	46	
0.75 to <2.50	32,773	37,130	11	35,625	1.50	8,511	41	2	33,120	93	219	
2.50 to <10.00	7,458	3,971	8	6,657	4.76	2,349	40	2	8,668	130	126	
10.00 to <100.00	1,091	232	21	1,056	18.54	313	41	2	2,234	212	82	
100.00 (Default)[2]	4,073	248	75	4,080	100.00	513	43	2	-	-	1,746	
Sub-total	**194,870**	**171,543**	**21**	**230,091**	**2.39**	**14,190**	**44**	**2**	**112,414**	**49**	**2,341**	**3,057**
Corporate small business												
0.00 to <0.15	87	269	-	87	0.05	1	45	2	11	13	#	
0.15 to <0.25	6	54	1	31	0.22	8	45	1	9	30	#	
0.25 to <0.50	537	577	6	596	0.37	156	43	2	313	53	1	
0.50 to <0.75	633	551	7	705	0.56	261	41	3	456	65	2	
0.75 to <2.50	4,950	2,152	13	5,263	1.66	1,429	40	3	4,661	89	35	
2.50 to <10.00	2,223	676	10	2,249	4.67	884	40	3	2,689	120	42	
10.00 to <100.00	479	81	6	476	14.18	156	39	2	804	169	26	
100.00 (Default)[2]	397	#	50	392	100.00	121	42	1	-	-	164	
Sub-total	**9,312**	**4,360**	**10**	**9,799**	**6.71**	**3,016**	**40**	**3**	**8,943**	**91**	**270**	**353**
Total (all portfolios)	**328,141**	**182,413**	**21**	**366,699**	**1.71**	**17,540**	**44**	**2**	**141,582**	**39**	**2,658**	**3,472**

Numbers below 0.5.

(1) For definition of RWA density, refer to footnote of 11.2.5.

(2) For definition of default, refer to 11.2.1.

11.2.7.2 Foundation IRBA (continued)

	30 Jun 2019											
	a	b	c	d	e	f	g	h	i	j	k	l
PD Range (%)	**Original on-balance sheet gross exposures ($m)**	**Off-balance sheet exposures pre CCF ($m)**	**Average CCF (%)**	**EAD post CRM and post-CCF ($m)**	**Average PD (%)**	**Number of obligors**	**Average LGD (%)**	**Average maturity (years)**	**RWA ($m)**	**RWA density[1] (%)**	**EL ($m)**	**TEP ($m)**
Sovereign												
0.00 to <0.15	49,674	12	87	52,056	0.01	22	45	2	3,611	7	2	
0.15 to <0.25	6	-	-	6	0.24	1	45	2	2	41	#	
0.25 to <0.50	4,924	-	-	4,924	0.38	5	45	2	2,993	61	8	
0.50 to <0.75	-	-	-	-	-	-	-	-	-	-	-	
0.75 to <2.50	63	-	-	63	1.76	7	45	2	70	111	#	
2.50 to <10.00	-	-	-	-	-	-	-	-	-	-	-	
10.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	
100.00 (Default)[2]	-	-	-	-	-	-	-	-	-	-	-	
Sub-total	**54,667**	**12**	**87**	**57,049**	**0.04**	**35**	**45**	**2**	**6,676**	**12**	**10**	**15**
Banks												
0.00 to <0.15	50,671	3,943	32	51,250	0.06	147	45	1	9,036	18	13	
0.15 to <0.25	1,321	51	47	1,346	0.24	27	48	1	714	53	2	
0.25 to <0.50	1,918	486	63	2,270	0.38	42	39	2	1,248	55	3	
0.50 to <0.75	1,411	144	40	1,468	0.61	15	35	1	802	55	3	
0.75 to <2.50	2,178	404	20	2,068	1.36	67	44	#	1,692	82	12	
2.50 to <10.00	153	80	3	155	3.05	12	45	#	170	110	2	
10.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	
100.00 (Default)[2]	-	-	-	-	-	-	-	-	-	-	-	
Sub-total	**57,652**	**5,108**	**34**	**58,557**	**0.14**	**310**	**45**	**1**	**13,662**	**23**	**35**	**48**
Corporate												
0.00 to <0.15	55,091	45,034	31	72,782	0.04	489	45	2	13,114	18	14	
0.15 to <0.25	33,611	28,478	24	40,200	0.22	391	45	2	17,072	42	40	
0.25 to <0.50	40,120	37,375	22	46,121	0.33	915	44	2	25,001	54	69	
0.50 to <0.75	14,739	11,958	20	16,696	0.56	688	44	2	11,531	69	41	
0.75 to <2.50	32,849	37,970	10	34,704	1.48	9,841	41	2	31,445	91	206	
2.50 to <10.00	7,895	3,719	7	7,621	4.49	2,685	39	2	9,561	125	133	
10.00 to <100.00	1,253	687	5	1,167	14.57	324	41	2	2,346	201	70	
100.00 (Default)[2]	4,078	287	72	4,159	100.00	524	43	2	-	-	1,808	
Sub-total	**189,636**	**165,508**	**21**	**223,450**	**2.48**	**15,857**	**44**	**2**	**110,070**	**49**	**2,381**	**3,354**
Corporate small business												
0.00 to <0.15	70	495	3	85	0.05	1	45	1	9	10	#	
0.15 to <0.25	31	28	2	112	0.22	6	45	1	33	29	#	
0.25 to <0.50	656	774	9	768	0.34	166	42	2	333	43	1	
0.50 to <0.75	1,208	470	8	1,268	0.56	288	42	2	739	58	3	
0.75 to <2.50	4,959	1,974	11	5,131	1.61	1,430	40	3	4,376	85	33	
2.50 to <10.00	2,276	666	10	2,321	4.64	926	40	3	2,597	112	43	
10.00 to <100.00	490	87	11	544	16.17	146	40	2	960	176	36	
100.00 (Default)[2]	343	#	50	334	100.00	109	42	1	-	-	141	
Sub-total	**10,033**	**4,494**	**9**	**10,563**	**5.89**	**3,072**	**40**	**2**	**9,047**	**86**	**257**	**348**
Total (all portfolios)	**311,988**	**175,122**	**21**	**349,619**	**1.80**	**19,274**	**44**	**2**	**139,455**	**40**	**2,683**	**3,765**

\# Numbers below 0.5.

[1] For definition of RWA density, refer to footnote of 11.2.5.

[2] For definition of default, refer to 11.2.1.

11.2.7.2 Foundation IRBA (continued)

Total exposures increased in the second half of 2019 mainly driven by increase in exposures of sovereign and corporate asset class. RWA density declined marginally due to changes in exposure mix.

11.2.8 IRBA - Effect on RWA of Credit Derivatives used as CRM

As at the reporting date, the Group does not have any credit derivative used as CRM in its Banking book.

11.2.9 IRBA - RWA Flow Statement for Credit Risk Exposures

The following table explains the change in the Group's credit RWA under IRBA for the quarter.

$m		31 Dec 2019 a RWA amounts
1	**RWA as at end of previous quarter**	**191,536**
2	Asset size	3,843
3	Asset quality [(1)]	(1,352)
4	Model updates	-
5	Methodology and Policy	-
6	Acquisitions and disposals	-
7	Foreign exchange movements	(2,172)
8	Other	-
9	**RWA as at end of quarter**	**191,855**

[(1)] This represents movements in RWA resulting from factors (other than exposure movements) such as changes in portfolio mix, tenor, credit risk mitigation, etc.

Total risk-weighted assets remained relatively stable during the quarter as the increase in asset size (driven by exposure growth) was offset by changes in asset quality and foreign currency translation.

11.2.10 IRBA - Specialised Lending and Equities under the Simple Risk Weight Method

11.2.10.1 IRBA - Specialised Lending (Other than HVCRE)[1]

The following table provides the exposure amounts and RWA of the Group's specialised lending exposures by each asset sub-class in accordance with the supervisory slotting criteria.

31 Dec 2019												
Specialised lending [2]												
$m	Other than HVCRE											
					Exposure amount							
Regulatory categories	Remaining maturity	On-balance sheet amount	Off-balance sheet amount	Risk Weight	PF	OF	CF	IPRE	Total	RWA	Expected losses
Strong	Less than 2.5 years	11,195	1,585	50%	354	-	-	11,697	12,051	6,387	-
	Equal to or more than 2.5 years	12,501	1,977	70%	2,558	200	-	11,057	13,815	10,252	55
Good	Less than 2.5 years	5,176	1,620	70%	345	85	-	5,874	6,304	4,677	25
	Equal to or more than 2.5 years	7,640	1,836	90%	1,620	235	-	6,892	8,747	8,345	70
Satisfactory		6,887	1,341	115%	959	68	-	6,367	7,394	9,012	207
Weak		332	106	250%	-	2	-	380	382	1,012	31
Default		235	5	0%	-	422	-	60	482	-	241
Total		**43,966**	**8,470**		**5,836**	**1,012**	**-**	**42,327**	**49,175**	**39,685**	**629**

30 Jun 2019											
Specialised lending [2]											
$m	Other than HVCRE										
					Exposure amount						
Regulatory categories	Remaining maturity	On-balance sheet amount	Off-balance sheet amount	Risk Weight	PF	OF	CF	IPRE	Total	RWA	Expected losses
Strong	Less than 2.5 years	9,425	1,102	50%	140	-	-	9,894	10,034	5,318	-
	Equal to or more than 2.5 years	11,455	1,392	70%	2,078	208	-	9,987	12,273	9,107	49
Good	Less than 2.5 years	6,216	1,140	70%	458	85	-	6,390	6,933	5,144	28
	Equal to or more than 2.5 years	7,946	2,083	90%	1,213	246	-	7,883	9,342	8,912	75
Satisfactory		7,345	1,397	115%	1,358	79	-	6,456	7,893	9,622	221
Weak		407	98	250%	-	3	-	450	453	1,198	36
Default		230	5	0%	-	417	-	51	468	-	234
Total		**43,024**	**7,217**		**5,247**	**1,038**	**-**	**41,111**	**47,396**	**39,301**	**643**

[1] As at reporting date, the Group does not have any HVCRE exposures.

[2] Specialised lending is a type of exposure typically towards an entity specifically created to finance or operate physical assets where the primary source of income and repayment of the obligation lies directly with the assets being financed.

Exposures and risk-weighted assets increased in the second half of 2019 mainly due to loan growth.

11.2.10.2 IRBA – Equities under the Simple Risk Weight Method

This disclosure is not applicable as the Group did not adopt the Simple Risk Weight Method (under IRBA) for its equity exposures.

