



恒生銀行
HANG SENG BANK

Banking Disclosure Statement

31 December 2018

(Unaudited)

**These disclosures are prepared under
the Banking (Disclosure) Rules**

BANKING DISCLOSURE STATEMENT *(unaudited)*

Contents

Page

Introduction	4
Purpose	4
Basis of preparation	4
The Banking Disclosure Statement	4
Overview of risk management	6
Linkage to the 2018 Annual Report	8
Basis of consolidation	8
Balance sheet reconciliation	9
Capital and RWA	12
Regulatory capital disclosures	12
Countercyclical capital buffer ratio	16
Leverage ratio	17
Overview of RWA and the minimum capital requirements	19
RWA flow statements	20
Credit risk	21
Credit risk management	21
Credit quality of assets	22
Credit risk under internal ratings-based approach	30
Credit risk under standardised approach	37
Credit risk mitigation	38
Model performance	41
Counterparty credit risk exposures	43
Counterparty credit risk management	43
Central counterparties	44
Counterparty default risk under internal ratings-based approach	46
Counterparty default risk under standardised approach	47
Market risk	48
Overview and governance	48
Market risk measures	49
Market risk under standardised approach	51
Analysis of VaR, stressed VaR and incremental risk charge measures	52
Prudent valuation adjustment	53
Liquidity information	53
Other disclosures	58
Interest rate exposures in the banking book	58
Mainland activities exposures	59
International claims	59
Foreign exchange exposure	60
Other information	61
Abbreviations	61

BANKING DISCLOSURE STATEMENT (unaudited) (continued)
Tables

Ref	Title	Page
1	KM1 – Key prudential ratios	5
2	List of subsidiaries outside the regulatory scope of consolidation	8
3	CC2 – Reconciliation of regulatory capital to balance sheet	9
4	LI1 – Differences between accounting and regulatory scopes of consolidation and mapping of financial statement categories with regulatory risk categories	10
5	LI2 – Main sources of differences between regulatory exposure amounts and carrying values in financial statements	11
6	CC1 – Composition of regulatory capital	12
7	CCA – Main features of regulatory capital instruments	15
8	CCyB1 – Geographical distribution of credit exposures used in countercyclical capital buffer	16
9	LR2 – Leverage ratio	17
10	LR1 – Summary comparison of accounting assets against leverage ratio exposure measure	18
11	OV1 – Overview of RWA	19
12	CR8 – RWA flow statement of credit risk exposures under IRB approach	20
13	MR2 – RWA flow statement of market risk exposures under IMM approach	20
14	CR1 – Credit quality of exposures	22
15	CR2 – Changes in defaulted loans and debt securities	22
16	CRB1 – Exposures by geographical location	22
17	CRB2 – Exposures by industry	23
18	CRB3 – Exposures by residual maturity	23
19	CRB4 – Impaired exposures and related allowances and write-offs by industry	24
20	CRB5 – Impaired exposures and related allowances and write-offs by geographical location	24
21	CRB6 – Aging analysis of accounting past-due unimpaired exposures	25
22	CRB7 – Breakdown of renegotiated loans between impaired and unimpaired	25
23	Loans and advances to customers by geographical location	26
24	Impaired and overdue loans and advances to customers	26
25	Gross loans and advances to customers by industry sector	27
26	Overdue loans and advances to customers	28
27	Off-balance sheet exposures other than derivative transactions	29
28	Percentage of total EAD and RWA covered by IRB approach	30
29	Wholesale IRB credit risk models	31
30	Material retail IRB credit risk models	32
31.1	CR6 – Credit risk exposures by portfolio and PD ranges – for IRB approach (Wholesale)	34
31.2	CR6 – Credit risk exposures by portfolio and PD ranges – for IRB approach (Retail)	35
31.3	CR6 – Credit risk exposures by portfolio and PD ranges – for IRB approach (Total)	35
32	CR10 – Specialised lending under supervisory slotting criteria approach – other than HVCRE	36
33	CR10 – Equity exposures under the simple risk-weight method	36
34	CR5 – Credit risk exposures by asset classes and by risk weights – for STC approach	37
35	CR3 – Overview of recognised credit risk mitigation	39
36	CR7 – Effects on RWA of recognised credit derivative contracts used as recognised credit risk mitigation – for IRB approach	39
37	CR4 – Credit risk exposures and effects of recognised credit risk mitigation – for STC approach	40
38.1	CR9 – Back-testing of PD per portfolio – for IRB approach (Wholesale)	41
38.2	CR9 – Back-testing of PD per portfolio – for IRB approach (Retail)	42
39	CCR1 – Analysis of counterparty default risk exposures (other than those to CCPs) by approaches	44
40	CCR2 – CVA capital charge	44
41	CCR8 – Exposures to CCPs	45
42	CCR5 – Composition of collateral for counterparty default risk exposures (including those for contracts or transactions cleared through CCPs)	45
43	CCR4 – Counterparty default risk exposures (other than those to CCPs) by portfolio and PD range – for IRB approach	46
44	CCR3 – Counterparty default risk exposures (other than those to CCPs) by asset classes and by risk weights – for STC approach	47
45	MR1 – Market risk under STM approach	51
46	MR3 – IMM approach values for market risk exposures	52
47	MR4 – Comparison of VaR estimates with gains or losses	52
48	PV1 – Prudent valuation adjustments	53
49	LIQA – LCRs and NSFRs on three liquidity reporting bases	53
50	Average liquidity coverage ratio	54
51	Total weighted amount of high quality liquid assets	54
52	LIQ1 – Liquidity coverage ratio – for category 1 institution	55
53	LIQ2 – Net stable funding ratio – for category 1 institution	56
54	IRRBB – Sensitivity analysis	58
55	Mainland activities exposures	59
56	International claims	59
57	Foreign exchange exposure	60

BANKING DISCLOSURE STATEMENT *(unaudited) (continued)*

Introduction

Purpose

The information contained in this document is for Hang Seng Bank Limited ("the Bank") and its subsidiaries (together "the Group"). It should be read in conjunction with the Group's 2018 Annual Report. The Group's Annual Report and the Banking Disclosure Statement, taken together, comply with the Banking (Disclosure) Rules ("BDR") made under section 60A of the Banking Ordinance.

These banking disclosures are governed by the Group's disclosure policy, which has been approved by the Board. The disclosure policy sets out the governance, control and assurance requirements for publication of the document. While the Banking Disclosure Statement is not required to be externally audited, the document has been subject to independent review in accordance with the Group's policies on disclosure and its financial reporting and governance processes.

Basis of preparation

Except where indicated otherwise, the financial information contained in this Banking Disclosure Statement has been prepared on a consolidated basis. The basis of consolidation for regulatory purposes is different from that for accounting purposes. Information regarding subsidiaries that are not included in the consolidation for regulatory purposes is set out in the "Basis of consolidation" section in this document.

The information in this document is not audited and does not constitute statutory accounts.

Certain financial information in this document is extracted from the statutory accounts for the year ended 31 December 2018 which will be delivered to the Registrar of Companies and the Hong Kong Monetary Authority ("HKMA"). The Auditors expressed an unqualified opinion on those statutory accounts in their report dated 19 February 2019. The Auditor's Report did not include a reference to any matters to which the auditor drew any attention by way of emphasis without qualifying their report; and did not contain a statement under sections 406(2), 407(2) or (3) of the Hong Kong Companies Ordinance (Cap.622). The Group's 2018 Annual Report, which include the statutory accounts, can be viewed on our website, www.hangseng.com.

The Banking Disclosure Statement

The HKMA has implemented the Basel Committee on Banking Supervision ("BCBS") standards on revised Pillar 3 disclosures requirements released in January 2015 ("January 2015 standard") since 2017. In June 2018, the HKMA further amended the BDR to incorporate the BCBS Pillar 3 disclosures requirements – consolidated and enhanced framework finalised in March 2017 ("March 2017 standard"). The Group has implemented the relevant updates and new requirements in accordance with the latest BDR.

According to the BDR, disclosure of comparative information is not required unless otherwise specified in the standard disclosure templates. Prior period disclosures can be found in the Regulatory Disclosures section of our website, www.hangseng.com.

The Banking Disclosure Statement includes the majority of the information required under the BDR. The remainder of the disclosure requirements are covered in the Group's 2018 Annual Report which can be found in the Investor Relations – Financial Statements section of our website, www.hangseng.com.

Disclosure requirements covered in the Group's 2018 Annual Report:

- Section 16FJ - LIQA : Liquidity risk management on pages 69 to 73
- Section 16J - The Group's definition of "Impaired" and "Renegotiated" and the methods adopted for determining impairments in note 2(j) on pages 163 to 169
- Sections 16ZS, 16ZT, 16ZU, 16ZV - Remuneration on pages 113, 116 to 117
- Section 44 - Assets used as security in note 30 on page 200
- Section 46 - The general disclosure of the major business activities and product lines in note 5 on page 181 and note 21 on pages 188 to 191 respectively
- Section 52 - Corporate governance on pages 104 to 127

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Table 1: KM1 – Key prudential ratios

		a	b	c	d	e
		At ¹				
		31 Dec	30 Sep	30 Jun	31 Mar	31 Dec
		2018	2018	2018	2018	2017
		Footnotes				
Regulatory capital (HK\$m)		2				
1	Common Equity Tier 1 ("CET1")	101,724	100,320	97,542	95,632	94,458
2	Tier 1	108,705	107,301	104,523	102,613	101,439
3	Total capital	123,307	121,299	118,100	116,016	115,247
Risk-weighted asset ("RWA") (HK\$m)		2				
4	Total RWA	611,885	602,711	601,549	600,727	572,723
Risk-based regulatory capital ratios (as a percentage of RWA)		2				
5	CET1 ratio (%)	16.6	16.6	16.2	15.9	16.5
6	Tier 1 ratio (%)	17.8	17.8	17.4	17.1	17.7
7	Total capital ratio (%)	20.2	20.1	19.6	19.3	20.1
Additional CET1 buffer requirements (as a percentage of RWA)		2				
8	Capital conservation buffer requirement (%)	1.875	1.875	1.875	1.875	1.250
9	Countercyclical capital buffer requirement (%)	1.550	1.661	1.651	1.626	1.085
10	Higher loss absorbency requirements (%) (applicable only to Global systemically important authorised institutions ("G-SIBs") or Domestic systemically important authorised institutions ("D- SIBs"))	1.125	1.125	1.125	1.125	0.750
11	Total AI-specific CET1 buffer requirements (%)	4.550	4.661	4.651	4.626	3.085
12	CET1 available after meeting the AI's minimum capital requirements (%)	11.8	11.8	11.4	11.1	11.7
Basel III leverage ratio		3				
13	Total leverage ratio ("LR") exposure measure (HK\$m)	1,477,001	1,418,636	1,444,966	1,415,190	1,388,288
14	LR (%)	7.4	7.6	7.2	7.3	7.3
Liquidity Coverage Ratio ("LCR")		4				
Total high quality liquid assets ("HQLA") (HK\$m)		293,081	280,177	274,966	279,172	277,788
16	Total net cash outflows (HK\$m)	140,330	135,029	131,540	135,437	133,131
17	LCR (%)	209.1	208.2	209.6	207.0	209.5
Net Stable Funding Ratio ("NSFR")		5				
18	Total available stable funding (HK\$m)	1,076,646	1,038,035	1,058,496	1,025,318	N/A
19	Total required stable funding (HK\$m)	699,089	689,787	689,335	670,407	N/A
20	NSFR (%)	154.0	150.5	153.6	152.9	N/A

- 1 All figures reported in 2018 are under the new Hong Kong Financial Reporting Standard 9 ("HKFRS 9"). Prior to 2018, the figures presented are reported under the Hong Kong Accounting Standard 39 ("HKAS 39").
- 2 The regulatory capital, RWA, risk-based regulatory capital ratios and additional CET1 buffer requirements above are based on or derived from the information as contained in the "Capital Adequacy Ratio" return submitted to the HKMA on a consolidated basis under the requirements of section 3C(1) of the Banking (Capital) Rules ("BCR").
- 3 From 1 January 2018 onwards, the Basel III leverage ratio disclosures are made in accordance with the information contained in the "Leverage Ratio" return submitted to the HKMA under the requirements specified in Part 1C of the BCR. Prior to 2018, the leverage ratio disclosures are made in accordance with the "Quarterly Template on Leverage Ratio" submitted to the HKMA during the parallel run period.
- 4 The LCR shown are the simple average values of all working days in the reporting periods and are made in accordance with the requirements specified in the "Liquidity Position" return submitted to the HKMA under rule 11(1) of the Banking (Liquidity) Rules ("BLR").
- 5 The NSFR disclosures are made in accordance with the information contained in the "Stable Funding Position" return submitted to the HKMA under the requirements specified in rule 11(1) of the BLR. The requirements have been implemented with effect from 2018 reporting periods. Accordingly, the ratio at 31 December 2017 is not shown.

BANKING DISCLOSURE STATEMENT *(unaudited) (continued)*

Overview of Risk Management

Our risk management framework

We use an enterprise-wide, risk management framework across the organisation and across all risk types. It is underpinned by our risk culture and is reinforced by HSBC Values and our Global Standards programme.

The framework fosters continuous monitoring of the risk environment, and promotes risk awareness and sound operational and strategic decision making. It also ensures we have a consistent approach to monitoring, managing and mitigating the risks we accept and incur in our activities. Further information on our risk management framework is set out on page 40 of the Group's 2018 Annual Report. The measurement and management of principal risks facing the Group is described on pages 42 to 45 of the Group's 2018 Annual Report.

Risk culture

We have long recognised the importance of a strong risk culture, the fostering of which is a key responsibility of senior executives. Our risk culture is reinforced by HSBC Values and our Global Standards programme. It is instrumental in aligning the behaviours of individuals with our attitude to assuming and managing risk, which helps to ensure that our risk profile remains in line with our risk appetite.

Our risk culture is further reinforced by our approach to remuneration. Individual awards, including those for senior executives, are based on compliance with HSBC Values and the achievement of financial and non-financial objectives that are aligned to our risk appetite and strategy.

Risk governance

The Board has ultimate responsibility for the effective management of risk and approves the risk appetite. It is advised by the Risk Committee on risk appetite and its alignment with strategy, risk governance and internal controls, and high-level risk related matters.

Executive accountability for the ongoing monitoring, assessment and management of the risk environment and the effectiveness of the risk management framework resides with the Group's Chief Risk Officer, supported by the Risk Management Meeting ("RMM").

Day-to-day responsibility for risk management is delegated to senior managers with individual accountability for decision making. All employees have a role to play in risk management. These roles are defined using the Three Lines of Defence model, which takes into account the Group's business and functional structures.

Our executive risk governance structures ensure appropriate oversight and accountability for risk, which facilitates the reporting and escalation to the RMM.

Risk appetite

Risk appetite is a key component of our management of risk. It sets out the aggregate level and types of risk that we are willing to accept in achieving our medium to long-term strategic goals. Within the Group, risk appetite is managed through a global risk appetite framework and articulated in a Risk Appetite Statement ("RAS"), which is approved by the Board on the advice of the Group's Risk Committee.

The RMM regularly reviews the Group's actual risk appetite profile against the limits set out in the RAS on monthly basis to enable senior management to monitor the risk profile and guide business activities in order to balance risk and return. The actual risk appetite profile is also reported to the Risk Committee and Board from Chief Risk Officer including material deviation and related management mitigating actions.

The Group's risk appetite informs our strategic and financial planning process, defining the desired forward-looking risk profile of the Group. It is also integrated within other risk management tools, such as the top and emerging risks report and stress testing, to ensure consistency in risk management. Information on our risk management tools is set out on page 41 of the Group's 2018 Annual Report. Details on the Group's overarching risk appetite are set out on in the global risk appetite framework.

Stress testing

The Group operates a comprehensive stress testing programme that supports our risk management and capital planning. It includes execution of stress tests mandated by our regulators, as well as internal stress tests. Our stress testing is supported by dedicated teams and infrastructure.

Our testing programme assesses our capital strength through a rigorous examination of our resilience to external shocks. It also helps us understand and mitigate risks, and informs our decision about capital levels. Stress testing results are reported, where appropriate, to the RMM and the Group's Risk Committee.

BANKING DISCLOSURE STATEMENT *(unaudited) (continued)*

The Group's risk functions

The Group's Risk function, headed by the Group's Chief Risk Officer, is responsible for enterprise-wide risk oversight. This includes establishing and monitoring of risk profiles and forward-looking risk identification and management. The Group's Risk function is made up of sub-functions covering all risks to our operations and forms part of the second line of defence. They are independent from the sales and trading functions, ensuring the necessary balance in risk/return decisions.

Risk management and internal control systems

The Directors are responsible for maintaining and reviewing the effectiveness of risk management and internal control systems, and for determining the aggregate level and risk types they are willing to accept in achieving the Group's business objectives.

On behalf of the Board, the Group's Audit Committee has responsibility for oversight of risk management and internal controls over financial reporting, and the Group's Risk Committee has responsibility for oversight of risk management and internal controls other than for financial reporting.

The Directors, through the Group's Risk Committee and the Group's Audit Committee, conduct an annual review of the effectiveness of our system of risk management and internal control. The Group's Risk Committee and the Group's Audit Committee received confirmation that executive management has taken or is taking the necessary actions to remedy any failings or weaknesses identified through the operation of our framework of controls.

Risk measurement and reporting systems

Our risk measurement and reporting systems are designed to help ensure that risks are comprehensively captured with all the attributes necessary to support well-founded decisions, that those attributes are accurately assessed, and that information is delivered in a timely manner for those risks to be successfully managed and mitigated.

Risk measurement and reporting systems are also subject to a governance framework designed to ensure that their build and implementation are fit for purpose and functioning appropriately. Risk information systems development is a key responsibility of the Risk and IT functions, while the development and operation of risk rating and management systems and processes are ultimately subject to the oversight of the Board.

We continue to invest significant resources in IT systems and processes in order to maintain and improve our risk management capabilities. A number of key initiatives and projects to enhance consistent data aggregation, reporting and management, and work towards meeting our BCBS data obligations are in progress. Group policy promotes the deployment of preferred technology where practicable. Group standards govern the procurement and operation of systems used in our subsidiaries to process risk information within business lines and risk functions.

Risk measurement and reporting structures deployed at Group level are applied throughout global businesses and major operating subsidiaries through a common operating model for integrated risk management and control. This model sets out the respective responsibilities of Group, global business and country level risk functions in respect of such matters as risk governance and oversight, compliance risks, approval authorities and lending guidelines, global and local scorecards, management information and reporting, and relations with third parties, including regulators, rating agencies and auditors.

Risk analytics and model governance

The Group's Risk functions manage a number of analytics disciplines supporting model development and management, including rating, scoring, economic capital and stress testing models for different risk types and business segments. They formulate technical responses to industry developments and regulatory policy in the field of risk analytics, supports the development of the HSBC Group's global risk model, develop local risk model and oversee the use around the Group toward our implementation targets for IRB approaches.

Model governance is under the general oversight of HSBC Group Model Oversight Committee ("MOC"). Local Model Oversight Committees ("Local MOCs") are established for Wholesale Credit and Market Risk ("WCMR") and Retail Banking and Wealth Management ("RBWM") Risk respectively with comparable terms of reference as HSBC Group MOC.

Models are also subject to an independent model review and validation process led by the Independent Model Review team within the HSBC Global Risk. The Independent Model Review team provides robust challenge to the modelling approaches used across the HSBC Group, including HASE, and ensures that the performance of those models is transparent and that their limitations are visible to key stakeholders.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Linkage to the 2018 Annual Report

Basis of consolidation

The basis of consolidation for financial accounting purposes is in accordance with Hong Kong Financial Reporting Standards ("HKFRS"), as described in note 1 on the consolidated financial statements in the Group's 2018 Annual Report.

The basis of consolidation for regulatory purposes is different from that for accounting purposes. Subsidiaries included in the consolidation for regulatory purposes are specified in a notice from the HKMA in accordance with section 3C(1) of the BCR.

Subsidiaries not included in consolidation for regulatory purposes are securities and insurance companies that are authorised and supervised by regulators and are subject to supervisory arrangements regarding the maintenance of adequate capital to support business activities comparable to those prescribed for authorised institutions ("AI") under the BCR and the Banking Ordinance. The capital invested by the Group in these subsidiaries is deducted from the capital base subject to certain thresholds, as determined in accordance with Part 3 of the BCR.

