

Banking Disclosure Statement

31 December 2021

(Unaudited)

${\bf BANKING\ DISCLOSURE\ STATEMENT\ } (unaudited)$

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Prefixes contained in the table names, where applicable, represent the reference codes of the standard disclosure templates and tables issued by the HKMA. Where applicable, RWA in tables 1, 6, 7, 13 and 14 are applied with 1.06 scaling factor, while RWA in other tables are before such application.

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 2021 Annual Report. The Group's Annual Report and the Banking Disclosure Statement, taken together, comply with both the Banking (Disclosure) Rules ('BDR') made under section 60A of the Banking Ordinance and the Financial Institutions (Resolution) (Loss-absorbing Capacity Requirements – Banking Sector) Rules ('LAC Rules') made under section 19(1) of the Financial Institutions (Resolution) Ordinance ('FIRO').

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 2021 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 22 February 2022. 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 2021 Annual Report, which include the statutory accounts, can be viewed on our website, www.hangseng.com.

The Banking Disclosure Statement

The Group's Banking Disclosure Statement at 31 December 2021 comprises information required under the framework of the Basel Committee on Banking Supervision ('BCBS'). The disclosures are made in accordance with the latest BDR and the LAC Rules issued by the HKMA.

According to the BDR and the LAC Rules, 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 and the LAC Rules. The remainder of the disclosure requirements are covered in the Group's 2021 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 2021 Annual Report:	Reference in Annual Report	Reference in Annual Report
	(Printed version)	(Text version)
- BDR Section 16FJ - LIQA : Liquidity risk management	Pages 96 to 101 and note 21 on pages 202 to 204	Pages 101 to 105 and note 21 on pages 227 to 228
BDR Section 16J - The Group's definition of 'Impaired' and 'Renegotiated'	Note 2(j) on pages 182 to 186	Note 2(j) on pages 203 to 208
and the methods adopted for determining impairments	Note 2(j) oii pages 182 to 180	Note 2(1) oil pages 203 to 208
- BDR Sections 16ZS, 16ZT, 16ZU, 16ZV - Remuneration	0	Pages 141 to 142, Pages 144 to
	134	146
– BDR Section 44 - Assets used as security	Note 29 on page 209	Note 29 on pages 233 to 234
- BDR Section 46 - The general disclosure of the major business activities	Note 4 on page 192 and note 20	Note 4 on pages 216 to 217 and
and product lines	on pages 199 to 202	note 20 on pages 223 to 226
- BDR Section 52 - Corporate governance	Pages 120 to 149	Pages 128 to 166

Loss-absorbing capacity disclosures

The basis of calculating the Group's loss-absorbing capacitry ('LAC') and risk-weighted asset ('RWA') is in accordance with the LAC Rules. The disclosures are made in accordance with the standard disclosure templates as issued by the HKMA.

Table 1: KM1 – Key prudential ratios

		-					
			a	b	c	d	e
		_			At		
			31 Dec	30 Sep	30 Jun	31 Mar	31 Dec
	F	Footnotes	2021	2021	2021	2021	2020
	Regulatory capital (HK\$m)	1					
1	Common Equity Tier 1 ('CET1')		116,599	116,583	116,224	117,488	118,609
2	Tier 1		128,343	128,327	127,968	129,232	130,353
3	Total capital		138,758	139,061	139,010	139,806	141,070
	RWA (HK\$m)	1					
4	Total RWA		734,128	713,496	734,532	707,658	705,528
	Risk-based regulatory capital ratios (as a percentage of RWA)	1					
5	CET1 ratio (%)		15.9	16.3	15.8	16.6	16.8
6	Tier 1 ratio (%)		17.5	18.0	17.4	18.3	18.5
7	Total capital ratio (%)		18.9	19.5	18.9	19.8	20.0
	Additional CET1 buffer requirements (as a percentage of RWA)	1					
8	Capital conservation buffer requirement (%)		2.500	2.500	2.500	2.500	2.500
9	Countercyclical capital buffer ('CCyB') requirement (%)	2	0.799	0.811	0.821	0.824	0.829
10	Higher loss absorbency requirements (%)						
	(applicable only to Global systemically important authorised institution ('C						
	SIBs') or Domestic systemically important authorised institution ('D-SIBs'	"))	1.000	1.000	1.000	1.000	1.000
11	Total authorised institution ('AI')-specific CET1 buffer requirements (%)		4.299	4.311	4.321	4.324	4.329
12	CET1 available after meeting the AI's minimum capital requirements (%)		10.9	11.5	10.9	11.8	12.0
	Basel III leverage ratio	3					
13	Total leverage ratio ('LR') exposure measure (HK\$m)		1,704,064	1,662,016	1,679,783	1,620,143	1,641,358
14	LR (%)		7.5	7.7	7.6	8.0	7.9
	Liquidity Coverage Ratio ('LCR')	4					
15	Total high quality liquid assets ('HQLA') (HK\$m)		369,454	360,010	373,629	394,118	401,898
16	Total net cash outflows (HK\$m)		193,384	177,733	174,649	194,172	194,202
17	LCR (%)		191.8	203.2	214.4	204.0	207.8
	Net Stable Funding Ratio ('NSFR')	5					
18	Total available stable funding (HK\$m)		1,169,638	1,145,297	1,151,904	1,146,675	1,165,359
19	Total required stable funding (HK\$m)		793,333	781,367	785,840	762,141	762,106
20	NSFR (%)		147.4	146.6	146.6	150.5	152.9
							