11.2.11 IRBA - Backtesting of PD per portfolio[1]

The following table shows the backtesting of PD of retail portfolios whose exposures are under A-IRBA for capital computation. The portfolios comprise of QRRE, residential mortgage and other retail exposures. PD, EAD and LGD estimates are based on internal historical defaults and realised losses within a defined period. Refer to Section 11.1.4 for key rating models used for retail exposures and the percentage of RWA covered by these models.

31 Dec 2019							
a	b	c	d		e	f	g
			Number of obligors				
PD Range (%)	Weighted average PD[2] (%)	Arithmetic average PD by obligors[2] (%)	End of previous annual reporting period	End of the annual reporting period	Defaulted obligors in the annual reporting period	of which: new defaulted obligors in the annual reporting period	Average historical annual default rate (%)
Retail - QRRE							
0.00 to < 0.15	0.12	0.12	669,235	372,064	611	2	0.09
0.15 to < 0.25	0.20	0.19	359,270	558,607	500	3	0.14
0.25 to < 0.50	0.42	0.40	219,475	340,324	795	4	0.31
0.50 to < 2.50	1.53	1.50	355,832	400,397	2,324	178	0.65
2.50 to < 10.00	4.75	4.69	124,572	99,550	5,566	201	4.01
10.00 to < 100.00	20.54	22.01	39,658	38,591	6,569	2	16.25
Retail - Residential mortgage							
0.00 to < 0.15	0.14	0.14	23,826	22,162	6	1	0.02
0.15 to < 0.25	0.18	0.19	23,532	23,589	10	-	0.04
0.25 to < 0.50	0.27	0.29	74,893	75,553	62	1	0.11
0.50 to < 2.50	0.96	0.76	9,410	9,177	15	-	0.10
2.50 to < 10.00	3.91	4.04	1,651	1,639	27	-	1.54
10.00 to < 100.00	24.86	24.69	1,017	1,070	112	-	13.53
Other retail exposures							
0.00 to < 0.15	-	-	-	-	-	-	-
0.15 to < 0.25	0.16	0.16	33,919	37,734	6	-	0.04
0.25 to < 0.50	0.28	0.28	13,528	10,828	3	-	0.06
0.50 to < 2.50	1.16	1.16	3,453	3,301	9	-	0.44
2.50 to < 10.00	-	-	-	-	-	-	-
10.00 to < 100.00	15.14	15.10	611	480	43	-	6.87

[1] All obligors with facilities are included.

[2] Calculated based on end of previous annual reporting period

11.2.11 IRBA - Backtesting of PD per portfolio[1] (continued)

31 Dec 2018							
a	b	c	d		e	f	g
			Number of obligors				
PD Range (%)	Weighted average PD[2] (%)	Arithmetic average PD by obligors[2] (%)	End of previous annual reporting period	End of the annual reporting period	Defaulted obligors in the annual reporting period	of which: new defaulted obligors in the annual reporting period	Average historical annual default rate (%)
Retail - QRRE							
0.00 to < 0.15	0.12	0.11	659,208	669,235	467	6	0.08
0.15 to < 0.25	0.20	0.19	349,179	359,270	433	15	0.14
0.25 to < 0.50	0.41	0.40	212,864	219,475	578	9	0.27
0.50 to < 2.50	1.54	1.50	326,297	355,832	1,845	99	0.66
2.50 to < 10.00	4.54	4.52	104,618	124,572	3,810	211	3.66
10.00 to < 100.00	37.56	33.26	63,252	39,658	7,620	12	15.60
Retail - Residential mortgage							
0.00 to < 0.15	0.14	0.14	23,510	23,826	2	-	0.03
0.15 to < 0.25	0.18	0.19	23,952	23,532	9	-	0.04
0.25 to < 0.50	0.27	0.29	73,004	74,893	61	-	0.13
0.50 to < 2.50	1.08	0.91	12,781	9,410	9	-	0.08
2.50 to < 10.00	3.99	4.07	1,509	1,651	16	-	1.44
10.00 to < 100.00	24.76	24.60	910	1,017	133	-	13.52
Other retail exposures							
0.00 to < 0.15	-	-	-	-	-	-	-
0.15 to < 0.25	0.16	0.16	37,286	33,919	14	-	0.05
0.25 to < 0.50	0.28	0.28	10,831	13,528	8	-	0.09
0.50 to < 2.50	1.16	1.16	3,823	3,453	9	-	0.47
2.50 to < 10.00	-	-	-	-	-	-	-
10.00 to < 100.00	15.01	14.75	936	611	76	-	6.69

[1] All obligors with facilities are included.

[2] Calculated based on end of previous annual reporting period

The average historical annual default rates have been lower than the PD ranges or within the PD ranges. For QRRE, the overall number of obligors were in line with that at end of previous reporting period; the obligor movement among PD ranges in 2019 was largely due to the implementation of model enhancements.

11.2.11 IRBA - Backtesting of PD per portfolio[1] (continued)

The following table shows the backtesting of PD of wholesale portfolios whose exposures are under F-IRBA for capital computation. The portfolios comprise of sovereign, bank and corporates. Refer to Section 11.1.4 for key rating models used for wholesale exposures and the percentage of RWA covered by these models.

31 Dec 2019										
a	b			c	d	e		f	g	h
						Number of obligors				
PD Range (%)	Standard & Poor's Ratings Services	Fitch Ratings	Moody's Investor Services	Weighted average PD[2] (%)	Arithmetic average PD by obligors[2] (%)	End of previous annual reporting period	End of the annual reporting period	Defaulted obligors in the annual reporting period	of which: new defaulted obligors in the annual reporting period	Average historical annual default rate (%)
Sovereign										
0.00 to < 0.15	AAA to BBB+	AAA to BBB+	Aaa to Baa1	0.02	0.01	26	29	-	-	-
0.15 to < 0.25	BBB+ to BBB	BBB+ to BBB	Baa1 to Baa2	-	-	-	4	-	-	-
0.25 to < 0.50	BBB to BBB-	BBB to BBB-	Baa2 to Baa3	0.38	0.38	6	3	-	-	-
0.50 to < 0.75	BB+	BB+	Ba1	-	-	-	-	-	-	-
0.75 to < 2.50	BB to BB-	BB to BB-	Ba2 to Ba3	1.77	1.81	3	2	-	-	-
2.50 to < 10.00	B+ to B-	B+ to B-	B1 to B3	-	-	-	1	-	-	-
10.00 to < 100.00	B- to C	B- to C	B3 to Ca	-	-	-	-	-	-	-
Banks										
0.00 to < 0.15	AAA to BBB+	AAA to BBB+	Aaa to Baa1	0.06	0.07	170	177	-	-	-
0.15 to < 0.25	BBB+ to BBB	BBB+ to BBB	Baa1 to Baa2	0.24	0.24	30	34	-	-	-
0.25 to < 0.50	BBB to BBB-	BBB to BBB-	Baa2 to Baa3	0.37	0.35	68	51	-	-	-
0.50 to < 0.75	BB+	BB+	Ba1	0.61	0.61	17	20	-	-	-
0.75 to < 2.50	BB to BB-	BB to BB-	Ba2 to Ba3	1.42	1.34	69	56	-	-	-
2.50 to < 10.00	B+ to B-	B+ to B-	B1 to B3	3.06	3.60	11	16	-	-	-
10.00 to < 100.00	B- to C	B- to C	B3 to Ca	-	-	-	-	-	-	-
Corporate										
0.00 to < 0.15	AAA to BBB+	AAA to BBB+	Aaa to Baa1	0.05	0.07	564	579	-	-	-
0.15 to < 0.25	BBB+ to BBB	BBB+ to BBB	Baa1 to Baa2	0.22	0.22	511	548	-	-	-
0.25 to < 0.50	BBB to BBB-	BBB to BBB-	Baa2 to Baa3	0.33	0.36	1,192	1,243	-	-	0.03
0.50 to < 0.75	BB+	BB+	Ba1	0.56	0.56	962	990	-	-	0.30
0.75 to < 2.50	BB to BB-	BB to BB-	Ba2 to Ba3	1.66	1.71	4,636	4,461	18	3	0.82
2.50 to < 10.00	B+ to B-	B+ to B-	B1 to B3	4.21	4.68	2,989	2,743	63	-	2.12
10.00 to < 100.00	B- to C	B- to C	B3 to Ca	13.83	13.18	368	343	21	-	11.83
Corporate small business										
0.00 to < 0.15	AAA to BBB+	AAA to BBB+	Aaa to Baa1	0.05	0.05	2	2	-	-	-
0.15 to < 0.25	BBB+ to BBB	BBB+ to BBB	Baa1 to Baa2	0.22	0.22	11	11	-	-	-
0.25 to < 0.50	BBB to BBB-	BBB to BBB-	Baa2 to Baa3	0.35	0.38	225	201	-	-	0.04
0.50 to < 0.75	BB+	BB+	Ba1	0.56	0.56	381	333	-	-	0.03
0.75 to < 2.50	BB to BB-	BB to BB-	Ba2 to Ba3	1.59	1.63	1,643	1,594	13	-	0.67
2.50 to < 10.00	B+ to B-	B+ to B-	B1 to B3	4.36	4.25	960	949	22	-	2.13
10.00 to < 100.00	B- to C	B- to C	B3 to Ca	12.21	12.57	134	164	7	-	8.20

(1) All obligors with facilities are included.