For insurance entities, the figures shown below exclude deferred acquisition cost assets as these are derecognised for consolidation purpose due to the recognition of the present value of in-force long-term insurance business ("PVIF") on long-term insurance contracts and investment contracts with discretionary participation features at Group level. As at 31 December 2018, the PVIF asset of HK\$15,910m and the related deferred tax liability, however, are recognised at the consolidated group level only, and are therefore also not included in the asset or equity positions for the standalone entities shown below.

As at 31 December 2018, there are no subsidiaries which are included within both the accounting scope of consolidation and the regulatory scope of consolidation but the method of consolidation differs.

There are also no subsidiaries which are included within the regulatory scope of consolidation but not included within the accounting scope of consolidation as at 31 December 2018.

The Group operates subsidiaries in different territories where capital is governed by local rules and there may be restrictions on the transfer of regulatory capital and funds between members of the Group.

The Group maintains a regulatory reserve to satisfy the provisions of the Banking Ordinance and local regulatory requirements for prudential supervision purposes. As at 31 December 2018, the effect of this requirement is to restrict the amount of reserves which can be distributed to shareholders by HK\$4,982m.

There are no relevant capital shortfalls in any of the Group's subsidiaries which are not included in its consolidation group for regulatory purposes as at 31 December 2018.

A list of subsidiaries not included in consolidation for regulatory purposes is shown below:

Table 2: List of subsidiaries outside the regulatory scope of consolidation

	Principal activities	As at 31 Dec 2018	
		Total assets*	Total equity*
		HK\$m	HK\$m
Hang Seng Futures Ltd	Futures brokerages	102	102
Hang Seng Investment Management Ltd	Fund management	1,528	1,512
Hang Seng Investment Services Ltd	Provision of investment commentaries	9	9
Hang Seng Securities Ltd	Stockbroking	2,253	1,039
Hang Seng Insurance Co. Ltd and its subsidiaries	Retirement benefits and life assurance	135,763	12,533
Hang Seng Qianhai Fund Management Co. Ltd	Fund raising, fund sales and asset management	99	82

* Prepared in accordance with HKFRS

The approaches used in calculating the Group's regulatory capital and RWA are in accordance with the BCR. The Group uses the advanced internal ratings-based approach to calculate its credit risk for the majority of its non-securitisation exposures. For counterparty credit risk, the Group uses the current exposure method to calculate its default risk exposures. For market risk, the Group uses an internal models approach to calculate its general market risk for the risk categories of interest rate and foreign exchange (including gold) exposures and the standardised (market risk) approach for calculating other market risk positions. For operational risk, the Group uses the standardised (operational risk) approach to calculate its operational risk.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)
Balance sheet reconciliation

The following table expands the balance sheet under the regulatory scope of consolidation to show separately the capital components that are reported in the "Composition of regulatory capital disclosures" template in Table 6. The capital components in this table contain a reference that shows how these amounts are included in Table 6.

Table 3: CC2 – Reconciliation of regulatory capital to balance sheet

	a	b	c
	Balance sheet as in published financial statements As at 31 Dec 2018 HK\$m	Under regulatory scope of consolidation As at 31 Dec 2018 HK\$m	Cross-referenced to Definition of Capital Components
Assets			
Cash and sight balances at central banks	16,421	16,421	
Placings with and advances to banks	79,400	75,929	
Trading assets	47,164	47,164	
Financial assets designated and otherwise mandatorily measured at fair value	13,070	231	
Derivative financial instruments	8,141	8,164	
Loans and advances to customers	874,456	874,458	
<i>of which: Impairment allowances eligible for inclusion in Tier 2 capital</i>		1,171	(1)
Financial investments	428,532	329,022	
Investment in subsidiaries	-	7,104	
Subordinated loans to subsidiaries	-	915	(2)
Interest in associates	2,444	-	
Investment properties	10,108	7,187	
Premises, plant and equipment	30,510	30,169	
Intangible assets	16,751	504	(3)
Other assets	44,300	26,590	
<i>of which: Deferred tax assets ("DTAs")</i>		111	(4)
<i>Defined benefit pension fund net assets</i>		13	(5)
Total assets	1,571,297	1,423,858	
Liabilities			
Current, savings and other deposit accounts	1,154,415	1,157,281	
Repurchase agreements – non-trading	410	410	
Deposits from banks	2,712	2,712	
Trading liabilities	33,649	33,649	
Financial liabilities designated at fair value	33,454	33,006	
<i>of which: Gains and losses due to changes in own credit risk on fair valued liabilities</i>		1	(6)
Derivative financial instruments	8,270	8,461	
<i>of which: Gains and losses due to changes in own credit risk on fair valued liabilities</i>		11	(7)
Certificates of deposit and other debt securities in issue	3,748	3,748	
Other liabilities	45,247	39,268	
Liabilities under insurance contracts	120,195	-	
Current tax liabilities	696	695	
Deferred tax liabilities	6,394	3,657	
<i>of which: Deferred tax liabilities related to intangible assets</i>		41	(8)
<i>Deferred tax liabilities related to defined benefit pension fund</i>		2	(9)
Total liabilities	1,409,190	1,282,887	
Equity			
Share capital	9,658	9,658	(10)
Retained profits	123,350	102,260	(11)
<i>of which: Revaluation gains of investment properties</i>		6,741	(12)
<i>Regulatory reserve for general banking risks</i>		4,982	(13)
<i>Regulatory reserve eligible for inclusion in Tier 2 capital</i>		2,402	(14)
<i>Valuation adjustments</i>		123	(15)
Other equity instruments	6,981	6,981	(16)
Other reserves	22,093	22,072	(17)
<i>of which: Cash flow hedge reserve</i>		(4)	(18)
<i>Valuation adjustments</i>		25	(19)
<i>Revaluation reserve of properties</i>		19,802	(20)
Total shareholders' equity	162,082	140,971	
Non-controlling interests	25	-	
Total equity	162,107	140,971	
Total equity and liabilities	1,571,297	1,423,858	

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Table 4: LII – Differences between accounting and regulatory scopes of consolidation and mapping of financial statement categories with regulatory risk categories

		a	b	c	d	e	f	g
		Carrying values		Carrying values of items:				
		Carrying values as reported in published financial statements	under scope of regulatory consolidation	subject to credit risk framework	subject to counterparty credit risk framework	subject to the securitisation framework	subject to market risk framework	not subject to capital requirements or subject to deduction from capital
As at 31 Dec 2018	Footnotes	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Assets								
Cash and sight balances at central banks		16,421	16,421	16,421	-	-	-	-
Placings with and advances to banks		79,400	75,929	75,929	-	-	-	-
Trading assets		47,164	47,164	-	-	-	47,164	-
Financial assets designated and otherwise mandatorily measured at fair value		13,070	231	68	163	-	-	-
Derivative financial instruments	1	8,141	8,164	-	7,785	-	8,164	379
Loans and advances to customers		874,456	874,458	874,458	-	-	-	-
Financial investments		428,532	329,022	329,022	-	-	-	-
Investment in subsidiaries		-	7,104	7,104	-	-	-	-
Subordinated loans to subsidiaries		-	915	-	-	-	-	915
Interest in associates		2,444	-	-	-	-	-	-
Investment properties		10,108	7,187	7,187	-	-	-	-
Premises, plant and equipment		30,510	30,169	30,169	-	-	-	-
Intangible assets	2	16,751	504	-	-	-	-	463
Other assets	2, 3	44,300	26,590	24,818	1,648	-	-	122
Total assets		1,571,297	1,423,858	1,365,176	9,596	-	55,328	1,879
Liabilities								
Current, savings and other deposit accounts		1,154,415	1,157,281	-	-	-	-	1,157,281
Repurchase agreements – non-trading		410	410	-	410	-	-	-
Deposits from banks		2,712	2,712	-	-	-	-	2,712
Trading liabilities		33,649	33,649	-	-	-	33,649	-
Financial liabilities designated at fair value		33,454	33,006	-	-	-	31	32,975
Derivative financial instruments	1	8,270	8,461	-	8,461	-	8,461	-
Certificates of deposit and other debt securities in issue		3,748	3,748	-	-	-	-	3,748
Other liabilities	3	45,247	39,268	-	504	-	-	38,764
Liabilities under insurance contracts		120,195	-	-	-	-	-	-
Current tax liabilities		696	695	-	-	-	-	695
Deferred tax liabilities		6,394	3,657	-	-	-	-	3,657
Total liabilities		1,409,190	1,282,887	-	9,375	-	42,141	1,239,832

1 Assets/liabilities arising from derivative contracts held in the regulatory trading book are subject to both market risk and counterparty credit risk because derivative contracts are mark to market and there is a risk that the counterparty may not be able to fulfil the contractual obligations. As a result, the amounts shown in column (b) do not equal the sum of columns (c) to (g).

2 The assets disclosed in column (g) are net of any associated deferred tax liability.

3 The difference in the carrying values reported in the financial statements in column (a) and the scope of regulatory consolidation in column (b) mainly represents (i) the differences between the financial and regulatory scope of consolidation, and (ii) the amounts of acceptance and endorsements being included as contingencies in accordance with the BCR, whilst for accounting purposes, acceptances and endorsements are recognised on the balance sheet.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Table 5: LI2 – Main sources of differences between regulatory exposure amounts and carrying values in financial statements

	a	b	c	d	e
	Items subject to:				
	Total	credit risk framework	securitisation framework	counterparty credit risk framework	market risk framework
As at 31 Dec 2018	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
1 Asset carrying value amount under scope of regulatory consolidation (as per template LI1) ¹	1,421,979	1,365,176	-	9,596	55,328
2 Liabilities carrying value amount under regulatory scope of consolidation (as per template LI1) ²	43,055	-	-	9,375	42,141
3 Total net amount under regulatory scope of consolidation	1,378,924	1,365,176	-	221	13,187
4 Off-balance sheet amounts and potential future exposures for counterparty risk	487,873	156,277	-	6,949	-
5 Differences due to impairments	2,542	2,542	-	-	-
6 Differences due to recognised collateral	(10,497)	(10,497)	-	-	-
7 Differences arising from off-balance sheet amounts recognised in regulatory exposures	(331,596)	-	-	-	-
8 Differences due to credit risk mitigation	3,449	-	-	3,449	-
9 Differences arising from capital deductions	(43)	-	-	-	-
10 Exposure amounts considered for regulatory purposes	1,530,652	1,513,498	-	10,619	13,187

1 The amount shown in column (a) is equal to column (b) less column (g) in the Total assets row in Table 4.

2 The amount shown in column (a) is equal to column (b) less column (g) in the Total liabilities row in Table 4.

Explanations of differences between accounting and regulatory exposure amounts

Off-balance sheet amounts and potential future exposures for counterparty risk

Off-balance sheet amounts subject to credit risk regulatory framework includes undrawn portion of committed facilities, various trade finance commitments and guarantees, by applying credit conversion factor ("CCF") to these items and consideration of potential future exposures ("PFE") for counterparty risk.

Differences due to impairments

The carrying value of assets is net of impairments. From the regulatory perspective, only exposure value under the IRB approach and non-defaulted exposure under the standardised approach are before deducting impairments.

Differences due to recognised collateral

Exposure value under the standardised approach is calculated after deducting credit risk mitigation whereas accounting value is before such deductions.

Differences due to credit risk mitigation

In counterparty credit risk, differences arise between accounting carrying values and regulatory exposure as a result of the application of credit risk mitigation.

Explanations of differences between accounting fair value and regulatory prudent valuation

Fair value is defined as the best estimate of the price that would be received to sell an asset or be paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Some fair value adjustments already reflect valuation uncertainty to some degree. These are market data uncertainty, model uncertainty and concentration adjustments.

However, it is recognised that a variety of valuation techniques using stressed assumptions and combined with the range of plausible market parameters at a given point in time may still generate unexpected uncertainty beyond fair value.

A series of additional valuation adjustments ("AVAs") are therefore required to reach a specified degree of confidence (the "Prudent Value") set by regulators and that differ both in terms of scope and measurement from the Group's own quantification for disclosure purposes.

AVAs should consider at the minimum: market price uncertainty, bid/offer (close out) uncertainty, model risk, concentration, administrative cost, unearned credit spread and funding fair value adjustment ("FFVA").

AVAs are not limited to level 3 exposures, for which a 95% uncertainty range is already computed and disclosed, but must also be calculated for any exposure for which the exit price cannot be determined with a high degree of certainty.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)
Capital and RWA
Regulatory capital disclosures

The following table sets out the detailed composition of the Group's regulatory capital using the composition of regulatory capital disclosures template as specified by the HKMA.

Table 6: CC1 – Composition of regulatory capital

	a	b
		Cross-referenced to Table 3
		Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
	Component of regulatory capital	
	HK\$m	
As at 31 Dec 2018		
CET1 capital: instruments and reserves		
1 Directly issued qualifying CET1 capital instruments plus any related share premium	9,658	(10)
2 Retained earnings	102,260	(11)
3 Disclosed reserves	22,072	(17)
4 Directly issued capital subject to phase-out arrangements from CET1 (only applicable to non-joint stock companies)	Not applicable	Not applicable
5 Minority interests arising from CET1 capital instruments issued by consolidated bank subsidiaries and held by third parties (amount allowed in CET1 capital of the consolidation group)	-	
6 CET1 capital before regulatory adjustments	133,990	
CET1 capital: regulatory deductions		
7 Valuation adjustments	148	(15) + (19)
8 Goodwill (net of associated deferred tax liability)	-	
9 Other intangible assets (net of associated deferred tax liabilities)	463	(3) - (8)
10 Deferred tax assets (net of associated deferred tax liabilities)	111	(4)
11 Cash flow hedge reserve	(4)	(18)
12 Excess of total EL amount over total eligible provisions under the IRB approach	-	
13 Credit-enhancing interest-only strip, and any gain-on-sale and other increase in the CET1 capital arising from securitisation transactions	-	
14 Gains and losses due to changes in own credit risk on fair valued liabilities	12	(6) + (7)
15 Defined benefit pension fund net assets (net of associated deferred tax liabilities)	11	(5) - (9)
16 Investments in own CET1 capital instruments (if not already netted off paid-in capital on reported balance sheet)	-	
17 Reciprocal cross-holdings in CET1 capital instruments	-	
18 Insignificant capital investments in CET1 capital instruments issued by financial sector entities that are outside the scope of regulatory consolidation (amount above 10% threshold)	-	
19 Significant capital investments in CET1 capital instruments issued by financial sector entities that are outside the scope of regulatory consolidation (amount above 10% threshold)	-	
20 Mortgage servicing rights (net of associated deferred tax liabilities)	Not applicable	Not applicable
21 Deferred tax assets arising from temporary differences (net of associated deferred tax liabilities)	Not applicable	Not applicable
22 Amount exceeding the 15% threshold	Not applicable	Not applicable
23 <i>of which: significant investments in the ordinary share of financial sector entities</i>	Not applicable	Not applicable
24 <i>of which: mortgage servicing rights</i>	Not applicable	Not applicable
25 <i>of which: deferred tax assets arising from temporary differences</i>	Not applicable	Not applicable
26 National specific regulatory adjustments applied to CET1 capital	31,525	
26a Cumulative fair value gains arising from the revaluation of land and buildings (own-use and investment properties)	26,543	(12) + (20)
26b Regulatory reserve for general banking risks	4,982	(13)
26c Securitisation exposures specified in a notice given by the Monetary Authority	-	
26d Cumulative losses below depreciated cost arising from the institution's holdings of land and buildings	-	
26e Capital shortfall of regulated non-bank subsidiaries	-	
26f Capital investment in a connected company which is a commercial entity (amount above 15% of the reporting institution's capital base)	-	
27 Regulatory deductions applied to CET1 capital due to insufficient additional tier 1 ("AT1") capital and Tier 2 capital to cover deductions	-	
28 Total regulatory deductions to CET1 capital	32,266	
29 CET1 capital	101,724	

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Table 6: CC1 – Composition of regulatory capital (continued)

	a	b
		Cross-referenced to Table 3
		Source based on reference
		numbers/letters of the balance sheet
	Component of regulatory capital HK\$m	under the regulatory scope of consolidation
AT1 capital: instruments		
30	Qualifying AT1 capital instruments plus any related share premium	6,981
31	<i>of which: classified as equity under applicable accounting standards</i>	6,981
32	<i>of which: classified as liabilities under applicable accounting standards</i>	-
33	Capital instruments subject to phase-out arrangements from AT1 capital	-
34	AT1 capital instruments issued by consolidated bank subsidiaries and held by third parties (amount allowed in AT1 capital of the consolidation group)	-
35	<i>of which: AT1 capital instruments issued by subsidiaries subject to phase-out arrangements</i>	-
36	AT1 capital before regulatory deductions	6,981
AT1 capital: regulatory deductions		
37	Investments in own AT1 capital instruments	-
38	Reciprocal cross-holdings in AT1 capital instruments	-
39	Insignificant capital investments in AT1 capital instruments issued by financial sector entities that are outside the scope of regulatory consolidation (amount above 10% threshold)	-
40	Significant capital investments in AT1 capital instruments issued by financial sector entities that are outside the scope of regulatory consolidation	-
41	National specific regulatory adjustments applied to AT1 capital	-
42	Regulatory deductions applied to AT1 capital due to insufficient Tier 2 capital to cover deductions	-
43	Total regulatory deductions to AT1 capital	-
44	AT1 capital	6,981
45	Tier 1 capital (T1 = CET1 + AT1)	108,705
Tier 2 capital: instruments and provisions		
46	Qualifying Tier 2 capital instruments plus any related share premium	-
47	Capital instruments subject to phase-out arrangements from Tier 2 capital	-
48	Tier 2 capital instruments issued by consolidated bank subsidiaries and held by third parties (amount allowed in Tier 2 capital of the consolidation group)	-
49	<i>of which: capital instruments issued by subsidiaries subject to phase-out arrangements</i>	-
50	Collective provisions and regulatory reserve for general banking risks eligible for inclusion in Tier 2 capital	3,573
51	Tier 2 capital before regulatory deductions	3,573
Tier 2 capital: regulatory deductions		
52	Investments in own Tier 2 capital instruments	-
53	Reciprocal cross-holdings in Tier 2 capital instruments	-
54	Insignificant capital investments in Tier 2 capital instruments issued by financial sector entities that are outside the scope of regulatory consolidation (amount above 10% threshold)	-
55	Significant capital investments in Tier 2 capital instruments issued by financial sector entities that are outside the scope of regulatory consolidation (net of eligible short positions)	915
56	National specific regulatory adjustments applied to Tier 2 capital	(11,944)
56a	Add back of cumulative fair value gains arising from the revaluation of land and buildings (own-use and investment properties) eligible for inclusion in Tier 2 capital	(11,944)
57	Total regulatory adjustments to Tier 2 capital	(11,029)
58	Tier 2 capital (T2)	14,602
59	Total regulatory capital (TC = T1 + T2)	123,307
60	Total RWA	611,885
Capital ratios (as a percentage of RWA)		
61	CET1 capital ratio	16.6%
62	Tier 1 capital ratio	17.8%
63	Total capital ratio	20.2%
64	Institution-specific buffer requirement (capital conservation buffer plus countercyclical capital buffer plus higher loss absorbency requirements)	4.550%
65	<i>of which: capital conservation buffer requirement</i>	1.875%
66	<i>of which: bank specific countercyclical capital buffer requirement</i>	1.550%
67	<i>of which: higher loss absorbency requirement</i>	1.125%
68	CET1 (as a percentage of RWA) available after meeting minimum capital requirements	11.8%

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Table 6: CC1 – Composition of regulatory capital (continued)

	a	b
		Cross-referenced to Table 3 Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
	Component of regulatory capital HK\$m	
National minima (if different from Basel 3 minimum)		
69	National CET1 minimum ratio	Not applicable
70	National Tier 1 minimum ratio	Not applicable
71	National Total capital minimum ratio	Not applicable
Amounts below the thresholds for deduction (before risk weighting)		
72	Insignificant capital investments in CET1, AT1 and Tier 2 capital instruments issued by financial sector entities that are outside the scope of regulatory consolidation	3,661
73	Significant capital investments in CET1 capital instruments issued by financial sector entities that are outside the scope of regulatory consolidation	7,587
74	Mortgage servicing rights (net of associated deferred tax liabilities)	Not applicable
75	Deferred tax assets arising from temporary differences (net of associated deferred tax liabilities)	Not applicable
Applicable caps on the inclusion of provisions in Tier 2 capital		
76	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to the BSC approach, or the STC approach and SEC-ERBA, SEC-SA and SEC-FBA (prior to application of cap)	715
77	Cap on inclusion of provisions in Tier 2 under the BSC approach, or the STC approach, and SEC-ERBA, SEC-SA and SEC-FBA	789
78	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to the IRB approach and SEC-IRBA (prior to application of cap)	2,858
79	Cap for inclusion of provisions in Tier 2 under the IRB approach and SEC-IRBA	2,947
Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2018 and 1 Jan 2022)		
80	Current cap on CET1 capital instruments subject to phase-out arrangements	Not applicable
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	Not applicable
82	Current cap on AT1 capital instruments subject to phase-out arrangements	-
83	Amount excluded from AT1 capital due to cap (excess over cap after redemptions and maturities)	-
84	Current cap on Tier 2 capital instruments subject to phase-out arrangements	-
85	Amount excluded from Tier 2 capital due to cap (excess over cap after redemptions and maturities)	-

Notes to the template:

Elements where a more conservative definition has been applied in the BCR relative to that set out in Basel III capital standards:

	Hong Kong basis HK\$m	Basel III basis HK\$m
As at 31 Dec 2018		
10	Deferred tax assets (net of associated deferred tax liabilities)	111
		31

Explanation

As set out in paragraphs 69 and 87 of the Basel III text issued by the Basel Committee (December 2010), DTAs of the bank to be realised are to be deducted, whereas DTAs which relate to temporary differences may be given limited recognition in CET1 capital (and hence be excluded from deduction from CET1 capital up to the specified threshold). In Hong Kong, an AI is required to deduct all DTAs in full, irrespective of their origin, from CET1 capital. Therefore, the amount to be deducted as reported in row 10 may be greater than that required under Basel III.