¹ 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 - (MA(BS)3)' return submitted to the HKMA on a consolidated basis under the requirements of section 3C(1) of the Banking (Capital) Rules ('BCR').

² The jurisdictional CCyB of Hong Kong used in the calculation of CCyB requirement was 1.0% since 31 March 2020. The jurisdictional CCyB of other countries used in the calculation of the CCyB requirement ranged from 0% to 1.0% at 31 December 2021.

³ The Basel III leverage ratios are disclosed in accordance with the information contained in the 'Leverage Ratio - (MA(BS)27)' return submitted to the HKMA under the requirements specified in Part 1C of the BCR.

⁴ The LCRs 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 - (MA(BS)1E)' 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 - (MA(BS)26)' return submitted to the HKMA under the requirements specified in rule 11(1) of the BLR.

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.

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 49 of the Group's 2021 Annual Report*. The measurement and management of principal risks facing the Group is described on pages 58 to 60 of the Group's 2021 Annual Report*.

Risk culture

We have long recognised the importance of a strong risk culture. Our risk culture is reinforced by HSBC Values. 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. The fostering of a strong risk culture is a key responsibility of our senior executives.

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.

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.

We use a defined executive risk goverance structure to 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 pages 50 to 52 of the Group's 2021 Annual Report*. Details on the Group's overarching risk appetite are set out in the global risk appetite framework.

Stress testing

The Group operates a wide-ranging stress testing programme that supports our risk management and capital planning. It includes execution of stress tests mandated by our regulators. 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. As well as taking part in regulatory driven stress tests, we conduct our own internal stress tests.

Stress test results are reported, where appropriate, to the RMM and the Group's Risk Committee which oversees the Group's stress testing programme.

Annual Report (Printed version) Annual Report (Text version)

 Page 49
 Page 39

 Pages 50 to 52
 Pages 41 to 44

 Pages 58 to 60
 Pages 54 to 58

^{*} Refers to printed version. The page reference of Annual Report (text version) is as follows:

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 policy, monitoring risk profiles and forward-looking risk identification and management. The Group's Risk function is made up of sub-functions covering financial and non-financial risks to our operations. They are independent from business functions in order to provide challenge, appropriate oversight and 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.

Regulatory reporting processes and controls

The quality of regulatory reporting remains a key priority for management and regulators. We are progressing with a comprehensive programme to strengthen our processes, improve consistency, and enhance controls on various aspects of regulatory reporting.

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. 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 the development and management of models, including those for risk rating, scoring, economic capital and stress testing models covering different risk types and business segments. The analytics functions 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 internal ratings-based (TRB') approaches.

The HSBC Group Model Risk Committee ('MRC') is the primary committee responsible for the oversight of Model Risk within HSBC Group. It serves an important role in providing strategic direction on the management of models and their associated risks to HSBC's businesses globally and is an essential element of the governance structure for model risk management. The MRC is supported by model oversight forums ('MOFs') operating within HSBC Group which are responsible for model risk management within their functional areas, including wholesale credit risk, market risk, retail risk, and finance.

Models are also subject to an independent validation process and governance oversight by the Model Risk Management team within HSBC Global Risk. The team provides robust challenge to the modelling approaches used across the HSBC Group, including the Bank, and ensures that the performance of those models is transparent and that their limitations are visible to key stakeholders. Information on key developments of model risk governance for the Group during the year can be found on page 111 of the Group's 2021 Annual Report*.

^{*} Refers to printed version. The page reference of Annual Report (text version) is page 119.

Linkage to the 2021 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 2021 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 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 present value of in-force long-term insurance business ("PVIF") asset of HK\$22,363m and the related deferred tax liability of HK\$3,690m are only recognised on consolidation in financial reporting and are therefore not included in the asset or equity positions for the stand-alone entities presented in the below table.

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 2021.

For all subsidiaries included in both the accounting and regulatory scope of consolidation, the same consolidation methodology is applied at 31 December 2021.

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 2021, the effect of this requirement is to restrict the amount of reserves which can be distributed to shareholders by HK\$441m.

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 2021.