(2) Calculated based on end of previous annual reporting period

11.2.11 IRBA - Backtesting of PD per portfolio[1] (continued)

31 Dec 2018										
a	b			c	d	e		f	g	h
						Number of obligors				
PD Range (%)	Standard & Poor's Ratings Services	Fitch Ratings	Moody's Investor Services	Weighted average PD[2] (%)	Arithmetic average PD by obligors[2] (%)	End of previous annual reporting period	End of the annual reporting period	Defaulted obligors in the annual reporting period	of which: new defaulted obligors in the annual reporting period	Average historical annual default rate (%)
Sovereign										
0.00 to < 0.15	AAA to BBB+	AAA to BBB+	Aaa to Baa1	0.02	0.01	24	26	-	-	-
0.15 to < 0.25	BBB+ to BBB	BBB+ to BBB	Baa1 to Baa2	-	-	-	-	-	-	-
0.25 to < 0.50	BBB to BBB-	BBB to BBB-	Baa2 to Baa3	0.39	0.39	6	6	-	-	-
0.50 to < 0.75	BB+	BB+	Ba1	-	-	-	-	-	-	-
0.75 to < 2.50	BB to BB-	BB to BB-	Ba2 to Ba3	1.76	1.76	2	3	-	-	-
2.50 to < 10.00	B+ to B-	B+ to B-	B1 to B3	-	-	-	-	-	-	-
10.00 to < 100.00	B- to C	B- to C	B3 to Ca	-	-	-	-	-	-	-
Banks										
0.00 to < 0.15	AAA to BBB+	AAA to BBB+	Aaa to Baa1	0.05	0.08	156	170	-	-	-
0.15 to < 0.25	BBB+ to BBB	BBB+ to BBB	Baa1 to Baa2	0.24	0.24	27	30	-	-	-
0.25 to < 0.50	BBB to BBB-	BBB to BBB-	Baa2 to Baa3	0.34	0.35	71	68	-	-	-
0.50 to < 0.75	BB+	BB+	Ba1	0.61	0.61	12	17	-	-	-
0.75 to < 2.50	BB to BB-	BB to BB-	Ba2 to Ba3	1.06	1.22	69	69	-	-	-
2.50 to < 10.00	B+ to B-	B+ to B-	B1 to B3	3.21	3.73	9	11	-	-	-
10.00 to < 100.00	B- to C	B- to C	B3 to Ca	-	-	-	-	-	-	-
Corporate										
0.00 to < 0.15	AAA to BBB+	AAA to BBB+	Aaa to Baa1	0.04	0.04	514	564	-	-	-
0.15 to < 0.25	BBB+ to BBB	BBB+ to BBB	Baa1 to Baa2	0.22	0.22	451	511	-	-	-
0.25 to < 0.50	BBB to BBB-	BBB to BBB-	Baa2 to Baa3	0.33	0.35	1,143	1,192	-	-	0.03
0.50 to < 0.75	BB+	BB+	Ba1	0.56	0.56	942	962	-	-	0.30
0.75 to < 2.50	BB to BB-	BB to BB-	Ba2 to Ba3	1.54	1.66	4,629	4,636	23	-	1.01
2.50 to < 10.00	B+ to B-	B+ to B-	B1 to B3	4.51	4.60	3,076	2,989	33	-	2.61
10.00 to < 100.00	B- to C	B- to C	B3 to Ca	13.29	14.68	372	368	27	1	20.63
Corporate small business										
0.00 to < 0.15	AAA to BBB+	AAA to BBB+	Aaa to Baa1	0.05	0.05	2	2	-	-	-
0.15 to < 0.25	BBB+ to BBB	BBB+ to BBB	Baa1 to Baa2	0.22	0.22	17	11	-	-	-
0.25 to < 0.50	BBB to BBB-	BBB to BBB-	Baa2 to Baa3	0.38	0.38	297	225	-	-	0.04
0.50 to < 0.75	BB+	BB+	Ba1	0.56	0.56	416	381	-	-	0.03
0.75 to < 2.50	BB to BB-	BB to BB-	Ba2 to Ba3	1.67	1.64	1,523	1,643	8	-	0.58
2.50 to < 10.00	B+ to B-	B+ to B-	B1 to B3	4.22	4.39	887	960	13	-	2.07
10.00 to < 100.00	B- to C	B- to C	B3 to Ca	12.53	12.21	111	134	12	-	9.66

(1) All obligors with facilities are included.

(2) Calculated based on end of previous annual reporting period

The average historical annual default rates have been lower than the PD ranges or within the PD ranges.

12 COUNTERPARTY CREDIT RISK ("CCR")

12.1 Qualitative Disclosures

Counterparty Credit Risk is defined as the risk that a counterparty could default before the final settlement of the cash flows of derivatives or securities financing transactions.

Pre-settlement credit risk for traded products arising from a counterparty potentially defaulting on its obligations is quantified by evaluation of the market price, plus potential future exposure. This is included under its overall credit limits to counterparties for internal risk management.

Issuer default risk that may also arise from derivatives, notes and securities is generally measured based on jump-to-default computations.

The Group policies and related standards set out the Group's overarching requirements for guarantees and Traded Products, including Securities Trading (Equity and Debt), Over-the-counter (OTC) Derivatives Trading, Exchange Traded Derivatives and Securities Borrowings and Lendings (including repos).

Credit limits and exposures to counterparties are subject to the Group’s overarching credit risk management framework. Counterparties (including Central Clearing Counterparties (CCPs) are assessed individually using an internal rating model and assigned credit risk ratings. Credit limits take into account current trading and projected volume for novation, and are approved by the credit risk function after an independent credit assessment. The Group's assessment for CCPs takes into consideration additional parameters including but not limited to default waterfall protection, margining process, risk management capabilities, segregation of margins, member liability provisions, regulatory oversight etc.

Counterparty credit exposures (including that of CCP exposures) are also subject to economic capital and limit allocation rules that are applied for Institutional Banking clients. Refer to section 9 for more information on capital allocation approach.

The Group actively monitors and manages our exposure to counterparties for OTC derivative trades to protect our balance sheet in the event of a counterparty default. Counterparty risk exposures that may be adversely affected by market risk events are identified, reviewed and acted upon by management, and highlighted to the appropriate risk committees.

The Group enters into master netting arrangements with counterparties where it is appropriate and feasible to do netting to mitigate counterparty risk. The credit risk associated with favorable contracts is reduced by a master netting arrangement to the extent that if an event of default occurs, all amounts with the counterparty are settled on a net basis. These agreements include derivative master agreements (including ISDA Master Agreement), global master repurchase agreements and global securities lending agreements. Master netting arrangements do not result in an offset of financial assets and liabilities on the balance sheet as the legal right to offset the transactions is conditional upon default.

Please refer to section 11.1.2 for details relating to collateral arrangements relating to derivatives, repurchase agreements (repo) and other repo style transactions as well as guarantees used as credit risk mitigants.

The Group also clears OTC Derivatives trades through CCPs to manage overall counterparty credit risks. In the recent years, regulatory changes requiring mandatory clearing of standardised OTC derivatives through central counterparties, have resulted in increasing volumes of trades being cleared through CCPs.

The Group’s policies provide the definition and management of specific wrong-way risk (SWWR). SWWR arises when the credit exposure of a counterparty (from the traded product transaction) directly correlates with the probability of default of the counterparty. An example of SWWR is when a counterparty buys or sells its own equity share.

The Group is required to post additional collateral in the event of a rating downgrade. As at 31 December 2019, for a three-notch downgrade of the Group's Standard & Poor's Ratings Services and Moody's Investor Services ratings, we will have to post additional collateral amounting to S$11 million.

12.2 Quantitative Disclosures

12.2.1 Analysis of CCR Exposure by Approach

The following table provides the methods used to calculate the Group's CCR capital requirements and the main parameters used for each method.

		31 Dec 2019					
		a	b	c	d	e	f
$m		Replacement cost	Potential future exposure	Effective EPE	α used for computing regulatory EAD	EAD (post-CRM)	RWA
1	Current exposure method (for derivatives)	6,363	11,376			17,422	7,285
2	CCR internal models method (for derivatives and SFTs)			-	-	-	-
3	FC(SA) (for SFTs)					-	-
4	FC(CA) (for SFTs)					16,624	2,007
5	VaR for SFTs					-	-
6	**Total**						**9,292**

		30 Jun 2019					
		a	b	c	d	e	f
$m		Replacement cost	Potential future exposure	Effective EPE	α used for computing regulatory EAD	EAD (post-CRM)	RWA
1	Current exposure method (for derivatives)	6,508	11,343			17,508	7,951
2	CCR internal models method (for derivatives and SFTs)			-	-	-	-
3	FC(SA) (for SFTs)					-	-
4	FC(CA) (for SFTs)					18,714	1,233
5	VaR for SFTs					-	-
6	**Total**						**9,184**

CCR exposures decreased in the second half of 2019 mainly driven by a decrease in securities financing transactions.

12.2.2 CVA Risk Capital Requirements

The Group adopts the standardised method to compute CVA risk capital requirements. The following table provides the exposure amount (post-CRM) and RWA.

		31 Dec 2019	
		a	b
$m		EAD (post-CRM)	RWA
	Total portfolios subject to the Advanced CVA capital requirement	-	-
1	(i) VaR component (including the three-times multiplier)		-
2	(ii) Stressed VaR component (including the three-times multiplier)		-
3	All portfolios subject to the Standardised CVA capital requirement	15,732	5,912
4	**Total portfolios subject to the CVA capital requirement**	**15,732**	**5,912**

		30 Jun 2019	
		a	b
$m		EAD (post-CRM)	RWA
	Total portfolios subject to the Advanced CVA capital requirement	-	-
1	(i) VaR component (including the three-times multiplier)		-
2	(ii) Stressed VaR component (including the three-times multiplier)		-
3	All portfolios subject to the Standardised CVA capital requirement	16,276	6,411
4	**Total portfolios subject to the CVA capital requirement**	**16,276**	**6,411**

There were no significant movements in the second half of 2019.

12.2.3 Credit Derivative Exposures

The following table provides the notional amounts (before any netting) and fair values of the Group's credit derivative exposures, broken down between credit derivatives bought or sold.

		31 Dec 2019	
		a	b
$m		Protection bought	Protection sold
	Notionals		
1	Single-name credit default swaps	8,379	9,192
2	Index credit default swaps	653	892
3	Total return swaps	8,514	323
4	Other credit derivatives	-	-
5	**Total notionals**	**17,546**	**10,407**
	Fair values		
6	Positive fair value (asset)	17	276
7	Negative fair value (liability)	238	1

		30 Jun 2019	
		a	b
$m		Protection bought	Protection sold
	Notionals		
1	Single-name credit default swaps	8,255	9,360
2	Index credit default swaps	760	770
3	Total return swaps	8,230	-
4	Other credit derivatives	-	-
5	**Total notionals**	**17,245**	**10,130**
	Fair values		
6	Positive fair value (asset)	14	211
7	Negative fair value (liability)	178	1

12.2.3 Credit Derivative Exposures (continued)

The increase in total return swaps in the second half of 2019 was due to an increase in efforts to sell total return swaps to customers and higher warehoused exposures to certain credit assets.

12.2.4 Standardised Approach - CCR Exposures by Portfolio and Risk Weights

The following table provides the breakdown of the Group's CCR exposure amounts (post-CRM) under SA(CR) by asset class and risk weight.