The amount reported under the column "Basel III basis" in this box represents the amount reported in row 10 (i.e. the amount reported under the "Hong Kong basis") adjusted by reducing the amount of DTAs to be deducted which relate to temporary differences to the extent not in excess of the 10% threshold set for DTAs arising from temporary differences and the aggregate 15% threshold set for Mortgage servicing rights ("MSRs"), DTAs arising from temporary differences and significant investments in CET1 capital instruments issued by financial sector entities (excluding those that are loans, facilities and other credit exposures to connected companies) under Basel III.

Remarks:

The amount of the 10% threshold mentioned above is calculated based on the amount of CET1 capital determined in accordance with the deduction methods set out in BCR Schedule 4F. The 15% threshold is referring to paragraph 88 of the Basel III text issued by the Basel Committee (December 2010) and has no effect to the Hong Kong regime.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

The following is a summary of the Group's CET1 capital and AT1 capital instruments.

Table 7: CCA – Main features of regulatory capital instruments

		a	
As at 31 Dec 2018		Quantitative / qualitative information	
		1) Ordinary shares	2) Perpetual subordinated loan (US\$ 900 million)
1	Issuer	Hang Seng Bank Limited	Hang Seng Bank Limited
2	Unique identifier (e.g. CUSIP, ISIN or Bloomberg identifier for private placement)	HK0011000095	N/A
3	Governing law(s) of the instrument	Laws of Hong Kong	Laws of Hong Kong
<i>Regulatory treatment</i>			
4	Transitional Basel III rules ¹	N/A	N/A
5	Post-transitional Basel III rules ²	Common Equity Tier 1	Additional Tier 1
6	Eligible at solo /group /solo and group	Group and Solo	Group and Solo
7	Instrument type (types to be specified by each jurisdiction)	Ordinary shares	Perpetual debt instrument
8	Amount recognised in regulatory capital (currency in millions, as of most recent reporting date)	HK\$ 9,658 million	HK\$ 6,981 million
9	Par value of instrument	No par value (Total amount HK\$ 9,658 million)	US\$ 900 million
10	Accounting classification	Shareholders' equity	Shareholders' equity
11	Original date of issuance	Various	22 Dec 2014
12	Perpetual or dated	Perpetual	Perpetual
13	Original maturity date	No maturity	No maturity
14	Issuer call subject to prior supervisory approval	N/A	Yes
15	Optional call date, contingent call dates and redemption amount	N/A	22 December 2019 at par value
16	Subsequent call dates, if applicable	N/A	Callable on any interest payment date after first call date
<i>Coupons / dividends</i>			
17	Fixed or floating dividend/coupon	N/A	Floating
18	Coupon rate and any related index	N/A	12-month US\$ LIBOR + 3.84%
19	Existence of a dividend stopper	N/A	No
20	Fully discretionary, partially discretionary or mandatory	Fully discretionary	Fully discretionary
21	Existence of step up or other incentive to redeem	N/A	No
22	Non-cumulative or cumulative	Noncumulative	Noncumulative
23	Convertible or non-convertible	Non-convertible	Non-convertible
24	If convertible, conversion trigger(s)	N/A	N/A
25	If convertible, fully or partially	N/A	N/A
26	If convertible, conversion rate	N/A	N/A
27	If convertible, mandatory or optional conversion	N/A	N/A
28	If convertible, specify instrument type convertible into	N/A	N/A
29	If convertible, specify issuer of instrument it converts into	N/A	N/A
30	Write-down feature	No	Yes
31	If write-down, write-down trigger(s)	N/A	Non-Viability Event. Hong Kong Monetary Authority – Contractual
32	If write-down, full or partial	N/A	Full
33	If write-down, permanent or temporary	N/A	Permanent
34	If temporary write-down, description of write-up mechanism	N/A	N/A
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument in the insolvency creditor hierarchy of the legal entity concerned).	Represents the most subordinated claim in liquidation	Subordinated to the claims of all Senior Creditors (including any holders of Tier 2 Instruments)
36	Non-compliant transitioned features	No	No
37	If yes, specify non-compliant features	N/A	N/A

Terms and conditions

[Terms and conditions - Ordinary shares](#)

[Terms and conditions – Perpetual subordinated loan](#)

Footnotes:

¹ Regulatory treatment of capital instruments subject to transitional arrangements provided for in Schedule 4H to the BCR.

² Regulatory treatment of capital instruments not subject to transitional arrangements provided for in Schedule 4H to the BCR.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Countercyclical capital buffer ratio

The countercyclical capital buffer ("CCyB") is calculated as the weighted average of the applicable CCyB ratios in effect in the jurisdictions in which banks have private sector credit exposures. The Group uses country of business as the basis of geographical allocation for the majority of its credit risk and risk country for market risk, which is defined by considering the country of incorporation, location of guarantor, headquarter domicile, distribution of revenue and booking country.

Table 8: CCyB1 – Geographical distribution of credit exposures used in countercyclical capital buffer

As at 31 Dec 2018		a	c	d	e
Geographical breakdown by Jurisdiction ("J")	Footnotes	Applicable JCCyB ratio in effect %	RWA used in computation of CCyB ratio HK\$m	AI-specific CCyB ratio %	CCyB amount HK\$m
1 Hong Kong SAR		1.875	426,105		
2 Norway		2.000	1		
3 Sweden		2.000	1		
4 United Kingdom		1.000	715		
5 Sum	1		426,822		
6 Total	2		515,917	1.550	9,484

1 This represents the sum of RWA for the private sector credit exposures in jurisdictions with a non-zero countercyclical buffer rate.

2 The total RWA used in the computation of the CCyB ratio in column (c) represents the total RWA for the private sector credit exposures in all jurisdictions to which the bank is exposed, including jurisdictions with no countercyclical buffer rate or with a countercyclical buffer rate set at zero. The CCyB amount in column (e) represents the Group's total RWA multiplied by the AI-specific CCyB ratio in column (d).

The major driver for the movement of the AI-specific CCyB ratio during the reporting period is due to a change in reporting methodology.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)
Leverage ratio

The following table shows the leverage ratio, Tier 1 capital and total exposure measure as contained in the "Leverage Ratio" return submitted to the HKMA under the requirements specified in Part 1C of the BCR.

Table 9: LR2 – Leverage ratio

	a	b
	31 Dec 2018 HK\$m	30 Sep 2018 HK\$m
On-balance sheet exposures		
1 On-balance sheet exposures (excluding those arising from derivative contracts and securities financing transactions ("SFTs"), but including collateral)	1,417,917	1,350,327
2 Less: Asset amounts deducted in determining Tier 1 capital	(32,258)	(31,238)
3 Total on-balance sheet exposures (excluding derivative contracts and SFTs)	1,385,659	1,319,089
Exposures arising from derivative contracts		
4 Replacement cost associated with all derivative contracts (where applicable net of eligible cash variation margin and/or with bilateral netting)	3,771	5,278
5 Add-on amounts for PFE associated with all derivative contracts	10,544	12,076
6 Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework	-	-
7 Less: Deductions of receivables assets for cash variation margin provided under derivative contracts	-	-
8 Less: Exempted central counterparty ("CCP") leg of client-cleared trade exposures	-	-
9 Adjusted effective notional amount of written credit derivative contracts	-	-
10 Less: Adjusted effective notional offsets and add-on deductions for written credit derivative contracts	-	-
11 Total exposures arising from derivative contracts	14,315	17,354
Exposures arising from SFTs		
12 Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions	461	3,696
13 Less: Netted amounts of cash payables and cash receivables of gross SFT assets	-	-
14 Counterparty credit risk ("CCR") exposure for SFT assets	50	248
15 Agent transaction exposures	-	-
16 Total exposures arising from SFTs	511	3,944
Other off-balance sheet exposures		
17 Off-balance sheet exposure at gross notional amount	487,873	483,594
18 Less: Adjustments for conversion to credit equivalent amounts	(408,609)	(402,436)
19 Off-balance sheet items	79,264	81,158
Capital and total exposures		
20 Tier 1 capital	108,705	107,301
20a Total exposures before adjustments for specific and collective provisions	1,479,749	1,421,545
20b Adjustments for specific and collective provisions	(2,748)	(2,909)
21 Total exposures after adjustments for specific and collective provisions	1,477,001	1,418,636
Leverage ratio		
22 Leverage ratio	7.4%	7.6%

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Table 10: LR1 – Summary comparison of accounting assets against leverage ratio exposure measure

As at 31 Dec 2018		a
		Value under the LR framework HK\$m
Item		
1	Total consolidated assets as per published financial statements	1,571,297
2	Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation	(147,439)
3	Adjustment for fiduciary assets recognised on the balance sheet pursuant to the applicable accounting standard but excluded from the LR exposure measure	-
4	Adjustments for derivative contracts	6,151
5	Adjustment for SFTs (i.e. repos and similar secured lending)	50
6	Adjustment for off-balance sheet ("OBS") items (i.e. conversion to credit equivalent amounts of OBS exposures)	79,264
6a	Adjustment for specific and collective provisions that are allowed to be excluded from exposure measure	(2,748)
7	Other adjustments	(29,574)
8	Leverage ratio exposure measure	1,477,001

Other adjustments mainly represent the regulatory deductions of property revaluation reserves and regulatory reserve to Tier 1 capital under the leverage ratio framework.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Overview of RWA and the minimum capital requirements

Table 11: OV1 – Overview of RWA

	a	b	c	
	RWA		Minimum capital requirements	
	31 Dec 2018 HK\$m	30 Sep 2018 HK\$m	31 Dec 2018 HK\$m	
1	Credit risk for non-securitisation exposures	490,027	478,406	41,253
2	<i>Of which: Standardised credit risk ("STC") approach</i>	62,793	61,377	5,023
2a	<i>Of which: Basic ("BSC") approach</i>	-	-	-
3	<i>Of which: Foundation internal ratings-based ("IRB") approach</i>	-	-	-
4	<i>Of which: Supervisory slotting criteria approach</i>	8,725	8,720	740
5	<i>Of which: Advanced IRB approach</i>	418,509	408,309	35,490
6	Counterparty default risk and default fund contributions	2,663	3,217	224
7	<i>Of which: Standardised approach for counterparty credit risk ("SA-CCR")*</i>	Not Applicable	Not Applicable	Not Applicable
7a	<i>Of which: Current exposure method ("CEM")</i>	2,631	3,177	221
8	<i>Of which: Internal models (counterparty credit risk) ("IMM(CCR))" approach</i>	-	-	-
9	<i>Of which: Others</i>	32	40	3
10	Credit valuation adjustment ("CVA") risk	1,833	2,120	147
11	Equity positions in banking book under the simple risk-weight method and internal models method	14,848	15,976	1,259
12	Collective investment scheme ("CIS") exposures – Look-through approach ("LTA")*	Not Applicable	Not Applicable	Not Applicable
13	CIS exposures – Mandate-based approach ("MBA")*	Not Applicable	Not Applicable	Not Applicable
14	CIS exposures – Fall-back approach ("FBA")*	Not Applicable	Not Applicable	Not Applicable
14a	CIS exposures – combination of approaches*	Not Applicable	Not Applicable	Not Applicable
15	Settlement risk	1	-	-
16	Securitisation exposures in banking book	-	-	-
17	<i>Of which: Securitisation internal ratings-based ("SEC-IRBA") approach</i>	-	-	-
18	<i>Of which: Securitisation external ratings-based ("SEC-ERBA") approach</i>	-	-	-
19	<i>Of which: Securitisation standardised ("SEC-SA") approach</i>	-	-	-
19a	<i>Of which: Securitisation fall-back ("SEC-FBA") approach</i>	-	-	-
20	Market risk	11,021	12,715	882
21	<i>Of which: Standardised market risk ("STM") approach</i>	38	70	3
22	<i>Of which: Internal models ("IMM") approach</i>	10,983	12,645	879
23	Capital charge for switch between exposures in trading book and banking book (not applicable before the revised market risk framework takes effect)*	Not Applicable	Not Applicable	Not Applicable
24	Operational risk	59,323	57,680	4,746
25	Amounts below the thresholds for deduction (subject to 250% RW)	18,967	19,277	1,608
26	Capital floor adjustment	-	-	-
26a	Deduction to RWA	(14,599)	(13,984)	(1,168)
26b	<i>Of which: Portion of regulatory reserve for general banking risks and collective provisions which is not included in Tier 2 Capital</i>	-	-	-
26c	<i>Of which: Portion of cumulative fair value gains arising from the revaluation of land and buildings which is not included in Tier 2 Capital</i>	(14,599)	(13,984)	(1,168)
27	Total	584,084	575,407	48,951

1 RWA in this table are before the application of the 1.06 scaling factor, where applicable.

2 Minimum capital requirement represents the Pillar 1 capital charge at 8% of the RWA after application of the 1.06 scaling factor, where applicable.

3 Items marked with an asterisk (*) will be applicable only after their respective policy frameworks take effect. Until then, "Not applicable" is reported in the rows.

Total RWA increased by HK\$8.7bn since last quarter. Credit risk RWA for non-securitisation exposures was the key contributor which increased by HK\$11.6bn mainly driven by model updates and policy changes under IRB approach and loan growth. It was partly offset by market risk RWA decrease of HK\$1.7bn mainly due to the movement in risk levels and RWA decrease on equity position by HK\$1.1bn due to valuation change.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

RWA flow statements
RWA flow statement for credit risk

Table 12: CR8 – RWA flow statement of credit risk exposures under IRB approach

	a
	Amount HK\$m
1 RWA as at end of previous reporting period (30 Sep 2018)	417,029
2 Asset size	2,385
3 Asset quality	(141)
4 Model updates	4,057
5 Methodology and policy	3,105
6 Acquisitions and disposals	-
7 Foreign exchange movements	(53)
8 Other	852
9 RWA as at end of reporting period (31 Dec 2018)	427,234

1 Credit risk in this table represents the credit risk for non-securitisation exposures excluding counterparty credit risk.

RWA increased by HK\$10.2bn in the fourth quarter of 2018, mainly due to model updates and policy changes relating to retail and corporate exposures of HK\$7.2bn, and asset size increase from loan growth of HK\$2.4bn.

RWA flow statement for market risk

Table 13: MR2 – RWA flow statement of market risk exposures under IMM approach

	a	b	c	d	e	f
	Value at risk ("VaR") HK\$m	Stressed VaR HK\$m	Incremental risk charge ("IRC") HK\$m	Comprehensive risk charge ("CRC") HK\$m	Other HK\$m	Total RWA HK\$m
1 RWA as at end of previous reporting period (30 Sep 2018)	4,947	7,698	-	-	-	12,645
2 Movement in risk levels	(1,049)	(628)	-	-	-	(1,677)
3 Model updates/changes	-	-	-	-	-	-
4 Methodology and policy	-	-	-	-	-	-
5 Acquisitions and disposals	-	-	-	-	-	-
6 Foreign exchange movements	6	9	-	-	-	15
7 Other	-	-	-	-	-	-
8 RWA as at end of reporting period (31 Dec 2018)	3,904	7,079	-	-	-	10,983

BANKING DISCLOSURE STATEMENT *(unaudited) (continued)*

Credit risk

Credit risk management

Credit risk is the risk that financial loss arises from the failure of a customer or counterparty to meet its obligations under a contract. It arises principally from lending, trade finance, and treasury businesses. The Group has dedicated standards, policies and procedures in place to control and monitor risk from all such activities.

There are dedicated credit risk functions, reported to Chief Risk Officer, responsible for centralised management of credit risk through:

- formulating credit policies on approval process, post disbursement monitoring, recovery process and large exposure;
- issuing guidelines on lending to specified market sectors, industries and products; the acceptability of specific classes of collateral or risk mitigations and valuation parameters for collateral;
- undertaking an independent review and objective assessment of credit risk for all commercial non-bank credit facilities in excess of designated amount prior to the facilities being committed to customers;
- controlling exposures to selected industries, counterparties, countries and portfolio types, etc. by setting limits;
- maintaining and developing credit risk rating/facility grading process to categorise exposures and facilitate focused management;
- reporting to senior executives and various committees on aspects of the Group loan portfolio;
- managing and directing credit-related systems initiatives; and
- providing advice and guidance to business units on various credit-related issues.

These credit risk functions work closely with other functions of the Group.

Credit risk operates through a hierarchy of individual credit approval authority limits. With delegation from the Board, Executive Committee delegates the credit approval authority limits to Chief Executive and empowers the Chief Executive to further delegate to Chief Risk Officer and senior management teams on individual basis. Chief Risk Officer is empowered by Chief Executive to further delegate the credit approval authority limits.

Business model/strategy will be reviewed regularly by different business units taking into consideration of current market condition and the Group's risk appetite. Credit risk policies and limits will also be reviewed to align with the direction of defined risk appetite and business strategy.

Credit Risk Management

The Group's exposure to credit risk arises from a wide range of customers and product types. To measure and manage the risk in these exposures, both to distinct customer types or product categories, the Group employs diverse risk rating systems and methodologies: judgmental, analytical, and hybrids of the two.

A fundamental principle of the Group's policy and approach is that analytical risk rating systems and scorecards are decision tools facilitating management, serving ultimately judgemental decisions for which individual approvers are accountable.

For individually assessed customers, the credit process provides for at least annual review of the facility granted. Review may be more frequent, as required by circumstances.

The Group adopts a set of standards that govern the process through which risk rating systems are initially developed, judged fit for purpose, approved and implemented, the conditions under which analytical risk model outcomes can be overridden by approvers; and the process of model performance monitoring and reporting. The framework emphasises on an effective dialogue between business line and risk management, suitable independence of decision takers and a good understanding and robust reflection on the part of senior management.

Analytical risk rating systems are not static and are subject to review and modification in light of the changing environment and the greater availability and quality of data. Processes are established to capture the relevant data for continuous model improvement.

We constantly seek to improve the quality of our risk management. IT systems that process credit risk data continue to be enhanced in order to deliver both comprehensive management information in support of business strategy and solutions to evolving regulatory reporting requirements.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)
Credit quality of assets

Tables 14 to 18 analyse credit exposures between defaulted and non-defaulted, changes in defaulted loans and debt securities, exposures by geographical locations, by industries and residual maturity on a regulatory consolidation basis. The exposures covered in these tables include loans, debt securities and off-balance sheet exposures. Loans are generally referred to as any on-balance sheet exposures included as credit risk for non-securitisation exposures, covering exposures to customers, banks, sovereigns and others. Cash items and non-financial assets are excluded.