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

		As at 31 D	ec 2021
	Principal activities	Total assets* HK\$m	Total equity* HK\$m
Hang Seng Investment Management Ltd	Fund management	328	297
Hang Seng Investment Services Ltd	Provision of investment commentaries	9	9
Hang Seng Securities Ltd	Stockbroking	2,033	703
Hang Seng Insurance Co. Ltd and its subsidiaries	Retirement benefits and life assurance	184,980	15,727
Hang Seng Qianhai Fund Management Co. Ltd	Fund raising, fund sales and asset management	307	283

^{*} 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 ('IRB') approach to calculate its credit risk for the majority of its non-securitisation exposures. For counterparty credit risk, the Group replaces the current exposure method with standardised (counterparty credit risk) ('SA-CCR') approach to calculate its default risk exposures starting from 30 June 2021. For market risk, the Group uses an internal models ('IMM') 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) ('STM') approach for calculating other market risk positions. For operational risk, the Group uses the standardised (operational risk) ('STO') approach to calculate its operational risk.

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' 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			
Table 5. CC2 – Reconcination of regulatory capital to balance sheet	a	b	c
<u>L</u>	Balance sheet	Under	Cross-referenced
	as in published	regulatory scope of	to Definition of
	financial statements	consolidation	Capital
	As at 31 Dec 2021	As at 31 Dec 2021	Components
	HK\$m	HK\$m	
Assets			
Cash and balances at central banks	16,896	16,896	
Trading assets	47,433	47,412	
Derivative financial instruments	13,224	13,128	
Financial assets designated and otherwise mandatorily measured at fair value			
through profit or loss	31,326	102	
Reverse repurchase agreements – non-trading	18,821	25,910	
Placings with and advances to banks	72,493	66,886	
Loans and advances to customers	997,397	998,312	
of which: Impairment allowances eligible for inclusion in Tier 2 capital		329	(1)
Financial investments	500,386	370,880	
Investment in subsidiaries	-	7,344	(2)
Subordinated loans to subsidiaries	-	1,045	(2)
Interest in associates	2,341		
Investment properties	9,545	6,461	
Premises, plant and equipment	31,205	31,190	(2)
Intangible assets	25,486	2,791	(3)
Other assets of which: Deferred tax assets ('DTAs')	53,632	34,628	(4)
Total assets	1,820,185	1,622,985	(4)
Liabilities	1,020,103	1,022,703	
Deposits from banks	5,333	5,333	
Current, savings and other deposit accounts	1,230,216	1,233,334	
Repurchase agreements – non-trading	16,592	14,120	
Trading liabilities	44,291	44,291	
Derivative financial instruments	12,252	12,279	
of which: Gains and losses due to changes in own credit risk on fair valued liabilities	12,202	8	(5)
Financial liabilities designated at fair value	27,399	27,017	
of which: Gains and losses due to changes in own credit risk on fair valued liabilities	,	(2)	(6)
Certificates of deposit and other debt securities in issue	81,567	81,567	
Other liabilities	31,179	20,479	
Liabilities under insurance contracts	154,551	-	
Current tax liabilities	603	155	
Deferred tax liabilities	7,302	3,531	
of which: Deferred tax liabilities related to intangible assets		432	(7)
Subordinated liabilities	24,484	24,484	
Total liabilities	1,635,769	1,466,590	
Equity			
Share capital	9,658	9,658	(8)
Retained profits	140,100	112,207	(9)
of which: Revaluation gains of investment properties		6,222	(10)
Regulatory reserve for general banking risks		441	(11)
Regulatory reserve eligible for inclusion in Tier 2 capital		53	(12)
Valuation adjustments		126	(13)
Other equity instruments	11,744	11,744	(14)
Other reserves	22,830	22,786	(15)
of which: Cash flow hedge reserve		(2)	(16)
Revaluation reserve of properties Total characteristics	104 222	18,395	(1/)
Total shareholders' equity Non-controlling interests	184,332 84	156,395	
Total equity	184,416	156,395	
Total equity and liabilities	1,820,185	1,622,985	
roun equity and natimites	1,020,105	1,044,705	