		31 Dec 2019								
		a	b	c	d	e	f	g	h	i
		Risk Weight								Total Credit Exposure
$m		0%	10%	20%	50%	75%	100%	150%	Others	
	Asset Classes									
1	Central government and central bank	-	-	-	-	-	-	-	-	-
2	PSE	-	-	-	-	-	-	-	-	-
3	MDB	538	-	-	9	-	-	-	-	547
4	Bank	-	-	#	#	-	#	-	-	#
6	Corporate	-	-	-	11	-	269	-	-	280
7	Regulatory retail	-	-	-	-	#	-	-	-	#
8	Other exposures	-	-	-	-	-	566	-	-	566
9	**Total**	**538**	**-**	**#**	**20**	**#**	**835**	**-**	**-**	**1,393**

		30 Jun 2019								
		a	b	c	d	e	f	g	h	i
		Risk Weight								Total Credit Exposure
$m		0%	10%	20%	50%	75%	100%	150%	Others	
	Asset Classes									
1	Central government and central bank	-	-	-	-	-	-	-	-	-
2	PSE	-	-	-	-	-	-	-	-	-
3	MDB	777	-	-	2	-	-	-	-	779
4	Bank	-	-	1	#	-	#	-	-	1
6	Corporate	-	-	-	10	-	249	-	-	259
7	Regulatory retail	-	-	-	-	#	-	-	-	#
8	Other exposures	-	-	-	-	-	633	-	-	633
9	**Total**	**777**	**-**	**1**	**12**	**#**	**882**	**-**	**-**	**1,672**

Numbers below 0.5.

There were no significant movements in the second half of 2019.

12.2.5 IRBA - CCR Exposures by Portfolio and PD Range

The following table sets out the parameters used to calculate the Group's CCR capital requirements for IRBA models. The Group adopts F-IRBA for all of its IRBA exposures which are subject to CCR capital requirements.

	31 Dec 2019						
	a	b	c	d	e	f	g
PD Range (%)	**EAD post CRM ($m)**	**Average PD (%)**	**Number of obligors**	**Average LGD (%)**	**Average maturity (years)**	**RWA ($m)**	**RWA density[(1)] (%)**
Sovereign							
0.00 to <0.15	1,503	0.01	9	14	#	5	#
0.15 to <0.25	83	0.24	1	45	#	21	25
0.25 to <0.50	93	0.38	2	45	1	39	42
0.50 to <0.75	-	-	-	-	-	-	-
0.75 to <2.50	-	-	-	-	-	-	-
2.50 to <10.00	4	4.15	1	45	#	5	118
10.00 to <100.00	-	-	-	-	-	-	-
100.00 (Default)[(2)]	-	-	-	-	-	-	-
Sub-total	**1,683**	**0.05**	**13**	**17**	**#**	**70**	**4**
Banks							
0.00 to <0.15	13,736	0.06	117	26	1	1,557	11
0.15 to <0.25	834	0.24	19	42	1	368	44
0.25 to <0.50	603	0.38	41	35	3	364	60
0.50 to <0.75	236	0.61	18	45	2	205	87
0.75 to <2.50	133	1.12	24	28	1	84	63
2.50 to <10.00	#	3.99	2	45	1	#	136
10.00 to <100.00	-	-	-	-	-	-	-
100.00 (Default)[(2)]	-	-	-	-	-	-	-
Sub-total	**15,542**	**0.10**	**221**	**28**	**1**	**2,578**	**17**
Corporate							
0.00 to <0.15	2,392	0.06	146	40	2	474	20
0.15 to <0.25	4,958	0.22	92	20	1	1,071	22
0.25 to <0.50	2,491	0.34	234	36	2	1,257	50
0.50 to <0.75	505	0.56	113	31	2	256	51
0.75 to <2.50	4,248	1.59	418	26	1	2,063	49
2.50 to <10.00	83	6.90	76	42	2	132	159
10.00 to <100.00	#	13.77	10	27	2	#	122
100.00 (Default)[(2)]	-	-	-	-	-	-	-
Sub-total	**14,677**	**0.66**	**1,089**	**28**	**1**	**5,253**	**36**
Corporate small business							
0.00 to <0.15	-	-	-	-	-	-	-
0.15 to <0.25	-	-	-	-	-	-	-
0.25 to <0.50	#	0.35	8	45	#	#	32
0.50 to <0.75	2	0.56	12	43	1	1	51
0.75 to <2.50	12	1.44	114	44	2	11	91
2.50 to <10.00	2	4.36	47	34	2	2	97
10.00 to <100.00	#	12.15	2	35	3	#	174
100.00 (Default)[(2)]	#	100.00	1	45	#	-	-
Sub-total	**16**	**1.68**	**184**	**43**	**2**	**14**	**86**
Total (all portfolios)	**31,918**	**0.36**	**1,507**	**27**	**1**	**7,915**	**25**

Numbers below 0.5.
(1) For definition of RWA density, refer to footnote of 11.2.5.
(2) For definition of default, refer to 11.2.1.

12.2.5 IRBA - CCR Exposures by Portfolio and PD Range (continued)

	30 Jun 2019						
	a	b	c	d	e	f	g
PD Range (%)	EAD post CRM ($m)	Average PD (%)	Number of obligors	Average LGD (%)	Average maturity (years)	RWA ($m)	RWA density[1] (%)
Sovereign							
0.00 to <0.15	1,580	0.01	10	16	#	19	1
0.15 to <0.25	-	-	-	-	-	-	-
0.25 to <0.50	245	0.38	2	45	#	94	38
0.50 to <0.75	-	-	-	-	-	-	-
0.75 to <2.50	#	0.75	1	45	#	#	72
2.50 to <10.00	4	4.15	1	45	#	4	118
10.00 to <100.00	-	-	-	-	-	-	-
100.00 (Default)[2]	-	-	-	-	-	-	-
Sub-total	**1,829**	**0.07**	**14**	**20**	**#**	**117**	**6**
Banks							
0.00 to <0.15	19,073	0.10	113	22	1	1,749	9
0.15 to <0.25	803	0.24	23	40	1	370	46
0.25 to <0.50	668	0.36	46	35	2	321	48
0.50 to <0.75	238	0.61	19	45	2	234	98
0.75 to <2.50	425	1.10	31	39	1	370	87
2.50 to <10.00	-	-	-	-	-	-	-
10.00 to <100.00	-	-	-	-	-	-	-
100.00 (Default)[2]	-	-	-	-	-	-	-
Sub-total	**21,207**	**0.14**	**232**	**24**	**1**	**3,044**	**14**
Corporate							
0.00 to <0.15	2,905	0.08	144	34	2	541	19
0.15 to <0.25	3,449	0.22	80	25	2	1,036	30
0.25 to <0.50	2,211	0.34	214	39	2	1,287	58
0.50 to <0.75	689	0.56	133	41	2	493	72
0.75 to <2.50	1,485	1.58	410	34	1	1,147	77
2.50 to <10.00	77	3.12	77	39	2	88	115
10.00 to <100.00	24	28.68	10	44	#	58	239
100.00 (Default)[2]	#	100.00	2	44	1	-	-
Sub-total	**10,840**	**0.50**	**1,070**	**32**	**2**	**4,650**	**43**
Corporate small business							
0.00 to <0.15	#	0.05	1	45	#	#	5
0.15 to <0.25	-	-	-	-	-	-	-
0.25 to <0.50	#	0.35	8	45	#	#	34
0.50 to <0.75	1	0.56	15	45	1	#	57
0.75 to <2.50	12	1.56	95	44	2	10	89
2.50 to <10.00	2	5.60	51	34	2	2	99
10.00 to <100.00	#	18.74	7	43	1	#	162
100.00 (Default)[2]	-	-	-	-	-	-	-
Sub-total	**15**	**2.21**	**177**	**42**	**2**	**12**	**88**
Total (all portfolios)	**33,891**	**0.25**	**1,493**	**26**	**1**	**7,823**	**23**

Numbers below 0.5.

[1] For definition of RWA density, refer to footnote of 11.2.5.

[2] For definition of default, refer to 11.2.1.

12.2.5 IRBA - CCR Exposures by Portfolio and PD Range (continued)

CCR exposures decreased in the second half of 2019 due mainly to a decrease in securities financing transactions. The marginal increase in RWA density was due mainly to a change in exposure mix.

12.2.6 RWA Flow Statements under the CCR Internal Models Method

This disclosure is not applicable as the Group does not adopt the CCR Internal Models method.

12.2.7 Composition of Collateral for CCR Exposure

The following table provides a breakdown of all types of collateral posted or received by the Group to support or reduce the CCR exposures related to derivative transactions or to SFTs, including transactions cleared through a CCP.

	31 Dec 2019					
	a	b	c	d	e	f
	Collateral used in derivative transactions				Collateral used in SFTs	
	Fair value of collateral received		Fair value of collateral posted		Fair value of collateral received	Fair value of collateral posted
$m	Segregated	Unsegregated	Segregated	Unsegregated		
Cash - domestic currency	-	34	-	524	815	1,630
Cash - other currencies	-	2,298	209	2,651	3,587	11,798
Domestic sovereign debt	-	36	-	106	357	1,048
Other sovereign debt	-	474	-	1,743	5,065	7,336
Government agency debt	-	-	-	-	147	880
Corporate bonds	-	#	-	143	2,064	708
Equity securities	-	4	-	-	5,951	322
Other collateral	-	18	-	-	22	-
Total	**-**	**2,864**	**209**	**5,167**	**18,008**	**23,722**

	30 Jun 2019					
	a	b	c	d	e	f
	Collateral used in derivative transactions				Collateral used in SFTs	
	Fair value of collateral received		Fair value of collateral posted		Fair value of collateral received	Fair value of collateral posted
$m	Segregated	Unsegregated	Segregated	Unsegregated		
Cash - domestic currency	-	60	-	401	843	1,796
Cash - other currencies	-	1,736	227	2,807	3,314	14,851
Domestic sovereign debt	-	43	-	12	497	554
Other sovereign debt	-	1	-	1,757	7,908	7,624
Government agency debt	-	-	-	-	51	751
Corporate bonds	-	#	-	151	1,771	207
Equity securities	-	11	-	-	5,611	#
Other collateral	-	22	-	-	50	-
Total	**-**	**1,873**	**227**	**5,128**	**20,045**	**25,783**

Numbers below 0.5.

The decrease in collateral used in securities financing transactions in the second half of 2019 was mainly due to a decrease in volume of such transactions.

13 SECURITISATION

13.1 Qualitative Disclosures

The Group arranges securitisation transactions for its clients, primarily as a way of providing alternative capital market solutions and for fees. These transactions do not involve special-purpose entities which the Group controls or to which it acts as a sponsor.