Table 14: CR1 – Credit quality of exposures

	a	b	c	d
	Gross carrying amounts of		Allowances/ impairments	Net values
	Defaulted exposures	Non-defaulted exposures		
As at 31 Dec 2018	HK\$m	HK\$m	HK\$m	HK\$m
1 Loans	2,161	965,080	2,685	964,556
2 Debt securities	-	325,835	5	325,830
3 Off-balance sheet exposures	-	487,873	58	487,815
4 Total	2,161	1,778,788	2,748	1,778,201

Table 15: CR2 – Changes in defaulted loans and debt securities

	a
	Amount
	Footnote
	HK\$m
1 Defaulted loans and debt securities at end of the previous reporting period (30 Jun 2018)	2,638
2 Loans and debt securities that have defaulted since the last reporting period	584
3 Returned to non-defaulted status	(3)
4 Amounts written off	(568)
5 Other changes	1 (490)
6 Defaulted loans and debt securities at end of the current reporting period (31 Dec 2018)	2,161

1 Other changes included repayment and foreign exchange movements.

Table 16: CRB1 – Exposures by geographical location

	Gross carrying amounts at 31 Dec 2018
	Footnote
	HK\$m
Hong Kong SAR	1,621,496
Others	1 (159,453)
Total	1,780,949

1 Any segment which constitutes less than 10% of total gross carrying amounts is disclosed on an aggregated basis under the category "Others".

BANKING DISCLOSURE STATEMENT *(unaudited) (continued)*

Table 17: CRB2 – Exposures by industry

	Gross carrying amounts at 31 Dec 2018 HK\$m
Industrial, commercial and financial	
- Property development and investment	325,305
- Financial concerns	355,884
- Stockbrokers	3,284
- Wholesale and retail trade	103,599
- Manufacturing	75,042
- Transport and transport equipment	20,057
- Recreational activities	396
- Information technology	13,766
- Others	290,613
Individuals	526,331
Trade finance	66,672
Total	1,780,949

Table 18: CRB3 – Exposures by residual maturity

	Gross carrying amounts at 31 Dec 2018 HK\$m
Less than 1 year	722,413
Between 1 and 5 years	520,031
More than 5 years	535,543
Undated	2,962
Total	1,780,949

BANKING DISCLOSURE STATEMENT (unaudited) (continued)
Impaired exposures, past due unimpaired exposures and renegotiated exposures

Tables 19 to 22 analyse impaired exposures, impairment allowances, past due but not impaired exposures and renegotiated exposures on a regulatory consolidation basis.

Our approach for determining impairment allowances, definitions for accounting purposes of "credit-impaired" and "renegotiated" are explained in Note 2(j) of the Group's 2018 Annual Report. The accounting definition of credit impaired and the regulatory definition of default are generally aligned.

The analysis of gross impaired loans and advances and impairment allowances by major industry sectors based on categories and definitions used by the Group is as follows:

Table 19: CRB4 – Impaired exposures and related allowances and write-offs by industry

As at 31 Dec 2018		Gross loans and advances ¹	Gross impaired loans and advances	Overdue loans and advances	Specific provisions ²	Collective provisions ²	Impairment provisions (charged to) / released from profit and loss	Advances written off during the year
	Footnote	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Residential mortgages		244,324	185	54	(8)	(2)	8	8
Real estate		248,286	147	71	-	(223)	117	-
Others	³	384,526	1,828	1,460	(951)	(1,494)	(1,149)	997
Total		877,136	2,160	1,585	(959)	(1,719)	(1,024)	1,005

1 The amounts shown in column "Gross loans and advances" represent the loans and advances to customers gross of provisions in the financial statements under the regulatory consolidation basis. The difference of total gross loans of HK\$2m against the figure under an accounting consolidation basis represents the Bank's loans and advances to the Group's subsidiary which is outside the regulatory scope of consolidation.

2 The classification of specific and collective provisions follows the treatment specified in the completion instructions of the HKMA Capital Adequacy Ratio - MA(BS)3 return. According to the completion instructions, impairment provisions classified into Stage 1 and Stage 2 under HKFRS 9 are treated as collective provisions, while those classified under Stage 3 are treated as specific provisions. Provisions made for purchased or originated credit-impaired financial assets, under which any changes in lifetime expected credit losses will be recognised in the profit and loss account as in impairment gain or loss, are treated as specific provisions.

3 Any segment which constitutes less than 10% of total gross loans and advances to customers is disclosed on an aggregated basis under the category "Others".

Impaired loans and advances to customers are those loans and advances where objective evidence exists that full repayment of principal or interest is considered unlikely. Specific provisions are made after taking into account the value of collateral in respect of such loans and advances. The geographical information shown below has been classified by the location of the principal operations of the subsidiary and by the location of the branch responsible for advancing the funds.

Table 20: CRB5 – Impaired exposures and related allowances and write-offs by geographical location

As at 31 Dec 2018		Gross loans and advances ¹	Gross impaired loans and advances	Overdue loans and advances	Specific provisions ²	Collective provisions ²	Impairment provisions (charged to) / released from profit and loss	Advances written off during the year
		HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Hong Kong SAR		799,329	1,739	1,279	(644)	(1,421)	(639)	924
China		62,223	359	244	(256)	(289)	(326)	81
Others		15,584	62	62	(59)	(9)	(59)	-
Total		877,136	2,160	1,585	(959)	(1,719)	(1,024)	1,005

1 The amounts shown in column "Gross loans and advances" represent the loans and advances to customers gross of provisions in the financial statements under the regulatory consolidation basis. The difference of total gross loans of HK\$2m against the figure under an accounting consolidation basis represents the Bank's loans and advances to the Group's subsidiary which is outside the regulatory scope of consolidation.

2 The classification of specific and collective provisions follows the treatment specified in the completion instructions of the HKMA Capital Adequacy Ratio - MA(BS)3 return. Details can be found in footnote 2 under table 19 of this document.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Past due unimpaired exposures are those loans where customers have failed to make payments in accordance with the contractual terms of their facilities. Exposures past due for more than 90 days are considered impaired.

Table 21: CRB6 – Aging analysis of accounting past-due unimpaired exposures

As at 31 Dec 2018	Up to 29 days HK\$m	30- 59 days HK\$m	60- 89 days HK\$m	Total HK\$m
Loans and advances to customers held at amortised cost:				
- Personal	3,545	337	120	4,002
- Corporate and commercial	2,458	21	30	2,509
- Non-bank financial institutions	3	-	-	3
Placings with and advances to banks held at amortised cost	-	-	-	-
Other assets	2	-	-	2
Total	6,008	358	150	6,516

Table 22: CRB7 – Breakdown of renegotiated loans between impaired and unimpaired

	31 Dec 2018 HK\$m
Impaired	344
Unimpaired	-
Total	344

BANKING DISCLOSURE STATEMENT (unaudited) (continued)**Loans and advances to customers**

Tables 23 to 26 analyse the loans and advances to customers by geographical locations, by industries and overdue and rescheduled loans and advances on an accounting consolidation basis, which is different from the basis of regulatory consolidation. As a result, the total gross loans and advances to customers in tables 23, 24 and 25 are different from that in tables 19 and 20.

The following analysis of loans and advances to customers by geographical areas is in accordance with the location of counterparties, after recognised risk transfer.

Table 23: Loans and advances to customers by geographical location

	Hong Kong	Mainland China	Others	Total
As at 31 Dec 2018	HK\$m	HK\$m	HK\$m	HK\$m
Gross loans and advances to customers	757,142	94,595	25,397	877,134

Impaired loans and advances to customers are those loans and advances where objective evidence exists that full repayment of principal or interest is considered unlikely. Specific provisions are made after taking into account the value of collateral, in respect of such loans and advances. The geographical information shown below has been classified by the location of the principal operations of the subsidiary and by the location of the branch responsible for advancing the funds.

Table 24: Impaired and overdue loans and advances to customers

	Hong Kong	Mainland China	Others	Total
As at 31 Dec 2018	HK\$m	HK\$m	HK\$m	HK\$m
Impaired gross loans and advances	1,739	359	62	2,160
Unimpaired gross loans and advances	797,588	61,864	15,522	874,974
Total gross loans and advances to customers	799,327	62,223	15,584	877,134
Impairment allowances				
- specific provisions	(644)	(256)	(59)	(959)
- collective provisions	(1,421)	(289)	(9)	(1,719)
Net loans and advances	797,262	61,678	15,516	874,456
Total impaired gross loans and advances as a percentage of total gross loans and advances to customers	0.22%	0.58%	0.40%	0.25%
Total allowances as a percentage of total gross loans and advances to customers	0.26%	0.88%	0.44%	0.31%
Overdue loans and advances to customers	1,279	244	62	1,585

The classification of specific and collective provisions follows the treatment specified in the completion instructions of the HKMA Capital Adequacy Ratio – MA(BS)3 return. Details can be found in footnote 2 under table 19 of this document.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

The analysis of gross loans and advances to customers by industry sector based on categories and definitions contained in the "Quarterly Analysis of Loans and Advances and Provisions - (MA(BS)2A)" return submitted to the HKMA is as follows:

Table 25: Gross loans and advances to customers by industry sector

As at 31 Dec 2018	Gross loans and advances HK\$m	% of gross advances covered by collateral %
Industrial, commercial and financial sectors		
- property development	67,295	38.6%
- property investment	145,791	86.0%
- financial concerns	8,737	45.6%
- stockbrokers	20	100.0%
- wholesale and retail trade	31,044	46.6%
- manufacturing	22,653	40.0%
- transport and transport equipment	13,077	59.4%
- recreational activities	177	34.5%
- information technology	8,736	2.8%
- other	84,705	70.3%
Individuals		
- loans and advances for the purchase of flats under the Government Home Ownership Scheme, Private Sector Participation Scheme and Tenants Purchase Scheme	25,664	100.0%
- loans and advances for the purchase of other residential properties	194,839	100.0%
- credit card loans and advances	29,793	0.0%
- other	30,275	52.0%
Gross loans and advances for use in Hong Kong	662,806	72.8%
Trade finance	36,127	29.6%
Gross loans and advances for use outside Hong Kong	178,201	36.5%
Gross loans and advances to customers	877,134	63.7%

Collateral includes any tangible security that carries a fair market value and is readily marketable. This includes (but is not limited to) cash and deposits, stocks and bonds, mortgages over properties and charges over other fixed assets such as plant and equipment. Where collateral values are greater than gross loans and advances to customers, only the amount of collateral up to the gross loans and advances is included.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Loans and advances to customers that are more than three months overdue and their expression as a percentage of gross loans and advances to customers are as follows:

Table 26: Overdue loans and advances to customers

As at 31 Dec 2018	HK\$m	%
Gross loans and advances which have been overdue with respect to either principal or interest for periods of:		
- more than three months but not more than six months	533	0.06%
- more than six months but not more than one year	395	0.05%
- more than one year	657	0.07%
Total	1,585	0.18%
of which:		
- specific provision	(784)	
- covered portion of overdue loans and advances	485	
- uncovered portion of overdue loans and advances	1,100	
- current market value of collateral held against the covered portion of overdue loans and advances	996	
Rescheduled loans and advances to customers	102	0.01%

Collateral held with respect to overdue loans and advances is mainly residential properties and commercial properties. The current market value of residential properties and commercial properties were HK\$868m and HK\$112m respectively.

Loans and advances with a specific repayment date are classified as overdue when the principal or interest is overdue and remains unpaid at period-end. Loans and advances repayable by regular instalments are treated as overdue when an instalment payment is overdue and remains unpaid at period-end. Loans and advances repayable on demand are classified as overdue either when a demand for repayment has been served on the borrower but repayment has not been made in accordance with the demand notice, or when the loans and advances have remained continuously outside the approved limit advised to the borrower for more than the overdue period in question.

Rescheduled loans and advances to customers are those loans and advances that have been rescheduled or renegotiated for reasons related to the borrower's financial difficulties. This will normally involve the granting of concessionary terms and resetting the overdue account to non-overdue status. Rescheduled loans and advances to customers are stated net of any advances which have subsequently become overdue for more than three months and which are included in "Overdue loans and advances to customers".

The amount of repossessed assets as at 31 December 2018 was HK\$18m.

Overdue and rescheduled amounts relating to placings with and advances to banks and other assets

There were no impaired, overdue or rescheduled placings with and advances to banks, nor rescheduled other assets as at 31 December 2018.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Off-balance sheet exposures other than derivative transactions

The following table gives the nominal contract amounts and RWA of contingent liabilities and commitments. The information is consistent with that in the "Capital Adequacy Ratio" return required to be submitted to the HKMA by the Group. The return is prepared on a consolidated basis as specified by the HKMA under the requirement of section 3C(1) of the BCR.

For accounting purposes, acceptances and endorsements are recognised on the balance sheet in "Other assets". For the purpose of the BCR, acceptances and endorsements are included in the capital adequacy calculation as if they were contingencies.

Table 27: Off-balance sheet exposures other than derivative transactions

	31 Dec 2018
	HK\$m
Contract amounts	
Direct credit substitutes	4,315
Transaction-related contingencies	6,690
Trade-related contingencies	15,388
Commitments that are unconditionally cancellable without prior notice	400,982
Commitments which have an original maturity of not more than one year	6,072
Commitments which have an original maturity of more than one year	54,426
Total	487,873
RWA	47,926

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Credit risk under internal ratings-based approach

Qualitative disclosures related to internal models for measuring credit risk under IRB approach

(i) Nature of exposures within each IRB class

The Group adopts advanced IRB approach for the majority of its business under the approval granted by the HKMA. The following non-securitisation exposures are subject to advanced IRB approach:

- Corporate exposures including exposures to global large corporates, local large corporates, middle market corporates and small and medium-sized enterprises ("SME"), non-bank financial institutions and specialised lending.
- Sovereign exposures including exposures to central governments, government agencies, central monetary institutions, multilateral development banks and relevant international organisations.
- Bank exposures including exposures to banks and regulated securities firms.
- Retail exposures, including residential mortgages, qualifying revolving retail exposures, other retail exposures and retail SME exposures.
- Equity exposures.
- Other exposures mainly including notes and coins, premises, plant and equipment and other assets.

At 31 December 2018, the portion of exposure at default ("EAD") and RWA within the Group covered by IRB approach are summarised in the following table. The remaining portions not covered by IRB approach are under STC approach.

Table 28: Percentage of total EAD and RWA covered by IRB approach

Portfolio	Percentage of total EAD under IRB approach	Percentage of total RWA under IRB approach
Corporate exposures (includes SME and other corporates and specialised lending)	93%	87%
Sovereign exposures	100%	100%
Bank exposures (including securities firms)	100%	100%
Residential mortgage loans	90%	81%
Other retail exposures	92%	77%
Equity exposures	100%	100%
Other exposures	100%	100%

The above table covers credit risk for non-securitisation exposures excluding counterparty credit risk. For counterparty credit risk, the percentage of total RWA covered by models is 70% for corporate exposures and 100% for bank exposures.

(ii) The internal rating system

Exposure to credit risk arises from a very wide range of customers and product types, and the risk rating systems in place to measure and monitor these risks are correspondingly diverse.

Credit risk exposures are generally measured and managed in portfolios of either distinct customer types or product categories. Risk rating systems for the former are designed to assess the default risk of, and loss severity associated with, customers who are typically managed as individual relationships; these rating systems tend to have a higher subjective content. Risk rating systems for the latter are generally more analytical, applying techniques such as behavioural analysis across product portfolios comprising large numbers of homogeneous transactions.

A fundamental principle of the Group's policy and approach is that analytical risk rating systems and scorecards are decision tools facilitating management, serving ultimately judgmental decisions for which individual approvers are accountable. In the case of automated decision-making processes, accountability rests with those responsible for the parameters built into those processes/systems and the controls surrounding their use. For distinct customers, the credit process requires at least annual review of facility limits granted. Review may be more frequent, as required by circumstances.

Group standards govern the process through which risk rating systems are initially developed, judged fit for purpose, approved and implemented; the conditions under which individual approvers can override analytical risk model outcomes; and the process of model performance monitoring and reporting. There is emphasis on an effective dialogue between business lines and risk management, appropriate independence of decision takers, and a good understanding and robust reflection on the part of senior management.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

(iii) Application of IRB parameters

The Group's credit risk rating framework incorporates the probability of default ("PD") of a borrower and the loss severity, expressed in terms of EAD and loss given default ("LGD"). These measures are used to calculate both expected loss ("EL") and capital requirements, subject to any floors required by the HKMA. They are also used in conjunction with other inputs to inform rating assessments for the purpose of credit approval and many other risk management decisions. The narrative explanations that follow relate to the IRB advanced approaches, that is, IRB advanced for distinct customers and retail IRB for the portfolio managed retail business.

Table 29: Wholesale IRB credit risk models

Regulatory asset classes measured	Component	Number of significant models	Model description and methodology	Number of years loss data	Regulatory Floors
Central governments and central banks	PD	1	A shadow rating approach that includes macroeconomic and political factors, constrained with expert judgement.	>10	No
	LGD	1	An unsecured model built on assessment of structural factors that influence the country's long-term economic performance. For unsecured LGD, a floor of 45% is applied.	8	45% ¹
	EAD	1	A cross-classification model that uses both internal data and expert judgement, as well as information on similar exposure types from other asset classes.	8	EAD must be at least equal to the current utilisation of the balance at account level
Bank / Securities firm	PD	2	A statistical model that combines quantitative analysis on financial information with expert inputs and macroeconomic factors.	10	0.03%
	LGD	1	A quantitative model that produces both downturn and expected LGD. Several securities types are included in the model to recognise collateral in the LGD calculation. For unsecured LGD, a floor of 45% is applied.	10	45% ²
	EAD	1	A quantitative model that assigns CCF taking into account product types and committed/uncommitted indicator to calculate EAD using current utilisation and available headroom.	10	EAD must be at least equal to the current utilisation of the balance at account level
Other Corporate / Small and medium sized corporates ³	PD	12	The corporate models use financial information, macroeconomic information and market-driven data, and is complemented by a qualitative assessment. The Non-Bank Financial Institution ("NBFI") models which are the predominantly statistical models that combines quantitative analysis on financial information with expert inputs.	>=10	0.03%
	LGD	1	Regional statistical models covering all corporates, developed using historical loss/recovery data and various data inputs, including collateral information, facility seniority and customer geography.	>10	No
	EAD	1	Regional statistical models covering all corporates, developed using historical utilisation information and various data inputs, including product type and nature of commitment.	>10	EAD must be at least equal to the current utilisation of the balance at account level

¹ LGD floor exempted for the People's Republic of China and Hong Kong Special Administrative Region

² LGD floor exempted for intra-group entities

³ Excludes specialised lending exposures subject to supervisory slotting approach.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

(iii) Application of IRB parameters (continued)

Table 30: Material retail IRB credit risk models

Regulatory asset classes measured	Component	Number of significant models	Model description and methodology	Number of years loss data	Regulatory Floors
Hong Kong - Hang Seng Personal Residential Mortgages	PD	1	Statistical model built on internal behavioural data and calibrated to a long-run default rate by segment.	>10	0.03%
(Residential mortgage exposures)	LGD	3	1 component based model and 2 historical average models based on estimate of loss incurred over a recovery period derived from historical data with downturn LGD based on the worst observed default rate.	>10	LGD floor of 10% at portfolio level
	EAD	1	Rule-based calculation based on current balance and estimated incurred interest which continues to be a conservative estimate for EAD.	>10	EAD must at least be equal to current balance
	PD	1	Statistical model built on internal behavioural data and calibrated to a long-run default rate by segment.	>10	0.03%
Hong Kong – Hang Seng Credit Cards (Qualifying revolving retail exposures and Other retail exposures to individuals)	LGD	1	Statistical model based on forecasting the amount of expected future losses with downturn adjustment.	>10	
	EAD	1	Statistical model which derives a credit limit utilization by segment which is used to determine the EAD.	>10	EAD must at least be equal to current balance
	PD	1	Statistical model built on internal behavioural data and calibrated to a long-run default rate by segment.	>10	PD floor of 0.03%
Hong Kong – Hang Seng Personal Loans (Qualifying revolving retail exposures and Other retail exposures to individuals)	LGD	1	Statistical model based on forecasting the amount of expected future losses with downturn adjustment.	> 10	
	EAD	1	EAD derived by different product types. Statistical model which derives a credit conversion factor to determine the proportion of undrawn limit to be added to the balance at observation for revolving nature while rule based calculation based on current balance for non-revolving nature.	> 10	EAD must at least be equal to current balance

These measures are used to calculate expected loss and capital requirements. They are also used in conjunction with other inputs to form rating assessments for the purpose of credit approval and for risk management decisions.