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
				Carry	ing values of i	tems:	
		Carrying					not subject to
	Carrying	values					capital
	values						require-
	as reported	of		subject to	subject to		ments or
	in published	regulatory		counterparty	the securi-	subject to	subject to
	financial	con-	credit risk	credit risk		market risk	deduction
A (21 D 2021	statements	solidation	framework	framework	framework		from capital
As at 31 Dec 2021 Footnote	es HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Assets	16.006	16.006	16.006				
Cash and balances at central banks	16,896	16,896	16,896	-	-		
Trading assets	47,433	47,412	-	-	-	47,412	
Derivative financial instruments	1 13,224	13,128	-	12,887	-	13,128	241
Financial assets designated and otherwise							
mandatorily measured at fair value through							
profit or loss	31,326	102	25	77	-	-	
Reverse repurchase agreements – non-trading	18,821	25,910	-	25,910	-	-	-
Placings with and advances to banks	72,493	66,886	66,886	-	-	-	<u>-</u>
Loans and advances to customers	997,397	998,312	998,312	-	-	-	<u>-</u>
Financial investments	500,386	370,880	370,880	-	-	-	<u>-</u>
Investment in subsidiaries	-	7,344	7,344	-	-	-	-
Subordinated loans to subsidiaries	-	1,045	-	-	-	-	1,045
Interest in associates	2,341	-	-	-	-	-	-
Investment properties	9,545	6,461	6,461	-	-	-	-
Premises, plant and equipment	31,205	31,190	31,190	-	-	-	-
Intangible assets	2 25,486	2,791	-	-	-	-	2,359
Other assets 2,	<i>3</i> 53,632	34,628	33,379	1,159	-	-	90
Total assets	1,820,185	1,622,985	1,531,373	40,033	-	60,540	3,735
Liabilities				•			•
Deposits from banks	5,333	5,333	-	-	-	_	5,333
Current, savings and other deposit accounts	1,230,216	1,233,334	-	-	-	_	1,233,334
Repurchase agreements – non-trading	16,592	14,120	-	14,120	-	-	
Trading liabilities	44,291	44,291	-	-	-	44,291	
Derivative financial instruments	1 12,252	12,279	-	12,279	-		
Financial liabilities designated at fair value	27,399	27,017	_	,	_	27	26,990
Certificates of deposit and other debt	2.,055	2.,01.					20,550
securities in issue	81,567	81,567	_	_	_	-	81,567
Other liabilities	3 31,179	20,479	-	1,938	-	-	18,541
Liabilities under insurance contracts	154,551	-	_	-	_	-	-
Current tax liabilities	603	155	-	-	_	-	155
Deferred tax liabilities	7,302	3,531	_	_	-	-	3,531
Subordinated liabilities	24,484	24,484	_		-	-	24,484
Total liabilities	1,635,769	1,466,590		28,337		56,597	1,393,935
- com andimens	1,000,107	1,700,270	-	20,337	-	20,271	1,070,700

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 marked 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).

 $^{2 \}quad \textit{The assets disclosed in column (g) are net of any associated deferred tax liability in accordance with HKMA requirement.}$

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.

Table 5: L12 - Main sources of differences between regulatory exposure amounts and carrying values in financial statements

		Г	a	b	c	d	e
		L		Ü	Items su		
As	at 31 Dec 2021	Footnotes	Total HK\$m	credit risk framework HK\$m	securitisation framework HK\$m	counterparty credit risk framework HK\$m	market risk framework HK\$m
1	Asset carrying value amount under scope of regulatory consolidation (as per template LI1)	1	1,619,250	1,531,373	-	40,033	60,540
2	Liabilities carrying value amount under regulatory scope of consolidation (as per template LI1)	2	72,655		-	28,337	56,597
3	Total net amount under regulatory scope of consolidation		1,546,595	1,531,373	-	11,696	3,943
4	Off-balance sheet amounts and potential future exposures for counterparty risk		547,321	168,039	-	16,361	_
5	Differences due to impairments		6,674	6,674	-	-	-
6	Differences due to recognised collateral		(11,336)	(11,336)	-	-	-
7	Differences arising from off-balance sheet amounts recognised in regulatory exposures		(379,282)	-	-	-	_
8	Differences due to a factor α used for computing default						
	risk exposure and application of credit risk mitigation		4,202	-	-	4,202	_
9	Differences arising from capital deductions		(432)	-	-	-	-
10	Exposure amounts considered for regulatory purposes		1,713,742	1,694,750	-	32,259	3,943

- 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 include undrawn portions of committed facilities, various trade finance commitments and guarantees. We apply credit conversion factors ('CCF') to these items and add potential future exposures ('PFE') for counterparty credit risk.

Differences due to impairments

The carrying value of assets is net of impairments. From the regulatory perspective, 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 a factor α used for computing default risk exposure and application of credit risk mitigation

Under the SA-CCR approach, a factor α of 1.4 is applied to the sum of replacement cost and PFE in arriving at the default risk exposure. Differences also 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 that differs 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, administration costs, unearned credit spreads and investing and funding costs.

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. Table 50 presents further information on the prudent valuation adjustment.