For transactions that are not underwritten, no securitisation exposures are assumed as a direct consequence of arranging the transactions. Any decision to invest in any of such arranged transactions is subject to independent risk assessment. Where the Group provides an underwriting commitment, any securitisation exposure that arises is held in the trading book to be traded or sold down in accordance with our internal policy and risk limits.

The Group invests in its clients' securitisation transactions from time to time. These may include securitisation transactions arranged by it or with other parties. We may also act as a working capital facility provider or swap counterparty. Such exposures require the approval of RMG, and are subject to regular risk reviews after they take place. The Group has processes in place to monitor the credit risk of its securitisation exposures.

In addition, the Group does not provide implicit support for any transactions it structures or has invested in.

The Group's securitisation positions are recognised as financial assets pursuant to the Group's accounting policies and valued accordingly. Please refer to the financial statements in the latest available annual report on the Group's accounting policies on financial assets.

Securitisation exposures in the banking and trading books are risk-weighted using either the External Ratings-Based Approach, which utilises, where available, ratings from Fitch Ratings, Moody's Investor Services and/or Standard & Poor's Ratings Services, or by applying a risk weight of 1250% to those exposures for which the External Ratings-Based Approach cannot be applied.

13.2 Quantitative Disclosures

13.2.1 Securitisation Exposures in the Banking Book

The following table provides an overview of the Group's securitisation exposures in the Banking book. Figures are based on carrying amounts as reported in the financial statements.

		31 Dec 2019	30 Jun 2019
		a	
		A Reporting Bank acts as investor	
$m		Traditional[1]	
1	**Total retail**	**2,754**	**2,423**
2	of which: residential mortgage	-	-
3	of which: credit card	2,124	1,860
4	of which: other retail exposures	630	563
5	**Total wholesale**	**291**	**293**
6	of which: loans to corporates	-	-
7	of which: commercial mortgage	-	-
8	of which: lease and receivables	-	-
9	of which: other wholesale	291	293

13.2.2 Securitisation Exposures in the Trading Book

The following table provides an overview of the Group's securitisation exposures in the Trading book. Figures are based on carrying amounts as reported in the financial statements.

		31 Dec 2019	30 Jun 2019
		a	
		A Reporting Bank acts as investor	
$m		Traditional[1]	
1	**Total retail**	**352**	**13**
2	of which: residential mortgage	12	13
3	of which: credit card	-	-
4	of which: other retail exposures	340	-
5	**Total wholesale**	**9**	**21**
6	of which: loans to corporates	-	-
7	of which: commercial mortgage	-	-
8	of which: lease and receivables	-	-
9	of which: other wholesale	9	21

[1] The Group does not invest in synthetic securitisation structures.

13.2.3 Securitisation Exposures in the Banking Book and associated Regulatory Capital Requirements - A Reporting Bank acting as Originator or as Sponsor

The Group did not act as an Originator or a Sponsor for its securitisation exposures in the Banking book.

13.2.4 Securitisation Exposures in the Banking Book and associated Regulatory Capital Requirements - A Reporting Bank acting as an Investor

The following table provides the exposure amounts, RWA and capital requirements of the Group's securitisation exposures in the Banking book.

		31 Dec 2019																
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
		Exposure values (by risk weight bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach)				Capital charge after cap[(1)]			
$m		≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW	SEC-IRBA	SEC-ERBA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA	SEC-SA	1250%
1	**Total exposures**	**2,331**	**24**	**509**	**131**	**-**	**-**	**2,995**	**-**	**-**	**-**	**851**	**-**	**-**	**-**	**85**	**-**	**-**
2	**Traditional securitisation**	2,331	24	509	131	-	-	2,995	-	-	-	851	-	-	-	85	-	-
3	Of which: securitisation	2,331	24	509	131	-	-	2,995	-	-	-	851	-	-	-	85	-	-
4	Of which: retail underlying	2,331	24	218	131	-	-	2,704	-	-	-	662	-	-	-	66	-	-
5	Of which: wholesale	-	-	291	-	-	-	291	-	-	-	189	-	-	-	19	-	-
6	Of which: re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Of which: senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Of which: non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	**Synthetic securitisation**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
10	Of which: securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Of which: retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Of which: wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Of which: re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Of which: senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Of which: non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

		30 Jun 2019																
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
		Exposure values (by risk weight bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach)				Capital charge after cap[(1)]			
$m		≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW	SEC-IRBA	SEC-ERBA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA	SEC-SA	1250%
1	**Total exposures**	**1,999**	**19**	**462**	**179**	**8**	**-**	**2,659**	**-**	**8**	**-**	**855**	**-**	**93**	**-**	**86**	**-**	**9**
2	**Traditional securitisation**	1,999	19	462	179	8	-	2,659	-	8	-	855	-	93	-	86	-	9
3	Of which: securitisation	1,999	19	462	179	8	-	2,659	-	8	-	855	-	93	-	86	-	9
4	Of which: retail underlying	1,999	19	169	179	8	-	2,366	-	8	-	665	-	93	-	67	-	9
5	Of which: wholesale	-	-	293	-	-	-	293	-	-	-	190	-	-	-	19	-	-
6	Of which: re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Of which: senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Of which: non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	**Synthetic securitisation**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
10	Of which: securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Of which: retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Of which: wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Of which: re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Of which: senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Of which: non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[(1)] Capital charge after cap in these columns correspond to 10% of the relevant RWA figures in column "(j)", "(k)", "(l)" and "(m)" which are 2.0 percentage points higher than the Basel Committee's requirement.

14 MARKET RISK

14.1 Qualitative Disclosures

Market risk arises from adverse changes in interest rates, foreign exchange rates, equity prices, credit spreads and commodity prices as well as related factors. The Group's exposures in the trading portfolios are from the undertaking of trading activities, for the purpose of market-making, client-facilitation and benefiting from market opportunities.

The Group utilises Value-at-Risk (VaR), a statistical risk measure, to estimate the potential loss from market movements. This measure uses historical simulation based on data for the previous 12 months. It assumes that historical changes in market values reflect the distribution of potential outcomes in the immediate future. We use Expected Shortfall (ES) that is VaR calculated with a one-day holding period and an expected tail-loss methodology which approximates a 97.5% confidence interval, to monitor and limit market risk exposures. The Group conducts backtesting to verify the predictiveness of the VaR model. To monitor the Group's vulnerability to unexpected but plausible extreme market risk-related events, we conduct multiple market risk stress tests regularly.

The Group uses a variety of financial derivatives such as swaps, forwards and futures, and options for trading and hedging against movements in interest rates, foreign exchange rates, equity prices and other market risks of the Group’s (a) investments, (b) maturity mismatches between loans and deposits, (c) structured product issuances, and (d) other assets and liabilities.

Independent monitoring of the Group's market risk (including interest rate risk in the banking book) is the responsibility of the RMG-Market and Liquidity Risk unit. The unit monitors, controls and analyses the Group's market risk (including interest rate risk in the banking book) regularly.

Internal control processes and systems have been designed and implemented to support our Group's market risk management approach. We review these control processes and systems regularly, and these reviews allow the management to assess their effectiveness.

The Group does not adopt Internal Models Approach (IMA) to measure its regulatory capital requirements for market risk.

14.2 Quantitative Disclosures

14.2.1 Market Risk under Standardised Approach

The following table provides the components of the Group's market risk RWA as measured under the Standardised Approach.

		31 Dec 2019	30 Jun 2019
		a	
$m		RWA[(1)]	
	Products excluding options		
1	Interest rate risk (general and specific)	15,302	17,748
2	Equity risk (general and specific)	314	228
3	Foreign exchange risk	7,325	6,002
4	Commodity risk	92	46
	Options		
5	Simplified approach	-	-
6	Delta-plus method	-	-
7	Scenario approach	5,558	6,807
8	**Securitisation**	105	64
9	**Total**	**28,696**	**30,895**

(1) The RWA is derived by multiplying the capital requirements by 12.5.

The decrease in market risk-weighted assets was mainly due to a reduction in interest rate risk.

14.2.2 RWA Flow Statements of Market Risk Exposures under IMA, IMA Values for Trading Portfolios and Comparison of VaR Estimates with Gains or Losses

These disclosures are not applicable as the Group did not adopt IMA to measure its regulatory capital requirements for market risk.

15 OPERATIONAL RISK

Operational risk is inherent in our business activities and it may arise from inadequate or failed internal processes, people, systems, or from external events.

The Group's objective is to keep operational risk at appropriate levels, taking into account the markets we operate in, the characteristics of the businesses as well as our economic and regulatory environment.

Robust internal control processes and systems are integral to identifying, monitoring, managing and reporting operational risk.

The RMG-Operational Risk unit and other corporate oversight and control functions,
- oversee and monitor the effectiveness of operational risk management,
- assess key operational risk issues with the units and
- report and/or escalate key operational risks to relevant risk committees and recommend appropriate risk mitigation strategies.

Please refer to Section 9 on the risk management committees established to discuss the various risk types.

The Group Operational Risk Management (ORM) Policy sets our overall approach for managing operational risk in a structured, systematic and consistent manner.

There are policies, standards, tools and programmes in place to govern ORM practices across the Group. These include corporate operational risk policies and standards that are owned by the respective corporate oversight and control functions. The key policies address risk areas relating to technology, compliance, fraud, money laundering, financing of terrorism and sanctions, new product and outsourcing.

The Group adopts the standardised approach to compute operational risk regulatory capital.

To manage and control operational risk, we use various tools, including risk and control self-assessment, operational risk event management and key risk indicator monitoring.

The Group’s three lines of defence adopt one common risk taxonomy, and a consistent risk assessment approach to manage operational risk. Risk and control self-assessment is conducted by each business or support unit to identify key operational risk and assess the effectiveness of internal controls. When control issues are identified, the units develop action plans and track the resolution of the issues.

Operational risk events are classified in accordance with Basel standards. Such events, including any significant incidents that may impact the Group's reputation, must be reported based on certain established thresholds. Key risk indicators with pre-defined escalation triggers are employed to facilitate risk monitoring in a forward-looking manner.

Additional methodologies are in place to address subject-specific risks, including, but not limited to, the following:

Technology risk
Information Technology (IT) risk is managed through an enterprise technology risk management approach. It covers risk identification, assessment, mitigation, monitoring and reporting. In addition, the appropriate governance, IT policies and standards, control processes and risk mitigation programmes are in place to support the risk management approach.