PD models are developed using statistical estimation generally based on a minimum of five years of historical data. The modelling approach is typically hybrid. EAD models are also generally developed using at least five years of historical observations and typically adopt one of two approaches:

- Closed-end products without the facility for additional drawdowns, EAD is estimated as the outstanding balance of accounts at the time of observation with predicted interest and fees; or
- EAD for products with the facility for additional drawdowns is estimated as the outstanding balance of accounts at the time of observation plus a credit conversion factor applied to the undrawn portion of the facility.

LGD estimates have more variation, particularly in respect of the time period that is used to quantify economic downturn assumptions.

For management information and reporting purposes, retail portfolios are segmented into 10 EL bands facilitating comparability across retail customer segment and product types. EL band is derived through a combination of PD and LGD.

BANKING DISCLOSURE STATEMENT *(unaudited) (continued)*

(iv) Model Governance

Model governance is under the oversight of HSBC Group or HSBC Regional Model Oversight Committee ("HSBC Group MOC" or "HSBC Regional MOC"). Wholesale Credit and Markets MOC and Retail Risk ("Local MOCs") are established respectively in the Bank with comparable terms of reference as HSBC Group MOC or HSBC Regional MOC.

Local MOCs meet regularly and report to RMM. They are chaired by the Risk function, and its membership is drawn from Risk, Finance and Businesses. Its primary responsibilities are to oversee the framework for the management of model risk, bring a strategic approach to model-related issues across the Bank, and to oversee the governance of our risk rating models, their consistency, within the regulatory framework. Also, it identifies emerging risks for all aspects of the risk rating system, ensuring that model risk is managed within our risk appetite statement, and formally advises RMM / HSBC Group MOC / HSBC Regional MOC on any material model-related issues.

All new or materially changed IRB capital models require the HKMA and the Prudential Regulation Authority's ("PRA") approval and such models fall directly under the remit of Local MOCs and HSBC Group MOC / HSBC Regional MOC.

The approval of models/model changes is the responsibility of individual approvers. Model Owner/Technical Expert ensures that the model is technically sound, has been developed robustly and follows the relevant modelling policies, standards, internal and regulatory requirements. Whereas the Model User/Steward for the function ensures that the model makes sense to the business or function where it will be used and that the model satisfies the requirements from the business, function and regulators.

Compliance with the HSBC Group and local standards for model development, credit risk models validation and implementation are subject to an independent model review process led by the HSBC Independent Model Review team which is separated from the Risk Analytics functions that are responsible for the development, usage and management of models. The Independent Model Review team provides robust challenge to the modelling approaches used and ensures that the performance of those models is transparent and that their limitations are visible to key stakeholders.

HSBC Group Audit, local Internal Audit, or a comparable independent model review unit also conducts regular reviews of the risk rating model application by credit and business groups.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Credit risk under internal ratings-based approach

Table 31.1: CR6 – Credit risk exposures by portfolio and PD ranges – for IRB approach (Wholesale)

	a	b	c	d	e	f	g	h	i	j	k	l
As at 31 Dec 2018	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Average CCF	EAD post-credit risk mitigation ("CRM") and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWA	RWA density	EL	Provisions [^]
PD scale	HK\$m	HK\$m	%	HK\$m	%		%	years	HK\$m	%	HK\$m	HK\$m
Sovereign												
0.00 to < 0.15	296,137	-	-	296,137	0.01	38	23.5	1.12	7,803	3	10	
0.15 to < 0.25	-	-	-	-	-	-	-	-	-	-	-	
0.25 to < 0.50	-	-	-	-	-	-	-	-	-	-	-	
0.50 to < 0.75	-	-	-	-	-	-	-	-	-	-	-	
0.75 to < 2.50	-	-	-	-	-	-	-	-	-	-	-	
2.50 to < 10.00	-	-	-	-	-	-	-	-	-	-	-	
10.00 to < 100.00	-	-	-	-	-	-	-	-	-	-	-	
100.00 (Default)	-	-	-	-	-	-	-	-	-	-	-	
Sub-total	296,137	-	-	296,137	0.01	38	23.5	1.12	7,803	3	10	3
Bank												
0.00 to < 0.15	96,831	536	45.6	97,075	0.04	985	43.2	1.15	12,577	13	15	
0.15 to < 0.25	304	144	50.0	376	0.22	67	42.5	0.50	122	32	-	
0.25 to < 0.50	561	-	-	561	0.37	48	44.6	0.75	272	48	1	
0.50 to < 0.75	501	1	0.5	501	0.63	41	45.0	0.78	366	73	1	
0.75 to < 2.50	26	-	-	26	1.04	24	45.0	0.06	18	69	-	
2.50 to < 10.00	-	-	-	-	-	-	-	-	-	-	-	
10.00 to < 100.00	-	-	-	-	-	-	-	-	-	-	-	
100.00 (Default)	-	-	-	-	-	-	-	-	-	-	-	
Sub-total	98,223	681	46.5	98,539	0.04	1,165	43.2	1.14	13,355	14	17	4
Corporate – small-and-medium sized corporates												
0.00 to < 0.15	4,597	3,313	31.9	5,652	0.12	141	26.3	2.99	983	17	2	
0.15 to < 0.25	15,261	3,172	32.7	16,297	0.22	323	32.4	2.60	4,418	27	12	
0.25 to < 0.50	23,762	3,384	32.9	24,874	0.37	338	25.4	2.94	7,479	30	23	
0.50 to < 0.75	24,051	8,567	39.2	27,409	0.63	439	29.2	2.26	10,746	39	50	
0.75 to < 2.50	47,631	14,385	28.4	51,711	1.40	1,324	29.2	2.39	27,482	53	209	
2.50 to < 10.00	6,681	2,323	28.5	7,342	3.67	223	27.8	2.21	4,929	67	76	
10.00 to < 100.00	76	13	32.7	80	10.00	8	36.1	1.49	96	120	3	
100.00 (Default)	164	-	-	164	100.00	8	48.6	3.02	677	413	26	
Sub-total	122,223	35,157	32.2	133,529	1.10	2,804	28.7	2.51	56,810	43	401	855
Corporate – others												
0.00 to < 0.15	132,030	68,860	36.6	157,250	0.09	479	44.8	2.52	42,483	27	64	
0.15 to < 0.25	39,117	28,837	30.2	47,830	0.22	276	41.9	2.04	18,427	39	44	
0.25 to < 0.50	46,793	22,819	28.2	53,229	0.37	417	33.8	2.42	23,359	44	67	
0.50 to < 0.75	44,375	21,764	25.5	49,927	0.63	428	38.8	2.01	29,893	60	122	
0.75 to < 2.50	99,207	58,149	26.4	114,563	1.38	1,307	36.2	1.84	83,406	73	560	
2.50 to < 10.00	15,481	9,530	20.5	17,436	3.79	238	39.1	1.33	18,344	105	258	
10.00 to < 100.00	528	451	19.6	616	12.11	24	27.3	1.32	699	113	20	
100.00 (Default)	1,396	-	-	1,396	100.00	82	48.8	1.40	2,112	151	740	
Sub-total	378,927	210,410	30.1	442,247	1.01	3,251	40.0	2.17	218,723	49	1,875	2,487

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Table 31.2: CR6 – Credit risk exposures by portfolio and PD ranges – for IRB approach (Retail)

	a	b	c	d	e	f	g	h	i	j	k	l
As at 31 Dec 2018	Original on-balance sheet gross exposure	Off-balance sheet exposures	Average CCF	EAD post CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWA	RWA density	EL	Provisions [^]
PD scale	HK\$m	HK\$m	%	HK\$m	%		%	years	HK\$m	%	HK\$m	HK\$m
Retail – qualifying revolving retail exposures ("QRRE")												
0.00 to < 0.15	11,568	137,217	39.4	65,684	0.07	1,653,732	104.5		3,000	5	48	
0.15 to < 0.25	1,953	11,246	44.9	6,998	0.22	175,843	104.2		850	12	16	
0.25 to < 0.50	4,927	18,781	33.0	11,131	0.39	214,185	100.0		2,041	18	43	
0.50 to < 0.75	2,100	4,128	48.3	4,092	0.60	64,573	101.7		1,066	26	25	
0.75 to < 2.50	7,080	11,293	33.6	10,872	1.45	118,014	98.6		5,328	49	155	
2.50 to < 10.00	4,446	2,954	60.7	6,238	4.72	62,122	98.7		7,091	114	291	
10.00 to < 100.00	1,527	420	125.0	2,051	28.18	20,648	99.4		4,184	204	559	
100.00 (Default)	49	-	-	49	100.00	684	93.4		75	153	41	
Sub-total	33,650	186,039	39.5	107,115	1.13	2,309,801	102.8		23,635	22	1,178	2,971
Retail – residential mortgage exposures												
0.00 to < 0.15	144,661	1,155	100.0	145,816	0.09	46,857	17.7		28,192	19	23	
0.15 to < 0.25	36,008	287	100.0	36,295	0.18	30,586	16.7		6,459	18	11	
0.25 to < 0.50	766	6	100.0	772	0.34	210	15.9		128	17	-	
0.50 to < 0.75	18,057	144	100.0	18,201	0.52	8,151	16.3		3,168	17	16	
0.75 to < 2.50	14,971	118	100.0	15,089	0.95	14,827	15.9		3,052	20	23	
2.50 to < 10.00	4,627	36	100.0	4,663	4.75	3,224	15.2		2,265	49	34	
10.00 to < 100.00	3,468	27	100.0	3,495	14.94	2,936	14.8		2,706	77	77	
100.00 (Default)	124	-	-	124	100.00	78	14.1		202	163	1	
Sub-total	222,682	1,773	100.0	224,455	0.58	106,869	17.2		46,172	21	185	-
Retail – small business retail exposures												
0.00 to < 0.15	2,296	7	100.0	2,303	0.08	984	7.3		34	1	-	
0.15 to < 0.25	602	3	100.0	605	0.19	159	15.4		37	6	-	
0.25 to < 0.50	116	1	100.0	117	0.48	35	16.3		13	11	-	
0.50 to < 0.75	563	-	-	563	0.58	183	8.8		42	7	-	
0.75 to < 2.50	180	1	100.0	181	1.19	46	18.7		37	20	-	
2.50 to < 10.00	472	1	100.0	473	6.10	167	5.8		42	9	2	
10.00 to < 100.00	-	-	-	-	-	-	-		-	-	-	
100.00 (Default)	-	-	-	-	-	-	-		-	-	-	
Sub-total	4,229	13	100.0	4,242	0.89	1,574	9.2		205	5	2	-
Other retail exposures to individuals												
0.00 to < 0.15	2,450	2,530	10.2	2,708	0.07	26,981	11.2		60	2	-	
0.15 to < 0.25	1,842	2,593	15.5	2,244	0.20	23,618	15.7		139	6	1	
0.25 to < 0.50	146	1,180	14.5	317	0.41	11,998	88.2		176	56	1	
0.50 to < 0.75	4,946	165	28.3	4,992	0.55	21,838	64.3		2,398	48	17	
0.75 to < 2.50	4,136	1,238	27.6	4,478	1.57	28,741	53.7		2,910	65	41	
2.50 to < 10.00	3,530	189	28.8	3,584	4.67	25,417	63.9		3,358	94	110	
10.00 to < 100.00	780	8	129.1	791	15.82	6,992	68.8		1,060	134	86	
100.00 (Default)	17	-	-	17	100.00	372	162.0		39	229	24	
Sub-total	17,847	7,903	16.2	19,131	2.17	145,957	49.2		10,140	53	280	480

Table 31.3: CR6 – Credit risk exposures by portfolio and PD ranges – for IRB approach (Total)

	a	b	c	d	e	f	g	h	i	j	k	l
As at 31 Dec 2018	Original on-balance sheet gross exposure	Off-balance sheet exposures	Average CCF	EAD post CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity*	RWA	RWA density	EL	Provisions [^]
	HK\$m	HK\$m	%	HK\$m	%		%	years	HK\$m	%	HK\$m	HK\$m
Total (all portfolios)	1,173,918	441,976	34.3	1,325,395	0.68	2,571,459	36.7	1.79	376,843	28	3,948	6,800

* The average maturity is relevant to wholesale portfolios only.

[^] Provisions in this table represent the eligible provisions as defined under Division 1, Part 6 of the BCR which include the regulatory reserves for general banking risks and the impairment allowances reported under IRB approach.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Table 32: CR10 – Specialised lending under supervisory slotting criteria approach – other than high-volatility commercial real estate ("HVCRE")

As at 31 Dec 2018

		a	b	c	d(i)	d(ii)	d(iii)	d(iv)	d(v)	e	f
		EAD amount									
Supervisory Rating Grade	Remaining Maturity	On-balance sheet exposure amount	Off-balance sheet exposure amount	Supervisory risk-weight ("SRW")	Project finance ("PF")	Object finance ("OF")	Commodities finance ("CF")	Income-producing real estate ("IPRE")	Total	RWA	Expected loss amount
		HK\$m	HK\$m	%	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Strong [^]	Less than 2.5 years	1,453	106	50%	-	-	-	1,511	1,511	756	-
Strong	Less than 2.5 years	2,581	419	70%	-	-	-	2,699	2,699	1,889	11
Strong	Equal to or more than 2.5 years	3,104	326	70%	-	-	-	3,229	3,229	2,261	13
Good [^]	Less than 2.5 years	222	-	70%	-	-	-	222	222	155	1
Good	Less than 2.5 years	2,222	342	90%	-	-	-	2,371	2,371	2,134	19
Good	Equal to or more than 2.5 years	725	926	90%	-	-	-	1,050	1,050	945	8
Satisfactory		456	151	115%	-	-	-	509	509	585	14
Weak		-	-	250%	-	-	-	-	-	-	-
Default		-	-	0%	-	-	-	-	-	-	-
Total		10,763	2,270		-	-	-	11,591	11,591	8,725	66

[^] Use of preferential risk-weights.

Table 33: CR10 – Equity exposures under the simple risk-weight method

As at 31 Dec 2018

	a	b	c	d	e
	On-balance sheet exposure amount	Off-balance sheet exposure amount	SRW	EAD amount	RWA
Categories	HK\$m	HK\$m	%	HK\$m	HK\$m
Publicly traded equity exposures	68	-	300%	68	204
All other equity exposures	3,661	-	400%	3,661	14,644
Total	3,729	-		3,729	14,848

BANKING DISCLOSURE STATEMENT (unaudited) (continued)
Credit risk under standardised approach

The standardised approach is applied where exposures do not qualify for use of an IRB approach and/or where an exemption from IRB has been granted. The standardised approach requires banks to use risk assessments prepared by External Credit Assessment Institutions ("ECAI") to determine the risk weightings applied to rated counterparties.

The Group uses the following ECAIs to calculate its capital adequacy requirements under the STC approach prescribed in the BCR:

- Fitch Ratings
- Moody's Investors Service
- Standard & Poor's Ratings Services

Where exposures have been rated by the above-mentioned ECAIs, they are categorised under the following class of exposures:

- Sovereign exposures
- Public sector entity ("PSE") exposures
- Bank exposures
- Securities firm exposures
- Corporate exposures
- Collective investment scheme ("CIS") exposures

The process used to map ECAIs issuer ratings or ECAIs issue specific ratings in the Group's banking book is consistent with those prescribed in the Part 4 of the BCR.

Table 34: CR5 – Credit risk exposures by asset classes and by risk weights – for STC approach

As at 31 Dec 2018		a	b	c	d	e	f	g	h	ha	i	j
Risk weight		0%	10%	20%	35%	50%	75%	100%	150%	250%	Others	Total credit risk exposures amount (post CCF and post CRM)
Exposure class		HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
1	Sovereign exposures	152	-	-	-	-	-	-	-	-	-	152
2	PSE exposures	16,588	-	4,312	-	15	-	-	-	-	-	20,915
2a	<i>Of which: Domestic PSEs</i>	-	-	2,053	-	-	-	-	-	-	-	2,053
2b	<i>Of which: Foreign PSEs</i>	16,588	-	2,259	-	15	-	-	-	-	-	18,862
3	Multilateral development bank exposures	-	-	-	-	-	-	-	-	-	-	-
4	Bank exposures	-	-	81	-	1	-	-	-	-	-	82
5	Securities firm exposures	-	-	-	-	-	-	-	-	-	-	-
6	Corporate exposures	-	-	160	-	393	-	41,070	-	-	-	41,623
7	CIS exposures	-	-	-	-	-	-	-	-	-	-	-
8	Cash items	-	-	-	-	-	-	-	-	-	-	-
9	Exposures in respect of failed delivery on transactions entered into on a basis other than a delivery-versus-payment basis	-	-	-	-	-	-	-	-	-	-	-
10	Regulatory retail exposures	-	-	-	-	-	4,181	-	-	-	-	4,181
11	Residential mortgage loans	-	-	-	22,090	-	526	2,504	-	-	-	25,120
12	Other exposures which are not past due exposures	-	-	-	-	-	-	6,386	-	-	-	6,386
13	Past due exposures	3	-	-	-	-	-	38	278	-	-	319
14	Significant exposures to commercial entities	-	-	-	-	-	-	-	-	-	-	-
15	Total	16,743	-	4,553	22,090	409	4,707	49,998	278	-	-	98,778

Credit risk mitigation

The Group's approach when granting credit facilities is on the basis of capacity to repay, rather than primarily rely on credit risk mitigation. Depending on a customer's standing and the type of product, facilities may be provided on unsecured basis. Nevertheless, mitigation of credit risk is an important aspect of effective management and takes in many forms.

The Group's general policy is to promote the use of credit risk mitigation, justified by commercial prudence and good practice as well as capital efficiency. Policies covering the acceptability, structuring, control and valuation with regard to different types of collateral security are established to ensure that they are supported by evidence and continue to fulfil their intended purpose.

Concentration of credit risk exists when changes in geographic, economic or industry factors similarly affect groups of counterparties whose aggregate credit exposure is material in relation to the Group's total exposures. The Group's portfolio of financial instrument is diversified along geographic, industry and product sectors.

Collateral

The Group has implemented guidelines on the acceptability of specific classes of collateral or credit risk mitigation, and determined the valuation parameters. Such parameters are established prudently and are reviewed regularly in light of changing market environment and empirical evidence. Security structures and legal covenants are subject to regular review to ensure that they continue to fulfil their intended purpose and remain in line with local market practice.

While collateral is an important mitigant to credit risk, it is the Group's policy to establish that loans are within the customer's capacity to repay rather than to rely excessively on security. Facilities may be granted on unsecured basis depending on the customer's standing and the type of product. The principal collateral types are as follows:

- in the personal sector, charges over the properties, securities, investment funds and deposits;
- in the commercial and industrial sector, charges over business assets such as properties, stock, debtors, investment funds, deposits and machinery; and
- in the commercial real estate sector, charges over the properties being financed.

Repossessed assets are non-financial assets acquired in exchange for loans in order to achieve an orderly realisation, and are reported in the balance sheet within "Other assets" at the lower of fair value (less costs to sell) and the carrying amount of the loan (net of any impairment allowance). If excess funds arise after the debt has been repaid, they are made available either to repay other secured lenders with lower priority or are returned to the customer. The Group does not generally occupy repossessed properties for its business use.

Collateral held as security for financial assets other than loans and advances is determined by the nature of the instrument. Debt securities, treasury and other eligible bills are generally unsecured.

Credit Risk Mitigation under IRB Approach

The main types of recognised collateral taken by the Group are those as stated in section 80 of the BCR, including (but not limited to) cash on deposit, gold bullion, equities listed in a main index and/or a recognised exchange, collective investment schemes, various recognised debt securities, residential, industrial and commercial property, etc.

The Group's policy provides that netting is only to be applied where it has the legal right to do so. Consistent with the BCR, only bilateral netting arrangements are included for capital adequacy credit risk mitigation calculation.