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		
Table	70. CC1 – Composition of regulatory capital	a	b
			Cross-referenced
			to Table 3
			Source based on
			reference
			numbers/letters of
			the balance sheet
		Component of	under the
	A	regulatory capital	regulatory scope of consolidation
	As at 31 Dec 2021 CET1 capital: instruments and reserves	HK\$m	consolidation
1	Directly issued qualifying CET1 capital instruments plus any related share premium	9,658	(8)
2	Retained earnings	112,207	(9)
3	Disclosed reserves	22,786	(15)
4	Directly issued capital subject to phase-out arrangements from CET1 (only applicable to non-joint	22,700	(13)
7	stock companies)	Not applicable	Not applicable
5	Minority interests arising from CET1 capital instruments issued by consolidated bank subsidiaries	Not applicable	тот аррисанс
5	and held by third parties (amount allowed in CET1 capital of the consolidation group)	_	
6	CET1 capital before regulatory deductions	144,651	
	CET1 capital: regulatory deductions		
7	Valuation adjustments	126	(13)
8	Goodwill (net of associated deferred tax liability)	-	, ,
9	Other intangible assets (net of associated deferred tax liabilities)	2,359	(3) - (7)
10	Deferred tax assets (net of associated deferred tax liabilities)	90	(4)
11	Cash flow hedge reserve	(2)	(16)
12	Excess of total EL amount over total eligible provisions under the IRB approach	415	
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	6	(5) + (6)
15	Defined benefit pension fund net assets (net of associated deferred tax liabilities)	-	
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 LAC investments in CET1 capital instruments issued by financial sector entities that are		
10	outside the scope of regulatory consolidation (amount above 10% threshold)	-	
19	Significant LAC 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
$\frac{20}{21}$	Deferred tax assets arising from temporary differences (net of associated deferred tax liabilities)	Not applicable Not applicable	Not applicable Not applicable
22	Amount exceeding the 15% threshold	Not applicable	Not applicable
23	of which: significant investments in the ordinary share of financial sector entities	Not applicable	Not applicable
24	of which: mortgage servicing rights	Not applicable	Not applicable
25	of which: deferred tax assets arising from temporary differences	Not applicable	Not applicable
26	National specific regulatory adjustments applied to CET1 capital	25,058	The state of the s
26a	Cumulative fair value gains arising from the revaluation of land and buildings (own-use and		
	investment properties)	24,617	(10) + (17)
26b	Regulatory reserve for general banking risks	441	(11)
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	28,052	
29	CET1 capital	116,599	

Toble	e 6: CC1 – Composition of regulatory capital (continued)		
rabic	co: CC1 – Composition of regulatory capital (continuea)	a	b
		u	Cross-referenced
			to Table 3
			g , ,
			Source based on reference
			numbers/letters of
			the balance sheet
		Component of	under the
		regulatory capital	regulatory scope of
		HK\$m	consolidation
	AT1 capital: instruments		
30	Qualifying AT1 capital instruments plus any related share premium	11,744	
31	of which: classified as equity under applicable accounting standards	11,744	(14)
32	of which: classified as liabilities under applicable accounting standards	-	
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		
25	allowed in AT1 capital of the consolidation group)	-	
35	of which: AT1 capital instruments issued by subsidiaries subject to phase-out arrangements	11.744	
36	AT1 capital before regulatory deductions	11,744	
27	AT1 capital: regulatory deductions	-	
37 38	Investments in own AT1 capital instruments Paciprocal cross holdings in AT1 capital instruments	-	
39	Reciprocal cross-holdings in AT1 capital instruments Insignificant LAC investments in AT1 capital instruments issued by financial sector entities that are	-	
39	outside the scope of regulatory consolidation (amount above 10% threshold)	_	
40	Significant LAC investments in AT1 capital instruments issued by financial sector entities that are	-	
40	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	<u>-</u>	
43	Total regulatory deductions to AT1 capital		
44	AT1 capital	11,744	
45	Tier 1 capital (T1 = CET1 + AT1)	128,343	
	Tier 2 capital: instruments and provisions	120,010	
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	of which: capital instruments issued by subsidiaries subject to phase-out arrangements	-	
50	Collective provisions and regulatory reserve for general banking risks eligible for inclusion in Tier 2		
	capital	382	(1) + (12)
51	Tier 2 capital before regulatory deductions	382	
	Tier 2 capital: regulatory deductions		
52	Investments in own Tier 2 capital instruments	-	
53	Reciprocal cross-holdings in Tier 2 capital instruments and non-capital LAC liabilities	-	
54	Insignificant LAC investments in Tier 2 capital instruments issued by, and non-capital LAC liabilities		
	of, financial sector entities that are outside the scope of regulatory consolidation (amount above 10%		
	threshold and, where applicable, 5% threshold)	-	
54a	Insignificant LAC investments in non-capital LAC liabilities of financial sector entities that are		
	outside the scope of regulatory consolidation (amount formerly designated for the 5% threshold but		
	no longer meets the conditions) (for institutions defined as 'section 2 institution' under §2(1) of Schedule 4F to BCR only)		
		-	
55	Significant LAC investments in Tier 2 capital instruments issued by financial sector entities that are		<i>(</i> C)
55	outside the scope of regulatory consolidation (net of eligible short positions)	1,045	(2)
55a	Significant LAC investments in non-capital LAC liabilities of financial sector entities that are outside the scope of regulatory consolidation (net of eligible short positions)		
56		(11,078)	
56	National specific regulatory adjustments applied to Tier 2 capital	(11,0/8)	
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	(44.0=0)	((10) ((15)) * 450
564		(11,078)	((10)+(17))*45%
56b	Regulatory deductions applied to Tier 2 capital to cover the required deductions falling within		
57	§48(1)(g) of BCR Total regulatory adjustments to Tier 2 capital	(10,033)	
58	Tier 2 capital (T2)	10,415	
59	Total regulatory capital (TC = T1 + T2)	138,758	
60	Total RWA	734,128	
		137,120	