Similarly, cybersecurity risk is managed through the same enterprise risk management approach. which cuts across all lines of business. The Chief Information Security Officer (CISO) oversees the cybersecurity function and the one-stop competency centre for all cybersecurity related matters, such as operational risks and data protection / data privacy risks.

Compliance risk
Compliance risk refers to the risk of the Group not being able to successfully conduct our business because of any failure to comply with laws, regulatory requirements, industry codes or standards of business and professional conduct applicable to the financial sector.

This includes, in particular, laws and regulations applicable to the licensing and conducting of banking or other financial businesses, financial crime such as anti-money laundering and countering the financing of terrorism, fraud and bribery/ corruption. We maintain a compliance programme designed to identify, assess, measure, mitigate and report on such risks through a combination of policy and relevant systems and controls.

The Group also provides relevant training and implements assurance processes. We strongly believe in the need to promote a strong compliance culture as well, and this is developed through the leadership of our Board and management.

15 OPERATIONAL RISK (CONTINUED)

Fraud risk

The Group has established minimum standards for our business and support units to prevent, detect, investigate and remediate fraud and related events. This is based on the Fraud Management Programme, through which standards are implemented at the unit and geographical levels. These standards aim to provide end-to-end management for fraud and related issues within the Group.

Money laundering, financing of terrorism and sanctions risks

There are minimum standards for our business and support units to mitigate and manage our actual and/or potential exposure to money laundering, terrorist financing, sanctions, corruption, or other illicit financial activities. Accountabilities have also been established for the protection of the Group's assets and reputation, as well as the interests of our customers and shareholders.

New product, outsourcing and ecosystem partnership risks

Each new product, service, outsourcing arrangement or ecosystem partnership is subject to a risk review and signoff process, where relevant risks are identified and assessed. Variations of existing products or services and existing outsourcing arrangements and ecosystem partnerships are also subject to a similar process.

Other mitigation programmes

A robust business continuity management programme is in place to ensure that essential banking services can continue in the event of unforeseen events or business disruptions. This includes a crisis management plan to enable quick response to manage incidents. Exercises are conducted annually, simulating different scenarios to test business continuity plans and crisis management protocol. The effectiveness of these exercises as well as the Group's business continuity readiness and our alignment to regulatory guidelines are communicated and attested by senior management to the BRMC annually.

To mitigate losses from specific risk events which are unexpected and significant, we purchase group-wide insurance policies under the Group Insurance Programme. These include policies relating to crime and professional indemnity, directors and officers liability, cyber risk, property damage and business interruption, general liability and terrorism.

16 INTEREST RATE RISK IN THE BANKING BOOK

The Group uses Expected Shortfall and Net Interest Income variability as key risk metrics to manage our assets and liabilities. Credit risk arising from loans and receivables is managed under the credit risk management framework.

Internal control processes and systems have been designed and implemented to support our market risk management approach. The Group reviews these control processes and systems regularly, and these reviews allow management to assess their effectiveness.

The Group's risk management strategies include the use of some derivatives to manage currency and maturity mismatches and for hedging interest rate risk.

Interest rate risk from the banking book arises from mismatches in the interest rate profiles of assets, liabilities and capital instruments. It includes basis risk arising from different interest rate benchmarks, interest rate repricing risk, and yield curve risk. Behavioural assumptions are applied when managing the interest rate risk of non-maturity deposits. The Group measures interest rate risk in the banking book on a weekly basis.

The key market risk drivers of our non-trading portfolios are SGD and USD interest rate positions. The Net Interest Income (NII) of the non-trading book is assessed under various rate scenarios to determine the impact of interest rate movements on future earnings. Based on a 100 bps parallel upward or downward shift in yield curves on the Group's non-trading exposures, NII is estimated to increase by $850 million and decrease by $1,273 million respectively.

17 DISCLOSURE OF G-SIB INDICATORS

The Basel Committee has developed an indicator-based methodology for assessing G-SIBs. Even though the Group is not a G-SIB, it is required to disclose the 12 G-SIB indicators. These have been prepared in accordance with the instructions issued by the Basel Committee. Please refer to http://www.bis.org/bcbs/gsib/ for details on the framework and the 12 indicators used in the assessment methodology.

	Category	Individual indicator	31 Dec 2019 Amount ($m)
1	Cross-jurisdictional activity	Cross-jurisdictional claims	318,446
2		Cross-jurisdictional liabilities	273,049
3	Size	Total exposures as defined for use in the Basel III leverage ratio	652,093
4	Interconnectedness	Intra-financial system assets	112,829
5		Intra-financial system liabilities	76,287
6		Securities outstanding	129,622
7	Substitutability / financial institution infrastructure	Assets under custody	1,012,426
8		Payments activity	14,575,036
9		Underwritten transactions in debt and equity markets	32,204
10	Complexity	Notional amount of over-the-counter derivatives	2,173,898
11		Level 3 assets	768
12		Trading and available-for-sale securities	28,551

The Group has been disclosing the 12 G-SIB indicators, on an annual basis, since 31 December 2013.

Please refer to https://www.dbs.com/investors/financials/quarterly-financials for the Group's G-SIB indicator disclosures for prior periods.

18 REMUNERATION

Remuneration disclosures are disclosed in the 2019 Annual Report which is available at: https://www.dbs.com/investors/financials/group-annual-reports.

The following table signposts the disclosure requirements to the relevant pages and sections in the 2019 Annual Report.

Disclosure requirements	Reference in 2019 Annual Report
MAS Notice 637 Table 11-44: Remuneration Policy	
Name, composition and mandate of the main body overseeing remuneration	Page 49, 54 to 56; sub section on Compensation and Management Development Committee
External consultants engagement in the remuneration process	Page 63; section 5; para 2
Scope of the remuneration policy	Page 61; section 1
Types of employees considered as material risk-takers and as senior managers	Page 64; section 5; footnote (1 and 2)
Information relating to the design and structure of remuneration processes.	Page 61 to 63; section 1 to 4; Page 54 to 56; sub section on Compensation and Management Development Committee
Description of the ways in which current and future risks are taken into account in the remuneration process	Page 62 to 63; section 2 to 4
Description of the ways the Group seeks to link performance during a performance measurement period with levels of remuneration	Page 62 to 65; section 2 to 5
Description of the ways in which the Group seeks to adjust remuneration to take account of longer-term performance.	Page 62 and 63; section 2 and 4
Description of the different forms of variable remuneration that the Group utilises and the rationale for using these different forms.	Page 62 to 63; section 2 to 4
MAS Notice 637 Table 11-44A: Remuneration Awarded during the Financial Year	
Quantitative information on remuneration for the financial year	Page 63; section 5; pie chart under "Senior management and material risk takers"; Page 64; section 5; table under "Breakdown of deferred remuneration awards"
MAS Notice 637 Table 11-44C: Special Payments	
Quantitative information on special payments for the financial year	Page 65; section 5; table "Guaranteed bonuses, sign-on bonuses and severance payments"
MAS Notice 637 Table 11-44E: Deferred Remuneration	
Quantitative information on deferred and retained remuneration	Page 64; section 5; table "Breakdown of deferred remuneration awards"

PART B: LIQUIDITY COVERAGE RATIO (“LCR”) DISCLOSURES

The following disclosures for the Group[1] are made pursuant to the Monetary Authority of Singapore (“MAS”) Notice to Banks No. 651 “Liquidity Coverage Ratio (“LCR”) Disclosure” (“MAS Notice 651”).

The Group is subject to the Basel III Liquidity Coverage Ratio (“LCR”) standards pursuant to MAS Notice 649. As at 1 January 2019, the Group is required to maintain daily all-currency and Singapore dollar (“SGD”) LCR above 100%.

The LCR aims to ensure that a bank has an adequate stock of unencumbered High Quality Liquid Assets (“HQLA”) to meet its liquidity needs for a 30-calendar day liquidity stress scenario. MAS Notice 649 stipulates the range of liquid assets that qualify as HQLA, as well as the applicable haircuts for each category. Net cash outflows are computed using the standardized 30-day cash flow rates defined in the same notice. The amounts after the application of haircuts or 30-day cash flow rates are reflected in the “weighted amount” column of the tables in this part.

The Group seeks to ensure that its LCR remains above the specified regulatory minimum requirements. This is achieved by:

(i) Establishing internal early warning triggers and thresholds based on observed movements in LCR over time;

(ii) Monitoring and managing the LCR closely to ensure it stays within established boundaries; and

(iii) Strategically managing the liquidity risk arising from the balance sheet structure.

[1] The LCR incorporates the assets and liabilities of the following entities:
- From 1 October 2019: DBS Bank Ltd., its banking subsidiaries and DBS Group Holdings Ltd;
- Till 30 September 2019: DBS Bank Ltd. and its banking subsidiaries

DBS GROUP HOLDINGS LTD AND ITS SUBSIDIARIES

1.1 Average All-Currency LCR for the Quarter ended 31 December 2019
(Number of data points: 92)

		31 Dec 2019	
$m		UNWEIGHTED[1]	WEIGHTED VALUE
HIGH-QUALITY LIQUID ASSETS			
1	**Total high-quality liquid assets (HQLA)[2]**		**91,968**
CASH OUTFLOWS			
2	**Retail deposits and deposits from small business customers, of which**	**205,137**	**16,602**
3	Stable deposits	77,445	3,833
4	Less stable deposits	127,692	12,769
5	**Unsecured wholesale funding, of which**	**151,527**	**84,215**
6	Operational deposits (all counterparties) and deposits in institutional networks of cooperative banks	25,332	6,033
7	Non-operational deposits (all counterparties)	119,596	71,583
8	Unsecured debt	6,599	6,599
9	**Secured wholesale funding**		**229**
10	**Additional requirements, of which**	**62,166**	**13,078**
11	Outflows related to derivatives exposures and other collateral requirements	12,595	7,311
12	Outflows related to loss of funding on debt products	-	-
13	Credit and liquidity facilities	49,571	5,767
14	**Other contractual funding obligations**	**1,643**	**1,607**
15	**Other contingent funding obligations**	**26,052**	**782**
16	**TOTAL CASH OUTFLOWS**		**116,513**
CASH INFLOWS			
17	**Secured lending (e.g. reverse repos)**	**9,458**	**504**
18	**Inflows from fully performing exposures**	**78,641**	**44,605**
19	**Other cash inflows**	**8,549**	**5,234**
20	**TOTAL CASH INFLOWS**	**96,648**	**50,343**
		TOTAL ADJUSTED VALUE	
21	**TOTAL HQLA[2]**		**91,922**
22	**TOTAL NET CASH OUTFLOWS**		**66,170**
23	**LIQUIDITY COVERAGE RATIO (%)[3]**		**139%**

[1] The unweighted amounts refer to cash flows due or callable within 30 days, with the exception of items in rows 13 and 15 which reflect the full notional balances.