In terms of the application within IRB approach, credit risk mitigants are considered in two broad categories: first, those which reduce the intrinsic PD of an obligor and therefore operate as adjustments to PD estimation, and second, those which affect estimated recoverability of obligations and require adjustment of LGD. The first includes, for example, full parental or group company guarantees; the second, collateral security of various kinds such as cash, equity, properties, fixed assets such as motor vehicles, plant and machinery, stock and debtors, bank and sovereign guarantees, etc.

Credit Risk Mitigation under STC Approach

As stated in sections 98 and 99 of the BCR, certain guarantees and credit derivative contracts are recognised for credit risk mitigation purposes. The main types of guarantees are from sovereigns, corporate and banks. With corporate guarantees, in order for it to be recognised as a credit risk mitigant, it must have a credit rating of A- or better by Standard & Poor's Ratings Services, Fitch Ratings or a credit rating of A3 or better by Moody's Investors Service.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Table 35: CR3 – Overview of recognised credit risk mitigation

	a	b1	b	d	f
	Exposures unsecured: carrying amount	Exposures to be secured	Exposures secured by recognised collateral	Exposures secured by recognised guarantees	Exposures secured by recognised credit derivative contracts
As at 31 Dec 2018	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
1 Loans	317,615	646,941	488,910	129,514	-
2 Debt securities	323,766	2,064	-	2,018	-
3 Total	641,381	649,005	488,910	131,532	-
4 <i>of which: Defaulted</i>	<i>706</i>	<i>496</i>	<i>170</i>	<i>3</i>	-

Table 36: CR7 – Effects on RWA of recognised credit derivative contracts used as recognised credit risk mitigation – for IRB approach

	a	b
	Pre-credit derivatives RWA	Actual RWA
As at 31 Dec 2018	HK\$m	HK\$m
1 Corporate – Specialised lending under supervisory slotting criteria approach (project finance)	-	-
2 Corporate – Specialised lending under supervisory slotting criteria approach (object finance)	-	-
3 Corporate – Specialised lending under supervisory slotting criteria approach (commodities finance)	-	-
4 Corporate – Specialised lending under supervisory slotting criteria approach (income-producing real estate)	8,725	8,725
5 Corporate – Specialised lending (high-volatility commercial real estate)	-	-
6 Corporate – Small-and-medium sized corporates	56,810	56,810
7 Corporate – Other corporates	218,723	218,723
8 Sovereigns	6,199	6,199
9 Sovereign foreign public sector entities	-	-
10 Multilateral development banks	1,604	1,604
11 Bank exposures – Banks	13,253	13,253
12 Bank exposures – Securities firms	102	102
13 Bank exposures – Public sector entities (excluding sovereign foreign public sector entities)	-	-
14 Retail – Small business retail exposures	205	205
15 Retail – Residential mortgages to individuals	44,886	44,886
16 Retail – Residential mortgages to property-holding shell companies	1,286	1,286
17 Retail – Qualifying revolving retail exposures	23,635	23,635
18 Retail – Other retail exposures to individuals	10,140	10,140
19 Equity – Equity exposures under market-based approach (simple risk-weight method)	14,848	14,848
20 Equity – Equity exposures under market-based approach (internal models method)	-	-
21 Equity – Equity exposures under PD/LGD approach (publicly traded equity exposures held for long-term investment)	-	-
22 Equity – Equity exposures under PD/LGD approach (privately owned equity exposures held for long-term investment)	-	-
23 Equity – Equity exposures under PD/LGD approach (other publicly traded equity exposures)	-	-
24 Equity – Equity exposures under PD/LGD approach (other equity exposures)	-	-
25 Equity – Equity exposures associated with equity investments in funds (CIS exposures)	-	-
26 Other – Cash items	1,201	1,201
27 Other – Other items	40,466	40,466
28 Total (under the IRB calculation approaches)	442,083	442,083

There is no effect in RWA, as the Group does not have credit derivative contracts used as recognised credit risk mitigation.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Table 37: CR4 – Credit risk exposures and effects of recognised credit risk mitigation – for STC approach

	a	b	c	d	e	f
	Exposures pre-CCF and pre-CRM		Exposures post-CCF and post-CRM		RWA and RWA density	
As at 31 Dec 2018	On-balance sheet amount HK\$m	Off-balance sheet amount HK\$m	On-balance sheet amount HK\$m	Off-balance sheet amount HK\$m	RWA HK\$m	RWA density %
Exposure classes						
1 Sovereign exposures	-	-	152	-	-	-
2 PSE exposures	20,299	1,282	20,299	616	871	4
2a <i>Of which: Domestic PSEs</i>	1,437	1,282	1,437	616	411	20
2b <i>Of which: Foreign PSEs</i>	18,862	-	18,862	-	460	2
3 Multilateral development bank exposures	-	-	-	-	-	-
4 Bank exposures	82	-	82	-	17	21
5 Securities firm exposures	-	-	-	-	-	-
6 Corporate exposures	43,257	20,411	39,514	2,109	41,297	99
7 CIS exposures	-	-	-	-	-	-
8 Cash items	-	-	-	-	-	-
9 Exposures in respect of failed delivery on transactions entered into on a basis other than a delivery-versus-payment basis	-	-	-	-	-	-
10 Regulatory retail exposures	4,759	10,700	4,175	6	3,136	75
11 Residential mortgage loans	24,297	4,476	24,224	896	10,630	42
12 Other exposures which are not past due exposures	12,287	6,758	6,225	161	6,386	100
13 Past due exposures	319	-	319	-	456	143
14 Significant exposures to commercial entities	-	-	-	-	-	-
15 Total	105,300	43,627	94,990	3,788	62,793	64

BANKING DISCLOSURE STATEMENT (unaudited) (continued)
Model performance

The disclosure covers wholesale and retail models which have been approved by regulators. It validates the PD estimation by comparing the PD estimated by IRB Models against actual default experience. It shows our IRB models are generally conservative.

Table 38.1: CR9 – Back-testing of PD per portfolio – for IRB approach (Wholesale)

a	b	c			d	e	f		g	h	i
		External rating equivalent (S&P)	External rating equivalent (Moody's)	External rating equivalent (Fitch)			Weighted average PD	Arithmetic average PD by obligors			
Portfolio	PD Range				%	%	Beginning of the year	End of the year	Defaulted obligors in the year	Defaulted obligors in the year	Default rate
As at 31 Dec 2018											
Sovereign	0.00 to < 0.15	AAA to BBB	Aaa to Baa2	AAA to BBB	0.01	0.02	21	23	-	-	-
	0.15 to < 0.25	BBB-	Baa3	BBB-	-	-	-	-	-	-	-
	0.25 to < 0.50	BBB-	Baa3	BBB-	-	-	-	-	-	-	-
	0.50 to < 0.75	BB+ to BB	Ba1 to Ba2	BB+ to BB	-	-	-	-	-	-	-
	0.75 to < 2.50	BB- to B+	Ba3 to B2	BB- to B-	-	-	-	-	-	-	-
	2.50 to < 10.00	B to B-	B2 to Caa1	CCC+ to CCC	-	-	-	-	-	-	-
	10.00 to < 100.00	B- to C	Caa1 to C	CCC to C	-	-	-	-	-	-	-
Bank	0.00 to < 0.15	AAA to A-	Aaa to Baa1	AAA to BBB+	0.03	0.06	64	66	-	-	-
	0.15 to < 0.25	BBB+	Baa2	BBB	0.22	0.22	8	5	-	-	-
	0.25 to < 0.50	BBB	Baa3	BBB-	0.37	0.37	8	7	-	-	-
	0.50 to < 0.75	BBB-	Baa3	BBB-	0.63	0.63	4	3	-	-	-
	0.75 to < 2.50	BB+ to BB-	Ba1 to B1	BB+ to B+	0.89	1.38	7	7	-	-	-
	2.50 to < 10.00	B+ to B-	B2 to Caa1	B to CCC+	5.75	5.75	1	-	-	-	-
	10.00 to < 100.00	CCC+ to C	Caa1 to C	CCC to C	-	-	-	-	-	-	-
Corporate – small-and-medium sized corporates	0.00 to < 0.15	AAA to A-	Aaa to Baa1	AAA to BBB+	0.12	0.11	141	105	-	-	-
	0.15 to < 0.25	BBB+	Baa2	BBB	0.22	0.22	161	260	-	-	0.07
	0.25 to < 0.50	BBB	Baa3	BBB-	0.37	0.37	297	278	5	-	0.64
	0.50 to < 0.75	BBB-	Baa3	BBB-	0.63	0.63	373	374	-	-	0.53
	0.75 to < 2.50	BB+ to BB-	Ba1 to B1	BB+ to B+	1.54	1.52	1,006	1,129	1	-	0.45
	2.50 to < 10.00	B+ to B-	B2 to Caa1	B to CCC+	3.63	3.70	131	186	3	-	1.16
	10.00 to < 100.00	CCC+ to C	Caa1 to C	CCC to C	10.00	10.00	2	6	1	-	21.43
Corporate – others³	0.00 to < 0.15	AAA to A-	Aaa to Baa1	AAA to BBB+	0.09	0.10	269	243	-	-	-
	0.15 to < 0.25	BBB+	Baa2	BBB	0.22	0.22	257	190	-	-	0.14
	0.25 to < 0.50	BBB	Baa3	BBB-	0.37	0.37	354	269	-	-	0.27
	0.50 to < 0.75	BBB-	Baa3	BBB-	0.63	0.63	326	319	3	-	0.72
	0.75 to < 2.50	BB+ to BB-	Ba1 to B1	BB+ to B+	1.41	1.54	1,098	1,056	16	-	1.19
	2.50 to < 10.00	B+ to B-	B2 to Caa1	B to CCC+	3.82	4.03	231	168	2	-	1.98
	10.00 to < 100.00	CCC+ to C	Caa1 to C	CCC to C	10.00	10.00	1	3	-	-	12.22

1 The number of obligors represents the obligor rated by key wholesale IRB models directly.

2 The number of obligors on corporate counterparty is being reported at counterparty level, while the number of obligors on Multilateral Development Bank (grouped under Sovereign portfolio) and Bank are being reported at entity level. Sovereigns are reported at country level based on local currency and foreign currency ratings.

3 Specialised lending exposures are excluded.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Table 38.2: CR9 – Back-testing of PD per portfolio – for IRB approach (Retail)

a	b	c	d	e	f		g	h	i
Portfolio	PD Range	External rating equivalent**	Weighted average PD	Arithmetic average PD by obligors	Number of obligors		Defaulted obligors in the year	of which: new defaulted obligors in the year	Average historical annual default rate
					Beginning of the year	End of the year			
As at 31 Dec 2018			%	%					%
Retail – QRRE	0.00 to < 0.15		0.07	0.07	1,683,241	1,735,424	683	4	0.05
	0.15 to < 0.25		0.22	0.22	175,484	182,320	163	1	0.11
	0.25 to < 0.50		0.39	0.39	213,484	223,962	328	10	0.19
	0.50 to < 0.75		0.60	0.59	64,052	66,140	205	6	0.37
	0.75 to < 2.50		1.45	1.37	238,489	247,161	1,134	40	0.72
	2.50 to < 10.00		4.75	4.65	79,321	81,550	1,620	55	2.66
	10.00 to < 100.00		29.61	34.53	24,978	23,153	2,505	13	13.41
Retail – residential mortgage exposures	0.00 to < 0.15		0.04	0.04	78,709	47,802	17	1	0.02
	0.15 to < 0.25		0.19	0.19	5,338	31,174	-	-	0.03
	0.25 to < 0.50		0.35	0.35	3,584	226	1	-	0.12
	0.50 to < 0.75		0.57	0.58	1,491	8,306	5	-	0.22
	0.75 to < 2.50		1.63	1.66	16,106	15,347	32	-	0.25
	2.50 to < 10.00		3.01	3.12	1,050	3,356	12	-	1.28
	10.00 to < 100.00		12.47	14.61	270	3,048	27	-	8.47
Retail – small business retail exposures	0.00 to < 0.15		0.06	0.06	1,204	1,129	-	-	-
	0.15 to < 0.25		0.17	0.17	116	188	-	-	-
	0.25 to < 0.50		0.49	0.49	17	43	-	-	-
	0.50 to < 0.75		0.54	0.54	160	222	-	-	-
	0.75 to < 2.50		1.18	1.19	248	56	-	-	0.18
	2.50 to < 10.00		5.22	5.25	206	204	-	-	0.11
	10.00 to < 100.00		-	-	-	-	-	-	-
Other retail exposures to individuals	0.00 to < 0.15		0.08	0.08	14,710	14,384	1	-	0.01
	0.15 to < 0.25		0.20	0.20	12,254	12,085	6	-	0.08
	0.25 to < 0.50		0.47	0.40	8,722	7,974	15	-	0.23
	0.50 to < 0.75		0.53	0.53	19,338	22,698	49	2	0.36
	0.75 to < 2.50		1.58	1.62	25,630	26,138	181	25	1.02
	2.50 to < 10.00		4.69	4.98	26,624	26,491	610	70	3.06
	10.00 to < 100.00		15.88	16.71	7,618	7,347	764	11	11.58

** External rating equivalent is not applicable to retail exposures.

Note:

The number of obligors is based on account level information for all retail IRB portfolios.

BANKING DISCLOSURE STATEMENT *(unaudited) (continued)*

Counterparty credit risk exposures

Counterparty credit risk management

Counterparty credit risk ("CCR") arises for derivatives and SFTs. It is calculated in both the trading and non-trading books, and is the risk that a counterparty may default before settlement of the transaction. CCR is generated primarily in our wholesale global businesses.

The Bank uses current exposure method to calculate exposure value for CCR RWA. Under the approach, the EAD is calculated as current exposure plus regulatory add-ons.

The PFE measures used for CCR management are calibrated to the 95th percentile. The measures consider volatility, trade maturity and the counterparty legal documentation covering netting and collateral.

Limits for CCR exposures are assigned within the overall credit process. The credit risk function assigns a limit against each counterparty to cover derivatives exposure which may arise as a result of a counterparty default. The magnitude of this limit will depend on the overall risk appetite and type of derivatives trading undertaken with the counterparty.

Credit valuation adjustment

CVA risk is the risk of adverse moves in the credit valuation adjustments taken for expected credit losses on derivative transactions. The Bank uses the standardised approach to calculate the CVA capital charge.

Collateral arrangements

Our policy is to revalue all traded transactions and associated collateral positions on a daily basis. An independent collateral management function manages the collateral process including pledging and receiving collateral and investigating disputes and non-receipts.

Eligible collateral types are controlled under a policy to ensure price transparency, price stability, liquidity, enforceability, independence, reusability and eligibility for regulatory purposes. A valuation "haircut" policy reflects the fact that collateral may fall in value between the date the collateral was called and the date of liquidation or enforcement.

Credit ratings downgrade

A credit rating downgrade clause in a Master Agreement or a credit rating downgrade threshold clause in a Credit Support Annex ("CSA") is designed to trigger an action if the credit rating of the affected party falls below a specified level. These actions may include the requirement to pay or increase collateral, the termination of transactions by the non-affected party or the assignment of transactions by the affected party.

At 31 December 2018, the potential value of the additional collateral pertaining to International Swaps and Derivatives Association ("ISDA") CSA downgrade thresholds that we would need to post with counterparties in the event of a one-notch or two-notch downgrade of our rating was nil.

Wrong-way risk

Wrong-way risk occurs when a counterparty's exposures are adversely correlated with its credit quality.

There are two types of wrong-way risk.

– General wrong-way risk occurs when the probability of counterparty default is positively correlated with general risk factors, for example, where a counterparty is resident and/or incorporated in a higher-risk country and seeks to sell a non-domestic currency in exchange for its home currency.

– Specific wrong-way risk occurs in self-referencing transactions. These are transactions in which exposure is driven by capital or financing instruments issued by the counterparty and occurs where exposure from the Bank's perspective materially increases as the value of the counterparty's capital or financing instruments referenced in the contract decreases. It is the HSBC policy that specific wrong-way transactions are approved on a case-by-case basis.

We use a range of tools to monitor and control wrong-way risk, including requiring the business to obtain prior approval before undertaking wrong-way risk transactions outside pre-agreed guidelines. The Traded Risk functions are responsible for the control and monitoring process within an overarching HSBC framework and limit framework.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)
Central counterparties

While exchange traded derivatives have been cleared through Central counterparties ("CCP")'s for many years, recent regulatory initiatives designed to reduce systemic risk in the banking system are directing increasing volumes of over-the-counter ("OTC") derivatives to be cleared through CCPs.

A dedicated CCP risk team has been established by the HSBC to manage the interface with CCPs and undertake in-depth due diligence of the unique risks associated with these organisations. This is to address an implication of the regulations that the HSBC's risk will be transferred from being distributed among individual, bilateral counterparties to a significant level of risk concentration on CCPs. The HSBC has developed a risk appetite framework to manage risk accordingly, on an individual CCP and global basis. The Bank has adopted such risk appetite framework with limits allocated to individual CCP.

Table 39: CCR1 – Analysis of counterparty default risk exposures (other than those to CCPs) by approaches

	a	b	c	d	e	f
	Replacement cost ("RC")	PFE	Effective expected positive exposure ("EPE")	Alpha (α) used for computing default risk exposure	Default risk exposure after CRM	RWA
As at 31 Dec 2018	HK\$m	HK\$m	HK\$m		HK\$m	HK\$m
1 SA-CCR (for derivative contracts)	-	-		1.4	-	-
1a CEM	2,346	6,949		N/A	9,295	2,631
2 IMM (CCR) approach			-	-	-	-
3 Simple Approach (for SFTs)					-	-
4 Comprehensive Approach (for SFTs)					60	3
5 VaR for SFTs					-	-
6 Total						2,634

Table 40: CCR2 – CVA capital charge

	a	b
	EAD post-CRM	RWA
As at 31 Dec 2018	HK\$m	HK\$m
Netting sets for which CVA capital charge is calculated by the advanced CVA method	-	-
1 (i) VaR (after application of multiplication factor if applicable)		-
2 (ii) Stressed VaR (after application of multiplication factor if applicable)		-
3 Netting sets for which CVA capital charge is calculated by the standardised CVA method	8,982	1,833
4 Total	8,982	1,833

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Table 41: CCR8 – Exposures to CCPs

	a	b
	Exposure after CRM HK\$m	RWA HK\$m
As at 31 Dec 2018		
1 Exposures of the AI as clearing member or client to qualifying CCPs (total)		29
2 Default risk exposures to qualifying CCPs (excluding items disclosed in rows 7 to 10), of which:	874	17
3 (i) <i>Over-the-counter ("OTC") derivative transactions</i>	874	17
4 (ii) <i>Exchange-traded derivative contracts</i>	-	-
5 (iii) <i>Securities financing transactions</i>	-	-
6 (iv) <i>Netting sets subject to valid cross-product netting agreements</i>	-	-
7 Segregated initial margin	-	
8 Unsegregated initial margin	227	5
9 Funded default fund contributions	163	7
10 Unfunded default fund contributions	-	-
11 Exposures of the AI as clearing member or client to non-qualifying CCPs (total)		-
12 Default risk exposures to non-qualifying CCPs (excluding items disclosed in rows 17 to 20), of which:	-	-
13 (i) <i>OTC derivative transactions</i>	-	-
14 (ii) <i>Exchange-traded derivative contracts</i>	-	-
15 (iii) <i>Securities financing transactions</i>	-	-
16 (iv) <i>Netting sets subject to valid cross-product netting agreements</i>	-	-
17 Segregated initial margin	-	
18 Unsegregated initial margin	-	-
19 Funded default fund contributions	-	-
20 Unfunded default fund contributions	-	-

Table 42: CCR5 – Composition of collateral for counterparty default risk exposures (including those for contracts or transactions cleared through CCPs)

	a	b	c	d	e	f
	Derivative contracts				SFTs	
	Fair value of recognised collateral received		Fair value of posted collateral		Fair value of recognised collateral received	Fair value of posted collateral
	Segregated HK\$m	Unsegregated HK\$m	Segregated HK\$m	Unsegregated HK\$m	HK\$m	HK\$m
As at 31 Dec 2018						
1 Cash – domestic currency	-	37	-	98	-	-
2 Cash – other currencies	-	467	-	129	410	-
3 Domestic sovereign debt	-	-	-	-	-	-
4 Other sovereign debt	-	-	-	-	-	470
5 Government agency debt	-	-	-	-	-	-
6 Corporate bonds	-	-	-	-	-	-
7 Equity securities	-	-	-	-	-	-
8 Other collateral	-	-	-	-	-	-
9 Total	-	504	-	227	410	470