Table	e 6: CC1 – Composition of regulatory capital (continued)		
		a	b
			Cross-referenced
			to Table 3
			Source based on
			reference
			numbers/letters of
		G	the balance sheet under the
		Component of	
		regulatory capital HK\$m	consolidation
	Capital ratios (as a percentage of RWA)	ПХфП	
61	CET1 capital ratio	15.9%	
62	Tier 1 capital ratio	17.5%	
63	Total capital ratio	18.9%	
64	Institution-specific buffer requirement (capital conservation buffer plus countercyclical capital		
0.	buffer plus higher loss absorbency requirements)	4.299%	
65	of which: capital conservation buffer requirement	2.500%	
66	of which: bank specific countercyclical capital buffer requirement	0.799%	
67	of which: higher loss absorbency requirement	1.000%	
68	CET1 (as a percentage of RWA) available after meeting minimum capital requirements	10.9%	
-	National minima (if different from Basel 3 minimum)	10.5 / 0	
69	National CET1 minimum ratio	Not applicable	Not applicable
70	National Tier 1 minimum ratio	Not applicable	Not applicable
71	National Total capital minimum ratio	Not applicable	Not applicable
	Amounts below the thresholds for deduction (before risk weighting)	1 tot applicasie	T tot application
72	Insignificant LAC investments in CET1, AT1 and Tier 2 capital instruments issued by, and non-		
	capital LAC liabilities of, financial sector entities that are outside the scope of regulatory		
	consolidation	4,982	
73	Significant LAC investments in CET1 capital instruments issued by financial sector entities that are	.,,,,,	
	outside the scope of regulatory consolidation	7,639	
74	Mortgage servicing rights (net of associated deferred tax liabilities)	Not applicable	Not applicable
75	Deferred tax assets arising from temporary differences (net of associated deferred tax liabilities)	Not applicable	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 Basic ('BSC')		
	approach, or the Standardised (credit risk) ('STC') approach and SEC-ERBA, SEC-SA and SEC-		
	FBA (prior to application of cap)	382	
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	997	
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)	-	
79	Cap for inclusion of provisions in Tier 2 under the IRB approach and SEC-IRBA	3,519	
	Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2018		
80	Current cap on CET1 capital instruments subject to phase-out arrangements	Not applicable	Not applicable
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	Not applicable	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)	-	

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

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	Basel III basis
	As at 31 Dec 2021	HK\$m	HK\$m
10	Deferred tax assets (net of associated deferred tax liabilities)	90	8

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.

Countercyclical capital buffer ratio

The 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 7: CCyB1 – Geographical distribution of credit exposures used in countercyclical capital buffer

	As at 31 Dec 2021	[a	c	d	e
	Geographical breakdown by Jurisdiction ('J')	Footnotes	Applicable JCCyB ratio in effect %	CCyB ratio	AI-specific CCyB ratio %	CCyB amount
1	Hong Kong SAR	1	1.000	494,281		
2	Norway		1.000	1		
	Sum	2		494,282		
	Total	3		618,914	0.799	5,866

¹ The jurisdictional CCyB of Hong Kong used in the calculation of CCyB requirement was 1.0% since 31 March 2020. The jurisdictional CCyB of other countries used in the calculation of the CCyB requirement ranged from 0% to 1.0% at 31 December 2021.

² This represents the sum of RWA for the private sector credit exposures in jurisdictions with a non-zero countercyclical buffer rate.

³ 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).

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.