[2] HQLA in row 1 and row 21 may not be equal as row 1 is before the application of caps on Level 2 liquid assets.

[3] The LCR is computed as an average of observations of LCR during the quarter. This may not be equal to an LCR computed with the average values of HQLA and net cash outflows disclosed in the table.

1.2 Average SGD LCR for the Quarter ended 31 December 2019
(Number of data points: 92)

$m		31 Dec 2019 UNWEIGHTED(1)	31 Dec 2019 WEIGHTED VALUE
HIGH-QUALITY LIQUID ASSETS			
1	**Total high-quality liquid assets (HQLA)(2)**		**33,880**
CASH OUTFLOWS			
2	**Retail deposits and deposits from small business customers, of which**	**132,925**	**10,205**
3	Stable deposits	61,748	3,087
4	Less stable deposits	71,177	7,118
5	**Unsecured wholesale funding, of which**	**25,735**	**10,548**
6	Operational deposits (all counterparties) and deposits in institutional networks of cooperative banks	10,638	2,514
7	Non-operational deposits (all counterparties)	14,922	7,859
8	Unsecured debt	175	175
9	**Secured wholesale funding**		**-**
10	**Additional requirements, of which**	**25,229**	**11,497**
11	Outflows related to derivatives exposures and other collateral requirements	10,757	10,310
12	Outflows related to loss of funding on debt products	-	-
13	Credit and liquidity facilities	14,472	1,187
14	**Other contractual funding obligations**	**231**	**231**
15	**Other contingent funding obligations**	**3,534**	**106**
16	**TOTAL CASH OUTFLOWS**		**32,587**
CASH INFLOWS			
17	**Secured lending (e.g. reverse repos)**	**573**	**0**
18	**Inflows from fully performing exposures**	**13,577**	**8,422**
19	**Other cash inflows**	**12,549**	**12,448**
20	**TOTAL CASH INFLOWS**	**26,699**	**20,870**
		TOTAL ADJUSTED VALUE	
21	**TOTAL HQLA(2)**		**33,875**
22	**TOTAL NET CASH OUTFLOWS(3)**		**11,717**
23	**LIQUIDITY COVERAGE RATIO (%)(4)**		**291%**

(1) The unweighted amounts refer to cash flows due or callable within 30 days, with the exception of items in rows 13 and 15 which reflect the full notional balances.

(2) HQLA in row 1 and row 21 may not be equal as row 1 is before the application of caps on Level 2 liquid assets.

(3) Total net cash outflows may not be equal to the total cash outflows minus total cash inflows as the cap on inflows could be binding. Cash inflows may be netted against cash outflows up to an aggregate cap of 75% of total cash outflows.

(4) The LCR is computed as an average of observations of LCR during the quarter. This may not be equal to an LCR computed with the average values of HQLA and net cash outflows disclosed in the table.

1.3 Liquidity Coverage Ratio

In the fourth quarter of 2019, the average all-currency and SGD LCRs were 139% and 291% respectively. The LCRs have increased from last quarter's corresponding ratios of 131% and 281% as a result of an increase in inflows from short term loans maturing within 30 days.

The LCR remains above the regulatory minimum requirements of 100% for both all-currency and SGD. The Group maintains a healthy liquidity position by keeping a stable balance sheet structure that is supported by a diversified funding base.

The Group's LCR is sensitive to (i) balance sheet movements resulting from commercial loan/deposit activities and wholesale inter-bank lending/ borrowing; and (ii) movements due to positions falling into or out of the LCR 30-day tenor, such as loan rollovers. LCR is also sensitive to movements in HQLA, driven primarily by changes in balances with central banks and collaterals from secured lending and borrowing transactions.

a) Composition of High Quality Liquid Assets (“HQLA”)

The Group holds a pool of unencumbered HQLA that are readily available to meet cash flow obligations under stress scenarios, as defined in the LCR rules. These liquid assets consist predominantly of Level 1 HQLA, which comprises cash, balances with central banks and highly rated bonds issued by governments or supranational entities. These may be included, without haircuts or limitations in quantum, in the total pool of HQLA.

The Group's HQLA include Singapore government securities and local government/central bank securities held at overseas branches and subsidiaries. This is supplemented by bonds issued by highly rated corporate issuers (including public sector entities), as well as covered bonds issued by reputable financial institutions.

b) Concentration of Funding Sources

The Group strives to develop a diversified funding base with access to funding sources across retail and wholesale channels. The Group's funding strategy is anchored on strengthening the core deposit franchise as the foundation of its long-term funding advantage. Please refer to the risk management disclosures in the latest available annual report for more information on the Group's funding strategy.

c) Derivative Exposures and Potential Collateral Calls

The Group actively manages its over-the-counter (“OTC”) and exchange-traded financial derivative exposures arising from market making, trading activities, and its commercial business (including structuring and packaging products for investors and clients). Derivative exposures are mainly from, but not limited to, interest rate swaps and futures, foreign exchange forwards and swaps, and currency swaps. These derivative positions are marked-to-market daily, affecting the collateral amounts posted to and received from interbank counterparties and/or exchanges. Cash flows resulting from potential changes in collateral amounts posted/received are incorporated into LCR net cash outflows.

1.3 Liquidity Coverage Ratio (continued)

d) Currency Mismatch

As part of its funding strategy, the Group makes use of the swap markets to support its funding needs across currencies. The Group's stable funding base of customer deposits is predominantly denominated in the local currency of its key operating locations. Matching its deposit currency mix, the main portion of the Group's liquid assets is denominated in SGD and the local currencies of key operating locations.

e) Centralization of Liquidity Management

Overseas branches and subsidiaries are encouraged but not required to centralise the majority of their borrowings and deployment of funds with Head Office. They will take into account any relevant regulatory restrictions while maintaining an adequate level of presence and participation in the local funding markets.

By managing the liquid assets as a pool, the Group expects to be able to monetize liquid assets to meet liquidity shortfalls under times of stress.

Please refer to the latest available annual report for more information on the Group's liquidity risk management.

PART C: NET STABLE FUNDING RATIO ("NSFR") DISCLOSURES

The following disclosures for the Group[1] are made pursuant to the Monetary Authority of Singapore ("MAS") Notice to Banks No. 653 "Net Stable Funding Ratio ("NSFR") Disclosure" ("MAS Notice 653").

The Group has been subjected to the Basel III NSFR standards from 1 January 2018, pursuant to MAS Notice to Banks No. 652 "Net Stable Funding Ratio (NSFR)" ("MAS Notice 652"). At the all-currency level, the Group is required to maintain NSFR of at least 100% on an ongoing basis.

NSFR aims to improve the resiliency of banks by promoting long term funding stability. It requires banks to maintain a stable funding profile in relation to the composition of their assets and off-balance sheet activities. MAS Notice 652 stipulates the applicable Required Stable Funding ("RSF") factor for each category of asset and Available Stable Funding ("ASF") factor for each type of funding source. NSFR represents the ratio of the bank's ASF to RSF. The breakdown of the bank's ASF and RSF amounts after applying the respective ASF or RSF factors are reflected in the "weighted amount" column of the tables in this part.

NSFR at the year end of 2019 was 110%, no change from the third quarter of 2019 and an increase from 109% in the second quarter of 2019. It remains above the regulatory minimum requirement of 100%. The Group maintains a healthy liquidity position by keeping a stable balance sheet structure that is supported by a diversified funding base. NSFR has held steady in the last two quarters as loan growth was supported by growth in retail deposits and wholesale term deposits.

The Group's NSFR is sensitive to (i) balance sheet movements resulting from commercial loan and deposit activities, and (ii) movements due to positions falling into the NSFR 1-year tenor, such as when the residual maturity of capital or senior issuances fall within the 1 year tenor. The Group recognized interdependent assets and liabilities from the fourth quarter of 2018 onwards, which comprise primarily of bills receivable and payable under letters of credit.

The Group seeks to ensure that its NSFR remains above the specified regulatory minimum requirements. This is achieved by:

(i) Monitoring the NSFR closely against an established internal early warning trigger and management target

(ii) Managing and developing strategies to build a diversified funding base with access to funding sources across retail and wholesale channels

Please refer to the Risk Management disclosures in the latest available annual report for more information on the Group's funding strategy.

[1] The NSFR incorporates the assets and liabilities of the following entities:
- From 1 October 2019: DBS Group Holdings Ltd. and its subsidiaries;
- Till 30 September 2019: DBS Bank Ltd. and its subsidiaries

1.1 NSFR Disclosure Template

$m		31 Dec 2019 Unweighted value by residual maturity: No maturity [1]	< 6 months	6 months to < 1 yr	≥ 1yr	WEIGHTED VALUE
ASF Item						
1	Capital:	**56,169**	**-**	**-**	**404**	**56,573**
2	Regulatory capital[2]	55,783	-	-	-	55,783
3	Other capital instruments	386	-	-	404	790
4	Retail deposits and deposits from small business customers:	**164,800**	**53,332**	**1,679**	**457**	**201,627**
5	Stable deposits	63,880	2,814	91	56	63,502
6	Less stable deposits	100,920	50,518	1,588	401	138,125
7	Wholesale funding:	**76,642**	**157,150**	**14,417**	**16,054**	**86,242**
8	Operational deposits	25,180	-	-	-	12,590
9	Other wholesale funding	51,462	157,150	14,417	16,054	73,652
10	Liabilities with matching interdependent assets	**-**	**1,334**	**-**	**-**	**-**
11	Other liabilities:	**12,879**		**5,237**		**2,651**
12	NSFR derivative liabilities			2,386		
13	All other liabilities and equity not included in the above categories	12,879	4	799	2,048	2,651
14	**Total ASF**[2]					**347,093**
RSF Item						
15	Total NSFR high-quality liquid assets (HQLA)					**14,328**
16	Deposits held at other financial institutions for operational purposes	**164**	**-**	**-**	**-**	**82**
17	Performing loans and securities:	**14,504**	**140,986**	**36,848**	**243,533**	**272,037**
18	Performing loans to financial institutions secured by Level 1 HQLA	-	3,985	-	20	418
19	Performing loans to financial institutions secured by non-Level 1 HQLA and unsecured performing loans to financial institutions	7,146	26,800	9,106	6,484	16,129
20	Performing loans to non-financial corporate clients, loans to retail and small business customers, and loans to sovereigns, central banks and PSEs, of which:	7,157	103,143	17,438	148,845	183,320
21	With a risk weight of less than or equal to 35% under MAS Notice 637's standardised approach to credit risk	-	31,857	551	6,036	17,846
22	Performing residential mortgages, of which:	-	2,477	1,651	67,733	48,069

[1] Items to be reported in the 'no maturity' time bucket do not have a stated maturity. These may include, but are not limited to, items such as capital with perpetual maturity, non-maturity deposits, short positions, open maturity positions, non-HQLA equities, and physical traded commodities.