BANKING DISCLOSURE STATEMENT (unaudited) (continued)
Counterparty default risk under internal ratings-based approach

Table 43: CCR4 – Counterparty default risk exposures (other than those to CCPs) by portfolio and PD range – for IRB approach

	a	b	c	d	e	f	g
As at 31 Dec 2018	EAD post- CRM	Average PD	Number of obligors	Average LGD	Average maturity	RWA	RWA density
PD scale	HK\$m	%		%	years	HK\$m	%
Sovereign							
0.00 to < 0.15	26	0.04	1	45.0	1.00	3	9
0.15 to < 0.25	-	-	-	-	-	-	-
0.25 to < 0.50	-	-	-	-	-	-	-
0.50 to < 0.75	-	-	-	-	-	-	-
0.75 to < 2.50	-	-	-	-	-	-	-
2.50 to < 10.00	-	-	-	-	-	-	-
10.00 to < 100.00	-	-	-	-	-	-	-
100.00 (Default)	-	-	-	-	-	-	-
Sub-total	26	0.04	1	45.0	1.00	3	9
Bank							
0.00 to < 0.15	7,153	0.05	97	35.6	1.41	969	14
0.15 to < 0.25	168	0.22	6	45.0	1.05	72	43
0.25 to < 0.50	124	0.37	5	45.0	1.23	76	61
0.50 to < 0.75	577	0.63	4	45.0	1.01	442	77
0.75 to < 2.50	8	1.65	1	45.0	1.00	10	112
2.50 to < 10.00	-	-	-	-	-	-	-
10.00 to < 100.00	-	-	-	-	-	-	-
100.00 (Default)	-	-	-	-	-	-	-
Sub-total	8,030	0.10	113	36.7	1.37	1,569	20
Corporates							
0.00 to < 0.15	372	0.11	20	48.4	4.36	174	47
0.15 to < 0.25	45	0.22	14	53.5	1.14	19	42
0.25 to < 0.50	60	0.37	13	50.9	1.00	30	50
0.50 to < 0.75	88	0.63	24	53.9	1.07	63	71
0.75 to < 2.50	363	1.38	43	55.6	1.60	398	110
2.50 to < 10.00	30	3.46	10	61.2	1.08	47	155
10.00 to < 100.00	-	-	-	-	-	-	-
100.00 (Default)	-	-	-	-	-	-	-
Sub-total	958	0.76	124	52.5	2.55	731	76
Retail							
0.00 to < 0.15	-	-	-	-	-	-	-
0.15 to < 0.25	-	-	-	-	-	-	-
0.25 to < 0.50	-	-	-	-	-	-	-
0.50 to < 0.75	-	-	-	-	-	-	-
0.75 to < 2.50	-	-	-	-	-	-	-
2.50 to < 10.00	-	-	-	-	-	-	-
10.00 to < 100.00	-	-	-	-	-	-	-
100.00 (Default)	-	-	-	-	-	-	-
Sub-total	-	-	-	-	-	-	-
Total (sum of all portfolios)	9,014	0.17	238	38.4	1.49	2,303	26

Note:

Details on the scope of models and percentage of RWA covered by models for each of the regulatory portfolios can be found in the "Credit risk under internal ratings-based approach" section of this document.

The Group has not used IMM(CCR) approach to calculate its default risk exposure.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)
Counterparty default risk under standardised approach

Table 44: CCR3 – Counterparty default risk exposures (other than those to CCPs) by asset classes and by risk weights – for STC approach

As at 31 Dec 2018											
	a	b	c	ca	d	e	f	g	ga	h	i
	0%	10%	20%	35%	50%	75%	100%	150%	250%	Others	Total default risk exposure after CRM
Risk weight	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Exposure class											
1 Sovereign exposures	-	-	-	-	-	-	-	-	-	-	-
2 PSE exposures	-	-	5	-	-	-	-	-	-	-	5
2a <i>Of which: Domestic PSEs</i>	-	-	5	-	-	-	-	-	-	-	5
2b <i>Of which: Foreign PSEs</i>	-	-	-	-	-	-	-	-	-	-	-
3 Multilateral development bank exposures	-	-	-	-	-	-	-	-	-	-	-
4 Bank exposures	-	-	-	-	-	-	-	-	-	-	-
5 Securities firm exposures	-	-	-	-	-	-	-	-	-	-	-
6 Corporate exposures	-	-	-	-	-	-	313	-	-	-	313
7 CIS exposures	-	-	-	-	-	-	-	-	-	-	-
8 Regulatory retail exposures	-	-	-	-	-	23	-	-	-	-	23
9 Residential mortgage loans	-	-	-	-	-	-	-	-	-	-	-
10 Other exposures which are not past due exposures	-	-	-	-	-	-	-	-	-	-	-
11 Significant exposures to commercial entities	-	-	-	-	-	-	-	-	-	-	-
12 Total	-	-	5	-	-	23	313	-	-	-	341

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Market risk

Overview and governance

Market risk is the risk that movements in market factors, including foreign exchange rates and commodity prices, interest rates, credit spreads and equity prices, will reduce our income or the value of our portfolios.

There were no significant changes to our policies and practices for the management of market risk in 2018.

Exposure to market risk is separated into two portfolios:

- Trading portfolios comprise positions arising from market-making and warehousing of customer-derived positions.
- Non-trading portfolios comprise positions that primarily arise from the interest rate management of our retail and commercial banking assets and liabilities, and financial investments designated as fair value through other comprehensive income.

The diagram below illustrates the major trading and non-trading market risk types and market risk measures used to monitor and limit exposures.

	Trading Risk	Non-Trading Risk
Risk Type	- Foreign exchange & Commodities - Interest rates - Credit spreads	- Structural foreign exchange - Interest rates - Credit spreads
Risk Measure	VaR / Sensitivity / Stress testing	VaR / Sensitivity / Stress testing

Where appropriate, the Group applies similar risk management policies and measurement techniques to both trading and non-trading portfolios. The Group's objective is to manage and control market risk exposures in order to optimise return on risk while maintaining a market profile consistent with the status as a professional banking and financial services organisation.

The nature of the hedging and risk mitigation strategies range from the use of traditional market instruments, such as interest rate swaps, to more sophisticated hedging strategies to address a combination of risk factors arising at portfolio level.

Market risk governance

Market risk is managed and controlled through limits approved by the Group's Chief Risk Officer, noting the support of RMM. These limits are allocated across business lines and to the Group's legal entities, including Hang Seng Bank (China) Limited.

The management of market risk is principally undertaken in Global Markets using risk limits allocated from the risk appetite, which is subject to the Board's approval. Limits are set for portfolios, products and risk types where appropriate, with market liquidity and business need being primary factors in determining the level of limits set.

An independent market risk management and control function is responsible for measuring, monitoring and reporting market risk exposures against the prescribed limits on a daily basis.

Market risks arising on each product are transferred to Global Markets for management. Our aim is to ensure that all market risks are consolidated within operations that have the necessary skills, tools, management and governance to manage them.

Our control of market risk in the trading and non-trading portfolios is based on a policy of restricting trading within a list of permissible instruments authorised for each business lines, of enforcing new product approval procedures, and of restricting trading in the more complex derivative products only to business lines with appropriate levels of product expertise and robust control systems.

Market risk measures

Monitoring and limiting market risk exposures

The Group's objective is to manage and control market risk exposures while maintaining a market profile consistent with the Group's risk appetite. The Group uses a range of tools to monitor and limit market risk exposures including sensitivity analysis, VaR, and stress testing.

Sensitivity analysis

The Group uses sensitivity measures to monitor the market risk positions within each risk type. Sensitivity limits are set for portfolios, products and risk types, with the depth of the market being one of the principal factors in determining the level of limits set.

VaR

VaR is a technique that estimates the potential losses on risk positions as a result of movements in market rates and prices over a specified time horizon and to a given level of confidence. The use of VaR is integrated into market risk management and is calculated for all trading positions regardless of how the Group capitalises those exposures. Where there is no approved internal model, the Group uses the appropriate local rules to capitalise exposures.

In addition, the Group calculates VaR for non-trading portfolios in order to have a complete picture of market risk. Where VaR is not calculated explicitly, alternative tools are used.

Standard VaR is calculated at a 99% confidence level for a one-day holding period while Stressed VaR uses a 10-day holding period and a 99% confidence interval based on a continuous one-year historical significant stress period. The VaR models used by the Group are predominantly based on historical simulation which incorporate the following features:

- historical market rates and prices are calculated with reference to foreign exchange rates and commodity prices, interest rates, equity prices and the associated volatilities;
- potential market movements utilised for Standard VaR are calculated with reference to data from the past two years; and
- Standard VaR is calculated to a 99% confidence level and use a one-day holding period.

The models also incorporate the effect of the option features on the underlying exposures. The nature of the VaR models means that an increase in observed market volatility will lead to an increase in VaR without any changes in the underlying positions.

VaR model limitations

Although a valuable guide to risk, VaR should always be viewed in the context of its limitations. For example:

- the use of historical data as a proxy for estimating future events may not encompass all potential events, particularly those which are extreme in nature;
- the use of a holding period assumes that all positions can be liquidated or the risks offset during that period. This may not fully reflect the market risk arising at times of severe illiquidity, when the holding period may be insufficient to liquidate or hedge all positions fully;
- the use of a 99% confidence level, by definition does not take into account losses that might occur beyond this level of confidence; and
- VaR is calculated on the basis of exposures outstanding at the close of business and therefore does not necessarily reflect intra-day exposures.

Risk not in VaR ("RNIV") framework

The RNIV framework aims to manage and capitalise material market risks that are not adequately covered in the VaR model. In such instances the RNIV framework uses stress tests to quantify the capital requirement. On average in 2018, the capital requirement derived from these stress tests represented 1.85% of the total internal model-based market risk requirement.

RNIV is not viewed as being a material component of the Group's market risk capital requirement. Risks covered by RNIV represent 1.85% of market risk RWA for models with regulatory approval.

Risk factors are reviewed on a regular basis and either incorporated directly in the VaR models, where possible, or quantified through the VaR-based RNIV approach or a stress test approach within the RNIV framework.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Backtesting

The Group routinely validates the accuracy of the VaR models by back-testing both actual and hypothetical profit and loss against the trading VaR numbers. Hypothetical profit and loss excludes non-modelled items such as fees, commissions and revenues of intra-day transactions.

The actual number of profits or losses in excess of VaR over this period can therefore be used to gauge how well the models are performing. VaR backtesting is performed at Group consolidated and solo levels, including entities that do not have local permission to use VaR for regulatory purposes.

Stress testing

Stress testing is an important tool that is integrated into the Group's market risk management tool to evaluate the potential impact on portfolio values of more extreme, although plausible, events or movements in a set of financial variables. In such abnormal scenarios, losses can be much greater than those predicted by VaR modelling.

Stress testing is implemented at the legal entity and the overall Group levels. Scenarios are tailored in order to capture the relevant events or market movements. A scoring framework is in place for management to effectively assess the severity of the potential stress losses and the likelihood of occurrence of the stress scenarios. The risk appetite around potential stress losses for the Group is set and monitored against referral limits.

Market risk reverse stress tests are undertaken based upon the premise that there is a fixed loss. The stress test process identifies which scenarios lead to this loss. The rationale behind the reverse stress test is to understand scenarios which are beyond normal business settings that could have contagion and systemic implications.

The market risk stress testing incorporates the historical and hypothetical events.

Stressed VaR and stress testing, together with reverse stress testing, provide management with insights regarding the "tail risk" beyond VaR for which the Group appetite is limited.

Market risk capital models

There are a number of measures that the Group has permission to use in calculating regulatory capital, which are listed below.

For regulatory purposes, the trading book comprises all positions in financial instruments and commodities that are held with trading intent, which are taken with the intention of benefiting from short-term gains or positions where it can be demonstrated that they hedge positions in the trading book.

Positions in the trading book are subject to market risk-based rules, i.e. market risk capital, computed using regulatory approved models. Otherwise, the market risk capital is calculated using the Standardised approach.

VaR

VaR used for regulatory purposes differs from VaR used for management purpose with key differences listed below.

VaR	Regulatory	Management
Scope	Regulatory approval	Broader population of trading and banking book positions
Confidence interval	99%	99%
Liquidity horizon	10-day	1-day
Data set	Past 2 years	Past 2 years

Stressed VaR

Stressed VaR is primarily used for regulatory capital purposes and is integrated into the risk management process to ensure prudent capital management. Stressed VaR complements other risk measures by providing the potential losses under stressed market conditions.

Stressed VaR modelling follows the same approach as our VaR risk measure, except for the following:

- potential market movements employed for stressed VaR calculations are based on a continuous one-year period of stress for the trading portfolio;
- it is calculated to a 99% confidence using a 10-day holding period;
- it is based on an actual 10-day holding period, whereas Regulatory VaR is based on a one-day holding period scaled to 10 days.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)**Market risk under standardised approach**

Using the standard templates as specified by the HKMA, the following tables provide detailed information relating to market risk under STM and IMM approaches.

Table 45: MR1 – Market risk under STM approach

		a
		RWA HK\$m
As at 31 Dec 2018		
Outright product exposures		
1	Interest rate exposures (general and specific risk)	38
2	Equity exposures (general and specific risk)	-
3	Foreign exchange (including gold) exposures	-
4	Commodity exposures	-
Option exposures		
5	Simplified approach	-
6	Delta-plus approach	-
7	Other approach	-
8	Securitisation exposures	-
9	Total	38

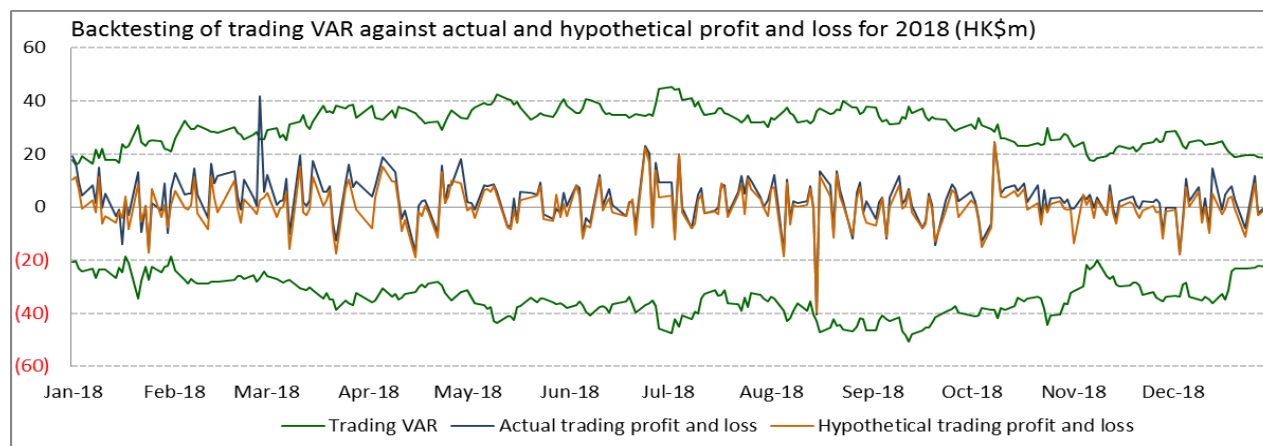
BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Analysis of VaR, stressed VaR and incremental risk charge measures

Table 46: MR3 – IMM approach values for market risk exposures

	a
	Value
	HK\$m
As at 31 Dec 2018	
VaR (10 days – one-tailed 99% confidence interval)	
1 Maximum Value	161
2 Average Value	108
3 Minimum Value	59
4 Period End	64
Stressed VaR (10 days – one-tailed 99% confidence interval)	
5 Maximum Value	280
6 Average Value	185
7 Minimum Value	119
8 Period End	136
IRC (99.9% confidence interval)	
9 Maximum value	-
10 Average value	-
11 Minimum value	-
12 Period end	-
CRC (99.9% confidence interval)	
13 Maximum value	-
14 Average value	-
15 Minimum value	-
16 Period end	-
17 Floor	-

Table 47: MR4 – Comparison of VaR estimates with gains or losses



In 2018, there were three profit exceptions for the Group consolidated level. The profit side exceptions are identified for actual P&L and those are mainly driven by intraday profit arising from trading activities.

The backtesting process applies only to regulatory trading book positions. The actual P&L excludes reserve which are resulted from regulatory banking book positions and also fee and commission which are non-modelled items.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Prudent valuation adjustment

The Group has documented policies and maintains systems and controls for the calculation of Prudent Valuation Adjustment ("PVA"). Prudent value is an estimated conservative pricing with a 90% degree of certainty that would be received to sell an asset or paid to transfer a liability in orderly transactions occurring between market participants at the balance sheet date. The Group's methodology addresses fair value uncertainties arising from a number of sources; market price uncertainty, bid offer ("close out") uncertainty, model risk, concentration, administrative cost, unearned credit spreads and investing and funding costs.

Table 48: PV1 – Prudent valuation adjustments

	a	b	c	d	e	f	g	h
	Equity	Interest rates	FX	Credit	Commo- dities	Total	Of which: In the trading book	Of which: In the banking book
As at 31 Dec 2018	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
1 Close-out uncertainty -for which:								
2 Mid-market value	(22)	(74)	(3)	(1)	-	(100)	(19)	(81)
3 Close-out costs	-	(10)	(1)	-	-	(11)	(4)	(7)
4 Concentration	-	(22)	-	-	-	(22)	-	(22)
5 Early termination	-	-	-	-	-	-	-	-
6 Model risk	-	-	-	-	-	-	-	-
7 Operational risks	(2)	(9)	-	-	-	(11)	(2)	(9)
8 Investing and funding costs	-	-	(1)	-	-	(1)	(1)	-
9 Unearned credit spreads	(1)	(2)	-	-	-	(3)	(3)	-
10 Future administrative costs	-	-	-	-	-	-	-	-
11 Other adjustments	-	-	-	-	-	-	-	-
12 Total adjustments	(25)	(117)	(5)	(1)	-	(148)	(29)	(119)

Liquidity information

The following table displays the LCR and NSFR levels on three reporting bases in accordance with rules 10(1)(a), 10(1)(b) and 11(1) of the BLR:

Table 49: LIQA – LCRs and NSFRs on three liquidity reporting bases

	LCR	NSFR
	%	%
As at 31 Dec 2018		
Hong Kong Office	227.2	155.5
Unconsolidated	219.7	153.9
Consolidated	214.7	154.0

Information relating to the Group's approach to liquidity risk management, including customised measurement tools and metrics, and details of collateral pools and funding sources is set out in the "Liquidity and funding risk" section in pages 69 to 73 of the Group's 2018 Annual Report. The on- and off- balance sheet items, broken down into maturity buckets are disclosed in Note 22 "Analysis of assets and liabilities by remaining maturity" on the consolidated financial statements in the Group's 2018 Annual Report.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

The BLR were introduced by the HKMA in 2014 and became effective from 1 January 2015. The Group is required to calculate its LCR on a consolidated basis in accordance with rule 11(1) of the BLR. During 2018, the Group was required to maintain a LCR of not less than 90%, increasing by 10% to not less than 100% from 1 January 2019.

The average LCR for the period is as follows:

Table 50: Average liquidity coverage ratio

	Quarter ended
	31 Dec
	2018
	%
Average liquidity coverage ratio	209.1

In accordance with the BLR, the NSFR was implemented in Hong Kong with effect from 1 January 2018. The Group is required to calculate its NSFR on a consolidated basis and maintain a NSFR of not less than 100%.

The liquidity position and funding position of the Group remained strong and stable in 2018.

The composition of the Group's high quality liquid assets ("HQLA") as defined under Schedule 2 of the BLR is shown as below. The majority of the HQLA held by the Group are Level 1 assets which consist mainly of government debt securities.

Table 51: Total weighted amount of high quality liquid assets

	Weighted value (average) for the quarter ended
	31 Dec
	2018
	HK\$m
Level 1 assets	281,615
Level 2A assets	10,920
Level 2B assets	546
Total weighted amount of HQLA	293,081

Sources of funding

Our primary sources of funding are customer deposits. We issue wholesale securities to supplement our customer deposits and change the currency mix or maturity profile of our liabilities.