A	Tab	le 8: LR2 – Leverage ratio		
Page			a	b
Non-balance sheet exposures (excluding those arising from derivative contracts and securities financing transactions (SFTs'), but including collateral) 1,580,253 1,541,626 2 Less: Asset amounts deducted in determining Tier I capital 28,049 (28,109)				
On-balance sheet exposures (excluding those arising from derivative contracts and securities financing transactions (SFITs), but including collateral) (28,049) (28,109) Total on-balance sheet exposures (excluding derivative contracts and SFTs) (28,049) (28,109) Total on-balance sheet exposures (excluding derivative contracts and SFTs) (1,552,204 1,513,517) Exposures arising from derivative contracts Replacement cost associated with all derivative contracts (where applicable net of eligible cash variation margin and/or with bilateral netting) (6,422 5,646 1) Add-on amounts for PFE associated with all derivative contracts where deducted from the balance sheet assets pursuant to the applicable accounting framework (1,513,513,513,513,513,513,513,513,513,51			2021	2021
On-balance sheet exposures (excluding those arising from derivative contracts and securities financing transactions (SFTs), but including collateral) 1,580,253 1,541,626 2 Less: Asset amounts deducted in determining Tier I capital (28,049) (28,109)			HK\$m	HK\$m
transactions (SFTs'), but including collateral) 1,580,253 1,541,626 2 Less: Asset amounts deducted in determining Tier 1 capital (28,049) (28,109) 3 Total on-balance sheet exposures (excluding derivative contracts and SFTs) 1,552,204 1,513,517 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) 6,422 5,646 5 Add-on amounts for PFE associated with all derivative contracts where deducted from the balance sheet assets pursuant to the applicable accounting framework 2,5135 19,906 6 Gross-up for collateral provided in respect of dervative contracts where deducted from the balance sheet assets pursuant to the applicable accounting framework 2,62 6,622 <t< td=""><td></td><td>•</td><td></td><td></td></t<>		•		
2 Less: Asset amounts deducted in determining Tier 1 capital 3 Total on-balance sheet exposures (excluding derivative contracts and SFTs) 1,552,204 1,513,517 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) 5 Add-on amounts for PFE associated with all derivative contracts where deducted from the balance sheet assets pursuant to the applicable accounting framework 6 Gross-up for collateral provided in respect of dervative contracts 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-related derivative contracts 10 Less: Adjusted effective notional offsets and add-on deductions for written credit-related derivative contracts 11 Total exposures arising from SFTs 12 Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions 13 Less: Netted amounts of cash payables and cash receivables of gross SFT assets 14 Counterparty credit risk (CCR') exposure for SFT assets 15 Agent transaction exposures 16 Total exposures arising from SFTs 17 Off-balance sheet exposure at gross notional amount 18 Less: Adjustments for conversion to credit equivalent amounts 19 Off-balance sheet exposures 19 Off-balance sheet exposures 20 Tier 1 capital 21 Total exposures before adjustments for specific and collective provisions 21 Total exposures before adjustments for specific and collective provisions 21 Total exposures after adjustments for specific and collective provisions 21 Total exposures after adjustments for specific and collective provisions 21 Total exposures after adjustments for specific and collective provisions 22 Total exposures after adjustments for specific and collect	1			
Total on-balance sheet exposures (excluding derivative contracts and SFTs) 1,552,204 1,513,517 Exposures arising from derivative contracts		transactions ('SFTs'), but including collateral)	1,580,253	1,541,626
Exposures arising from derivative contracts	2		(28,049)	(28,109)
Replacement cost associated with all derivative contracts (where applicable net of eligible cash variation margin and/or with bilateral netting) 6,422 5,646 Add-on amounts for PFE associated with all derivative contracts 25,135 19,906 Gross-up for collateral provided in respect of dervative contracts where deducted from the balance sheet assets pursuant to the applicable accounting framework - - Less: Deductions of receivables assets for cash variation margin provided under derivative contracts - - Less: Exempted central counterparty (CCP') leg of client-cleared trade exposures - - - Adjusted effective notional amount of written credit-related derivative contracts - - - Less: Adjusted effective notional offsets and add-on deductions for written credit-related derivative contracts 31,557 25,552 Exposures arising from SFTs 2 Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions 36,543 38,670 Less: Netted amounts of cash payables and cash receivables of gross SFT assets 769 1,001 Agent transaction exposures - - Other off-balance sheet exposures 37,312 39,671 Other off-balance sheet exposures 37,312 39,671 Other off-balance sheet exposures 37,312 39,071 Other off-balance sheet exposures - Other off-balance sheet exposures - Other off-balance sheet exposures - Other off-balance sheet exposures - Other off-balance sheet exposures - Other off-balance sheet exposures -	3	Total on-balance sheet exposures (excluding derivative contracts and SFTs)	1,552,204	1,513,517
margin and/or with bilateral netting) 6,422 5,646 5 Add-on amounts for PFE associated with all derivative contracts 25,135 19,906 6 Gross-up for collateral provided in respect of dervative contracts 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-related derivative contracts - - 10 Less: Adjusted effective notional offsets and add-on deductions for written credit-related derivative contracts - - 11 Total exposures arising from derivative contracts 31,557 25,552 Exposures arising from SFTs 31,557 25,552 Exposures arising from SFTs 12 Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions 36,543 38,670 15 Agent transaction exposures - - -		Exposures arising from derivative contracts		