[2] Total available stable funding has been adjusted to reflect the residual maturity of a callable capital instrument.

1.1 NSFR Disclosure Template (continued)

$m		31 Dec 2019				
		Unweighted value by residual maturity				
		No maturity [1]	< 6 months	6 months to < 1 yr	≥ 1yr	WEIGHTED VALUE
23	With a risk weight of less than or equal to 35% under MAS Notice 637's standardised approach to credit risk	-	2,452	1,629	66,966	47,393
24	Securities that are not in default and do not qualify as HQLA, including exchange-traded equities	201	4,581	8,653	20,451	24,101
25	Assets with matching interdependent liabilities	**-**	**1,334**	**-**	**-**	**-**
26	Other assets:	**18,365**	**16,332**			**25,891**
27	Physical trade commodities, including gold	16	**-**	**-**	**-**	14
28	Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs	**-**	433			368
29	NSFR derivative assets	**-**	6,376			3,990
30	NSFR derivative liabilities before deduction of variation margin posted	**-**	6,686			334
31	All other assets not included in the above categories	18,349	1	-	2,836	21,185
32	Off-balance sheet items	**-**	**326,206**			**2,484**
33	**Total RSF**					**314,822**
34	**Net Stable Funding Ratio (%)**					**110**

[1] Items to be reported in the 'no maturity' time bucket do not have a stated maturity. These may include, but are not limited to, items such as capital with perpetual maturity, non-maturity deposits, short positions, open maturity positions, non-HQLA equities, and physical traded commodities.

1.1 NSFR Disclosure Template (continued)

		30 Sep 2019				
		Unweighted value by residual maturity				
$m		No maturity [(1)]	< 6 months	6 months to < 1 yr	≥ 1yr	WEIGHTED VALUE
ASF Item						
1	Capital:	**57,233**	**-**	**-**	**415**	**57,648**
2	Regulatory capital	56,005	-	-	-	56,005
3	Other capital instruments	1,228	-	-	415	1,643
4	Retail deposits and deposits from small business customers:	**161,316**	**53,872**	**2,029**	**797**	**199,567**
5	Stable deposits	62,590	2,825	103	72	62,314
6	Less stable deposits	98,726	51,047	1,926	725	137,253
7	Wholesale funding:	**75,728**	**156,424**	**12,327**	**15,818**	**81,782**
8	Operational deposits	24,386	-	-	-	12,193
9	Other wholesale funding	51,342	156,424	12,327	15,818	69,589
10	Liabilities with matching interdependent assets	**-**	**1,374**	**-**	**-**	**-**
11	Other liabilities:	**14,750**		**7,891**		**2,975**
12	NSFR derivative liabilities			4,984		
13	All other liabilities and equity not included in the above categories	14,750	33	-	2,874	2,975
14	**Total ASF**[(2)]					**341,972**
RSF Item						
15	Total NSFR high-quality liquid assets (HQLA)					**12,794**
16	Deposits held at other financial institutions for operational purposes	**145**	**-**	**-**	**-**	**72**
17	Performing loans and securities:	**14,739**	**141,006**	**34,218**	**243,398**	**272,445**
18	Performing loans to financial institutions secured by Level 1 HQLA	-	3,547	-	16	371
19	Performing loans to financial institutions secured by non-Level 1 HQLA and unsecured performing loans to financial institutions	7,530	24,713	6,146	6,997	14,906
20	Performing loans to non-financial corporate clients, loans to retail and small business customers, and loans to sovereigns, central banks and PSEs, of which:	7,008	103,720	16,415	148,094	183,503
21	With a risk weight of less than or equal to 35% under MAS Notice 637's standardised approach to credit risk	-	28,852	472	4,298	15,870
22	Performing residential mortgages, of which:	-	2,466	1,628	67,616	47,697

[(1)] Items to be reported in the 'no maturity' time bucket do not have a stated maturity. These may include, but are not limited to, items such as capital with perpetual maturity, non-maturity deposits, short positions, open maturity positions, non-HQLA equities, and physical traded commodities.

[(2)] Total available stable funding has been adjusted to reflect the residual maturity of a callable capital instrument.

1.1 NSFR Disclosure Template (continued)

		30 Sep 2019				
		Unweighted value by residual maturity				
$m		No maturity [1]	< 6 months	6 months to < 1 yr	≥ 1yr	WEIGHTED VALUE
23	With a risk weight of less than or equal to 35% under MAS Notice 637's standardised approach to credit risk	-	2,437	1,605	66,775	46,956
24	Securities that are not in default and do not qualify as HQLA, including exchange-traded equities	201	6,560	10,029	20,675	25,968
25	Assets with matching interdependent liabilities	**-**	**1,374**	**-**	**-**	**-**
26	Other assets:	**16,538**		**21,874**		**24,085**
27	Physical trade commodities, including gold	16	**-**	**-**	**-**	14
28	Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs	**-**		714		607
29	NSFR derivative assets	**-**		9,275		4,291
30	NSFR derivative liabilities before deduction of variation margin posted	**-**		9,232		-
31	All other assets not included in the above categories	16,522	2	1	2,650	19,173
32	Off-balance sheet items	**-**		**323,693**		**2,558**
33	**Total RSF**					**311,954**
34	**Net Stable Funding Ratio (%)**					**110**

[1] Items to be reported in the 'no maturity' time bucket do not have a stated maturity. These may include, but are not limited to, items such as capital with perpetual maturity, non-maturity deposits, short positions, open maturity positions, non-HQLA equities, and physical traded commodities.

PART D : ATTESTATION

The Pillar 3 disclosures as at 31 December 2019 have been prepared in accordance with the internal controls processes approved by the DBSH Board of Directors.

Piyush Gupta
Chief Executive Officer

12 February 2020
Singapore

PART E: ABBREVIATIONS

Abbreviations	Brief Description
A-IRBA	Advanced Internal Ratings-Based Approach
ASF	Available Stable Funding
AT1	Additional Tier 1
BRMC	Board Risk Management Committee
CAR	Capital Adequacy Ratio
CCF	Credit Conversion Factor
CCO	Chief Credit Officer
CCP	Central Counterparty
CCR	Counterparty Credit Risk
CEO	Chief Executive Officer
CET1	Common Equity Tier 1
CF	Commodities Finance
CISO	Chief Information Security Officer
CRE	Commercial Real Estate
CRM	Credit Risk Mitigation
CRO	Chief Risk Officer
CVA	Credit Valuation Adjustment
D-SIB	Domestic Systemically Important Banks
DOA	Delegation of Authority
EAD	Exposure at the time of default
EC	Economic Capital
ECL	Expected Credit Loss
EL	Expected Loss
EPE	Expected Positive Exposure
ES	Expected Shortfall

PART E: ABBREVIATIONS (CONTINUED)

Abbreviations	Brief Description
F-IRBA	Foundation Internal Ratings-Based Approach
FC(CA)	Financial Collateral Comprehensive Approach
FC(SA)	Financial Collateral Simple Approach
FX	Foreign Exchange
FVOCI	Fair Value through Other Comprehensive Income
FVPL	Fair Value through Profit or Loss
G-SIB	Global Systemically Important Banks
GCPC	Group Credit Policy Committee
GCRC	Group Credit Risk Committee
GCRMC	Group Credit Risk Models Committee
GMLRC	Group Market and Liquidity Risk Committee
GORC	Group Operational Risk Committee
GSSTC	Group Scenario and Stress Testing Committee
HQLA	High Quality Liquid Assets
HVCRE	High-volatility Commercial Real Estate
IAA	Internal Assessment Approach
ICAAP	Internal Capital Adequacy Assessment Process
IMA	Internal Models Approach
IMM	Internal Models Method
IPRE	Income-producing Real Estate
IPV	Independent Price Verification
IRBA	Internal Ratings-Based Approach
ISDA	International Swaps & Derivatives Association
ISIN	International Securities Identification Number
IT	Information Technology
LCR	Liquidity Coverage Ratio

PART E: ABBREVIATIONS (CONTINUED)

Abbreviations	Brief Description
LGD	Loss Given Default
MAS	Monetary Authority of Singapore
MDB	Multilateral Development Bank
NII	Net Interest Income
NPA	Non-performing Assets
NSFR	Net Stable Funding Ratio
OF	Object Finance
ORM	Operational Risk Management
OTC	Over-the-counter
PAC	Product Approval Committee
PD	Probability of Default
PE/VC	Private Equity and Venture Capital
PF	Project Finance
PSE	Public Sector Entity
PVA	Prudent Valuation Adjustments
QRRE	Qualifying Revolving Retail Exposures
Repo	Repurchase agreements
Risk ExCo	Risk Executive Committee
RLAR	Regulatory Loss Allowance Reserve
RMG	Risk Management Group
RSF	Required Stable Funding
RW	Risk Weight
RWA	Risk-Weighted Assets
SA	Standardised Approach
SA(CR)	Standardised Approach to Credit Risk
SA(EQ)	Standardised Approach for Equity Exposures

PART E: ABBREVIATIONS (CONTINUED)

Abbreviations	Brief Description
SA(MR)	Standardised Approach to Market Risk
SEC-ERBA	Securitisation External Ratings-Based Approach
SEC-IRBA	Securitisation Internal Ratings-Based Approach
SEC-SA	Securitisation Standardised Approach
SFT	Securities or Commodities Financing Transaction
SGD	Singapore Dollar
SFRS(I)	Singapore Financial Reporting Standards (International)
SME	Small Medium Enterprise
SWWR	Specific Wrong-way Risk
TEP	Total Eligible Provisions
TLAC	Total Loss-absorbing Capacity
TMRAC	Target Market and Risk Acceptance Criteria
T1	Tier 1
T2	Tier 2
USD	United States Dollar
VaR	Value-at-risk
α	Alpha Factor