Currency mismatch

The Group allows currency mismatches to provide some flexibility in managing the balance sheet structure and to carry out foreign exchange trading, on the basis that there is sufficient liquidity in the swap market to support currency conversion in periods of stress. The Group sets limits on LCR by currency for all material currencies based on liquidity in the swap markets. These limits are approved and monitored by Asset and Liability Management Committee ("ALCO").

Additional contractual obligations

Most of the Group's derivative transactions are exchange rate contracts and interest rate contracts. Under the terms of our current collateral obligations under derivative contracts (which are ISDA compliant CSA contracts), in the event of one-notch and two-notch downgrade in credit ratings, the additional collateral required to post is immaterial.

A summary of the Group's current policies and practices for the management of liquidity and funding risk is set out in "Liquidity and funding risk" section on pages 69 to 73 of the Group's 2018 Annual Report.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

The following table sets out the required disclosure items under the Liquidity Coverage Ratio Standard Disclosure Template as specified by the HKMA. Number of data points used in calculating the average value of the LCR and related components set out in this table for the quarter ended on 31 December 2018 was 75.

Table 52: LIQ1 – Liquidity coverage ratio – for category 1 institution

		Quarter ended 31 Dec 2018 (75 data points)	
		a	b
		Unweighted value (average) HK\$m	Weighted value (average) HK\$m
Basis of disclosure: consolidated			
A	High quality liquid assets		
1	Total high quality liquid assets ("HQLA")		293,081
B	Cash outflows		
2	Retail deposits and small business funding, of which:	830,812	67,927
3	<i>Stable retail deposits and stable small business funding</i>	216,489	6,495
4	<i>Less stable retail deposits and less stable small business funding</i>	614,323	61,432
4a	<i>Retail term deposits and small business term funding</i>	-	-
5	Unsecured wholesale funding (other than small business funding) and debt securities and prescribed instruments issued by the institution, of which:	267,026	114,590
6	<i>Operational deposits</i>	57,458	13,594
7	<i>Unsecured wholesale funding (other than small business funding) not covered in Row 6</i>	209,556	100,984
8	<i>Debt securities and prescribed instruments issued by the institution and redeemable within the LCR period</i>	12	12
9	Secured funding transactions (including securities swap transactions)		-
10	Additional requirements, of which:	82,868	11,902
11	<i>Cash outflows arising from derivative contracts and other transactions, and additional liquidity needs arising from related collateral requirements</i>	3,543	3,543
12	<i>Cash outflows arising from obligations under structured financing transactions and repayment of funding obtained from such transactions</i>	1,092	1,092
13	<i>Potential drawdown of undrawn committed facilities (including committed credit facilities and committed liquidity facilities)</i>	78,233	7,267
14	Contractual lending obligations (not otherwise covered in Section B) and other contractual cash outflows	20,756	20,756
15	Other contingent funding obligations (whether contractual or non-contractual)	409,593	1,717
16	Total cash outflows		216,892
C	Cash inflows		
17	Secured lending transactions (including securities swap transactions)	1,021	-
18	Secured and unsecured loans (other than secured lending transactions covered in Row 17) and operational deposits placed at other financial institutions	103,921	60,092
19	Other cash inflows	25,903	16,470
20	Total cash inflows	130,845	76,562
D	Liquidity coverage ratio (adjusted value)		
21	Total HQLA		293,081
22	Total net cash outflows		140,330
23	LCR (%)		209.1%

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Table 53: LIQ2 – Net stable funding ratio – for category 1 institution

Basis of disclosure: consolidated		Quarter ended 31 Dec 2018				
		Unweighted value by residual maturity				
		No specified term to maturity HK\$m	<6 months or repayable on demand HK\$m	6 months to < 12 months HK\$m	12 months or more HK\$m	Weighted amount HK\$m
A. Available stable funding ("ASF") item						
1	Capital:	142,760	-	-	-	142,760
2	Regulatory capital	142,760	-	-	-	142,760
2a	Minority interests not covered by row 2	-	-	-	-	-
3	Other capital instruments	-	-	-	-	-
4	Retail deposits and small business funding:	-	854,080	-	-	779,462
5	Stable deposits		215,802	-	-	205,012
6	Less stable deposits		638,278	-	-	574,450
7	Wholesale funding:	-	358,517	10,619	903	152,301
8	Operational deposits		57,393	-	-	28,696
9	Other wholesale funding	-	301,124	10,619	903	123,605
10	Liabilities with matching interdependent assets	-	-	-	-	-
11	Other liabilities:	18,584	35,983	218	2,014	2,123
12	Net derivative liabilities	-				
13	All other funding and liabilities not included in the above categories	18,584	35,983	218	2,014	2,123
14	Total ASF					1,076,646
B. Required stable funding ("RSF") item						
15	Total HQLA for NSFR purposes		340,594			8,800
16	Deposits held at other financial institutions for operational purposes	-	-	-	-	-
17	Performing loans and securities:	39,900	267,986	95,085	588,222	627,496
18	Performing loans to financial institutions secured by Level 1 HQLA	-	-	-	-	-
19	Performing loans to financial institutions secured by non-Level 1 HQLA and unsecured performing loans to financial institutions	8	73,296	1,046	6,798	18,324
20	Performing loans, other than performing residential mortgage, to non-financial corporate clients, retail and small business customers, sovereigns, the Monetary Authority for the account of the Exchange Fund, central banks and PSEs, of which:	37,018	163,153	77,076	316,944	420,421
21	With a risk-weight of less than or equal to 35% under the STC approach	13	5,165	339	2,741	4,531
22	Performing residential mortgages, of which:	-	6,463	6,224	253,652	178,829
23	With a risk-weight of less than or equal to 35% under the STC approach	-	5,374	5,298	215,591	145,470
24	Securities that are not in default and do not qualify as HQLA, including exchange-traded equities	2,874	25,074	10,739	10,828	9,922
25	Assets with matching interdependent liabilities	-	-	-	-	-
26	Other assets:	69,052	18,572	49	1,113	59,386
27	Physical traded commodities, including gold	5,257				4,469
28	Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs	1,019				866
29	Net derivative assets	460				460
30	Total derivative liabilities before deduction of variation margin posted	3,441				N/A
31	All other assets not included in the above categories	58,875	18,572	49	1,113	53,591
32	Off-balance sheet items			487,873		3,407
33	Total RSF					699,089
34	Net Stable Funding Ratio (%)					154.0%

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Table 53: LIQ2 – Net stable funding ratio – for category 1 institution (continued)

Basis of disclosure: consolidated		Quarter ended 30 Sep 2018				
		Unweighted value by residual maturity				
		No specified term to maturity HK\$m	<6 months or repayable on demand HK\$m	6 months to < 12 months HK\$m	12 months or more HK\$m	Weighted amount HK\$m
A. Available stable funding (“ASF”) item						
1	Capital:	140,253	-	-	-	140,253
2	Regulatory capital	140,253	-	-	-	140,253
2a	Minority interests not covered by row 2	-	-	-	-	-
3	Other capital instruments	-	-	-	-	-
4	Retail deposits and small business funding:	-	826,271	-	-	754,445
5	Stable deposits		216,026	-	-	205,225
6	Less stable deposits		610,245	-	-	549,220
7	Wholesale funding:	-	347,088	5,933	791	141,192
8	Operational deposits		55,056	-	-	27,528
9	Other wholesale funding	-	292,032	5,933	791	113,664
10	Liabilities with matching interdependent assets	-	-	-	-	-
11	Other liabilities:	19,965	17,583	298	1,996	2,145
12	Net derivative liabilities	-				
13	All other funding and liabilities not included in the above categories	19,965	17,583	298	1,996	2,145
14	Total ASF					1,038,035
B. Required stable funding (“RSF”) item						
15	Total HQLA for NSFR purposes		279,098			7,322
16	Deposits held at other financial institutions for operational purposes	-	-	-	-	-
17	Performing loans and securities:	36,739	282,044	102,264	577,392	620,150
18	Performing loans to financial institutions secured by Level 1 HQLA	-	-	-	-	-
19	Performing loans to financial institutions secured by non-Level 1 HQLA and unsecured performing loans to financial institutions	8	89,991	2,255	5,934	20,568
20	Performing loans, other than performing residential mortgage, to non-financial corporate clients, retail and small business customers, sovereigns, the Monetary Authority for the account of the Exchange Fund, central banks and PSEs, of which:	33,685	155,029	82,737	309,874	410,342
21	With a risk-weight of less than or equal to 35% under the STC approach	7	4,087	85	2,767	3,878
22	Performing residential mortgages, of which:	-	6,206	6,699	247,399	179,200
23	With a risk-weight of less than or equal to 35% under the STC approach	-	4,795	4,713	187,706	126,763
24	Securities that are not in default and do not qualify as HQLA, including exchange-traded equities	3,046	30,818	10,573	14,185	10,040
25	Assets with matching interdependent liabilities	-	-	-	-	-
26	Other assets:	68,096	14,558	22	1,150	58,293
27	Physical traded commodities, including gold	4,407				3,746
28	Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs	1,093				929
29	Net derivative assets	802				802
30	Total derivative liabilities before deduction of variation margin posted	3,870				N/A
31	All other assets not included in the above categories	57,924	14,558	22	1,150	52,816
32	Off-balance sheet items			482,794		4,022
33	Total RSF					689,787
34	Net Stable Funding Ratio (%)					150.5%

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Other disclosures

Interest rate exposures in the banking book

Interest rate risk in the banking book is the risk of an adverse impact to earnings or capital due to changes in market interest rates. The risk arises from timing mismatches in the re-pricing of non-traded assets and liabilities and is the potential adverse impact of changes in interest rates on earnings and capital.

In its management of the risk, the Group aims to mitigate the impact of future interest rate movements which could reduce future net interest income, while balancing the cost of hedging activities to the current revenue stream. Monitoring the sensitivity of projected net interest income and economic value of equity ("EVE") under varying interest rate scenarios is a key part of this.

In order to manage structural interest rate risk, non-traded assets and liabilities are transferred to Balance Sheet Management ("BSM") based on their re-pricing and maturity characteristics. For assets and liabilities with no defined maturity or re-pricing characteristics, behaviouralisation is used to assess the interest rate risk profile. BSM manages the banking book interest rate positions transferred to it within the approved limits. The ALCO is responsible for monitoring and reviewing its overall structural interest rate risk position. Interest rate behaviouralisation policies have to be formulated in line with the Group's behaviouralisation policies and approved at least annually by ALCO.

Quantitative Disclosure

An EVE Sensitivity is the extent to which the EVE will change due to a pre-specified movement in interest rates, where all other economic variables are held constant. The EVE sensitivity shown below is indicative and based on scenario and assumptions prescribed by HKMA under completion instruction for the Return of Interest Rate Risk Exposures (MA(BS)12), which is completed and reported quarterly on solo basis according to MA(BS)12. The HKMA applies a standardised 200-basis-point parallel rate shock* to institutions' interest rate risk exposures to measure the EVE impact of the shock.

All the positions captured by this return are slotted into the appropriate time bands according to the earliest interest repricing date (as per MA(BS)12).

* Multiplying the net position by the corresponding weighting factors which are designed to reflect the sensitivity of positions in different time bands to an assumed parallel shift of 200 basis points throughout the time spectrum.

Table 54: IRRBB – Sensitivity analysis

		Economic value sensitivity ²			Total HK\$m
		Material Currencies			
		Hong Kong dollar ("HKD") HK\$m	US dollar ("USD") HK\$m	Chinese Renminbi ("RMB") HK\$m	
As at 31 Dec 2018	<i>Footnote</i>				
Parallel up		1,316	312	29	1,657
Total Capital Base	1				110,734

1 The Total Capital Base is as of 31 December 2018.

2 The EVE sensitivity is reported on solo basis according to the Return of Interest Rate Risk Exposures (MA(BS)12) submitted to the HKMA.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Mainland activities exposures

The analysis of mainland activities exposures is based on the categories of non-bank counterparties and the type of direct exposures defined by the HKMA "Return of Mainland Activities - (MA(BS)20)". This includes the mainland activities exposures extended by the Bank's Hong Kong offices and its wholly owned banking subsidiary in mainland China.

Table 55: Mainland activities exposures

	On-balance sheet exposure	Off-balance sheet exposure	Total exposures
As at 31 Dec 2018	HK\$m	HK\$m	HK\$m
Type of Counterparties			
1 Central government, central government-owned entities and their subsidiaries and joint ventures ("JVs")	47,176	3,212	50,388
2 Local governments, local government-owned entities and their subsidiaries and JVs	15,588	2,310	17,898
3 PRC nationals residing in Mainland China or other entities incorporated in Mainland China and their subsidiaries and JVs	83,426	27,289	110,715
4 Other entities of central government not reported in item 1 above	7,507	1,541	9,048
5 Other entities of local governments not reported in item 2 above	4,320	634	4,954
6 PRC nationals residing outside Mainland China or entities incorporated outside Mainland China where the credit is granted for use in Mainland China	32,408	1,571	33,979
7 Other counterparties where the exposures are considered by the reporting institution to be non-bank Mainland China exposures	14,059	417	14,476
Total	204,484	36,974	241,458
Total assets after provision	1,435,631		
On-balance sheet exposures as percentage of total assets	14.24%		

On-balance sheet exposures as percentage of total assets remained stable as compared with 30 June 2018.

International claims

The Group's country risk exposures in the table below are prepared in accordance with the HKMA "Return of International Banking Statistics - (MA(BS)21)" guidelines. International claims are on-balance sheet exposures to counterparties based on the location of the counterparties after taking into account the transfer of risk, and represent the sum of cross-border claims in all currencies and local claims in foreign currencies.

The table shows claims on individual countries and territories or areas, after recognised risk transfer, amounting to not less than 10% of the Group's total international claims.

Table 56: International claims

	Banks	Official Sector	Non Bank Financial Institution	Non-Financial Private Sector	Others	Total
As at 31 Dec 2018	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Developed countries	47,929	46,164	14,222	47,922	-	156,237
Offshore centres	4,442	10,482	6,099	112,449	-	133,472
of which : Hong Kong SAR	3,118	1,339	5,457	95,631	-	105,545
Developing Asia and Pacific	79,487	11,747	9,419	75,359	-	176,012
of which : China	55,209	11,678	8,343	68,138	-	143,368

At 31 December 2018, only claims on Hong Kong SAR and China were the individual countries and territories or areas, which were not less than 10% of the Group's total international claims.

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Foreign exchange exposure

The Group's foreign exchange exposures mainly comprise foreign exchange dealing by Global Markets and currency exposures originated by its banking business. The latter are transferred to Global Markets where they are centrally managed within foreign exchange position limits approved by the Group's Chief Risk Officer, noting the support of RMM. The net options position is calculated on the basis of delta-weighted positions of all foreign exchange options contracts.

The Group's structural foreign exchange exposure, monitored using sensitivity analysis, represents the Group's foreign currency investments in subsidiaries, branches and associates, and the fair value of the Group's certain long-term foreign currency equity investments. The Group's structural foreign exchange exposures are managed by the Group's ALCO with the primary objective of ensuring, where practical, that the Group's and the Bank's capital ratios are largely protected from the effect of changes in exchange rates.

The Group's foreign exchange exposures in the table below is prepared in accordance with the HKMA "Return of Foreign Currency Position - (MA(BS)6)".

At 31 December 2018, the USD, RMB and New Zealand dollar ("NZD") were the currencies in which the Group had non-structural foreign currency positions that were not less than 10% of the total net position in all foreign currencies. The Group also had a RMB structural foreign currency position, which was not less than 10% of the total net structural position in all foreign currencies.

The table below summarise the net structural and non-structural foreign currency positions of the Group.

Table 57: Foreign exchange exposure

	USD HK\$m	RMB HK\$m	NZD HK\$m	Other foreign currencies HK\$m	Total foreign currencies HK\$m
As at 31 Dec 2018					
Non-structural position					
Spot assets	188,061	106,361	1,973	114,479	410,874
Spot liabilities	(197,161)	(109,797)	(4,345)	(67,537)	(378,840)
Forward purchases	360,739	132,550	4,122	25,888	523,299
Forward sales	(349,362)	(130,604)	(1,614)	(72,687)	(554,267)
Net options position	110	(149)	(29)	30	(38)
Net long/(short) non-structural position	2,387	(1,639)	107	173	1,028
Structural position	-	14,755	-	1,212	15,967

BANKING DISCLOSURE STATEMENT (unaudited) (continued)

Other information

Abbreviations

A		J	
AI	Authorised institution	JCCyB	Jurisdictional countercyclical capital buffer
ALCO	Asset and Liability Management Committee	JVs	Joint ventures
ASF	Available stable funding	L	
ATI	Additional tier 1	LCR	Liquidity coverage ratio
AVAs	Additional valuation adjustments	LGD	Loss given default
B		LR	Leverage ratio
Bank	Hang Seng Bank Limited	LTA	Look through approach
BCBS	Basel Committee on Banking Supervision	M	
BCR	Banking (Capital) Rules	MBA	Mandate-based approach
BDR	Banking (Disclosure) Rules	MOC	Model Oversight Committee
BLR	Banking (Liquidity) Rules	MSRs	Mortgage servicing rights
BSC	Basic approach	N	
BSM	Balance Sheet Management	N/A	Not applicable
C		NBFI	Non-Bank Financial Institution
CCF	Credit conversion factor	NSFR	Net stable funding ratio
CCP	Central counterparty	NZD	New Zealand dollar
CCR	Counterparty credit risk	O	
CCyB	Countercyclical capital buffer	OBS	Off-balance sheet
CEM	Current exposure method	OF	Object finance
CET1	Common equity tier 1	OTC	Over-the-counter
CF	Commodities finance	P	
CIS	Collective investment scheme	P&L	Profit and loss
CRC	Comprehensive risk charge	PD	Probability of default
CRM	Credit risk mitigation	PF	Project finance
CSA	Credit support annex	PFE	Potential future exposure
CVA	Credit valuation adjustment	PRA	Prudential Regulation Authority
D		PRC	People's Republic of China
D-SIB	Domestic systemically important authorised institution	PSE	Public sector entity
DTAs	Deferred tax assets	PVA	Prudent valuation adjustment
E		PVIF	Present value of in-force long-term insurance business
EAD	Exposure at default	Q	
ECAI	External Credit Assessment Institution	QRRE	Qualifying revolving retail exposures
EL	Expected loss	R	
EPE	Expected positive exposure	RAS	Risk Appetite Statement
EVE	Economic value of equity	RBWM	Retail Banking and Wealth Management
F		RC	Replacement cost
FBA	Fall-back approach	RMB	Chinese Renminbi
FFVA	Funding fair value adjustment	RMM	Risk Management Meeting
FX	Foreign Exchange	RNIV	Risk not in VaR
G		RSF	Required stable funding
G-SIB	Global systemically important authorised institution	RW	Risk-weight
Group	Hang Seng Bank Limited together with its subsidiaries	RWA	Risk-weighted asset/risk-weighted amount
H		S	
HK\$bn	Billions (thousands of millions) of Hong Kong dollars	SA-CCR	Standardised approach for counterparty credit risk
HK\$m	Millions of Hong Kong dollars	SEC-ERBA	Securitisation external ratings-based approach
HKAS	Hong Kong Accounting Standard	SEC-FBA	Securitisation fall-back approach
HKD	Hong Kong dollar	SEC-IRBA	Securitisation internal ratings-based approach
HKMA	Hong Kong Monetary Authority	SEC-SA	Securitisation standardised approach
HKFRS	Hong Kong Financial Reporting Standards	SFT	Securities financing transaction
Hong Kong	The Hong Kong Special Administrative Region of the People's Republic of China	SME	Small and medium-sized enterprises
HSBC	HSBC Holdings together with its subsidiary undertakings	SRW	Supervisory risk-weight
HVCRE	High-volatility commercial real estate	STC	Standardised (credit risk) approach
HQLA	High quality liquid assets	STM	Standardised (market risk) approach
I		U	
IMM	Internal models approach	USD	US dollar
IMM(CCR)	Internal models (counterparty credit risk) approach	V	
IPRE	Income-producing real estate	VaR	Value at risk
IRB	Internal ratings-based approach	W	
IRC	Incremental risk charge	WCMR	Wholesale Credit and Market Risk
ISDA	International Swaps and Derivatives Association		