5 Add-on amounts for PFE associated with all derivative contracts 6 Gross-up for collateral provided in respect of dervative contracts 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-related derivative contracts 10 Less: Adjusted effective notional offsets and add-on deductions for written credit-related derivative contracts 11 Total exposures arising from derivative contracts 12 Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions 13 Less: Netted amounts of cash payables and cash receivables of gross SFT assets 14 Counterparty credit risk (°CCR') exposure for SFT assets 15 Agent transaction exposures 16 Total exposures arising from SFTs 17 Other off-balance sheet exposures 18 Less: Adjustments for conversion to credit equivalent amounts 19 Less: Adjustments for conversion to credit equivalent amounts 19 Off-balance sheet items 19 Off-balance sheet items 10 Less: Adjustments for specific and collective provisions 10 Leverage ratio	4	Replacement cost associated with all derivative contracts (where applicable net of eligible cash variation		
Gross-up for collateral provided in respect of dervative contracts where deducted from the balance sheet assets pursuant to the applicable accounting framework Less: Deductions of receivables assets for cash variation margin provided under derivative contracts Less: Exempted central counterparty (**CCP**) leg of client-cleared trade exposures Adjusted effective notional amount of written credit-related derivative contracts 10 Less: Adjusted effective notional amount of written credit-related derivative contracts 11 Total exposures arising from derivative contracts 12 Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions 13 Less: Netted amounts of cash payables and cash receivables of gross SFT assets 14 Counterparty credit risk (**CCR**) exposure for SFT assets 15 Agent transaction exposures 16 Total exposures arising from SFTs 17 Other off-balance sheet exposures 18 Jay 20 Other off-balance sheet exposures 19 Off-balance sheet exposure at gross notional amount Capital and total exposures 20 Tier 1 capital 20 Tier 1 capital 21 Less: Adjustments for conversion to credit equivalent amounts Capital and total exposures 10 Total exposures before adjustments for specific and collective provisions 11 Less: Adjustments for specific and collective provisions 12 Less: Adjustments for specific and collective provisions 13 Less: Adjustments for specific and collective provisions 14 Counterparty credit risk (**CCR**) exposures after adjustments for specific and collective provisions 15 Leverage ratio		margin and/or with bilateral netting)	6,422	5,646
assets pursuant to the applicable accounting framework Less: Deductions of receivables assets for cash variation margin provided under derivative contracts Less: Exempted central counterparty (CCP) leg of client-cleared trade exposures Adjusted effective notional amount of written credit-related derivative contracts Adjusted effective notional offsets and add-on deductions for written credit-related derivative contracts 10 Less: Adjusted effective notional offsets and add-on deductions for written credit-related derivative contracts 11 Total exposures arising from derivative contracts Exposures arising from SFTs 12 Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions 36,543 38,670 31,557 25,552 Exposures arising from SFTs 12 Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions 36,543 38,670 14 Counterparty credit risk (CCR) exposure for SFT assets 769 1,001 15 Agent transaction exposures 769 1,001 16 Total exposures arising from SFTs 37,312 39,671 Other off-balance sheet exposures 17 Off-balance sheet exposures 18 Less: Adjustments for conversion to credit equivalent amounts 4457,210 450,656 19 Off-balance sheet items 90,111 88,643 Capital and total exposures 20 Tier 1 capital 128,343 128,327 20a Total exposures before adjustments for specific and collective provisions 17,11,184 1,667,383 20b Adjustments for specific and collective provisions 1,704,064 1,662,016 Leverage ratio	5	Add-on amounts for PFE associated with all derivative contracts	25,135	19,906
Less: Deductions of receivables assets for cash variation margin provided under derivative contracts Seempted central counterparty ("CCP") leg of client-cleared trade exposures Seempted central counterparty ("CCP") leg of client-cleared trade exposures Seempted central counterparty ("CCP") leg of client-cleared trade exposures Seempted central counterparty ("CCP") leg of client-cleared trade exposures Seempted central counterparty ("CCP") leg of client-cleared trade exposures Seempted central counterparty central counterparty contracts Seempted central counterparty central ce	6	Gross-up for collateral provided in respect of dervative contracts where deducted from the balance sheet		
8 Less: Exempted central counterparty (**CCP**) leg of client-cleared trade exposures		assets pursuant to the applicable accounting framework	-	-
8 Less: Exempted central counterparty (**CCP*) leg of client-cleared trade exposures - - 9 Adjusted effective notional amount of written credit-related derivative contracts - - 10 Less: Adjusted effective notional offsets and add-on deductions for written credit-related derivative contracts - - 11 Total exposures arising from derivative contracts 31,557 25,552 Exposures arising from SFTs - - 12 Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions 36,543 38,670 13 Less: Netted amounts of cash payables and cash receivables of gross SFT assets - - - 14 Counterparty credit risk (**CCR**) exposure for SFT assets 769 1,001 15 Agent transaction exposures - - - 16 Total exposures arising from SFTs 37,312 39,671 Other off-balance sheet exposures - - - 17 Off-balance sheet exposure at gross notional amount 547,321 539,299 18 Less: Adjustments for conversion to credit equivalent amounts (457,210) (450,656) 19 <td< td=""><td>7</td><td>Less: Deductions of receivables assets for cash variation margin provided under derivative contracts</td><td>-</td><td>-</td></td<>	7	Less: Deductions of receivables assets for cash variation margin provided under derivative contracts	-	-
9 Adjusted effective notional amount of written credit-related derivative contracts 10 Less: Adjusted effective notional offsets and add-on deductions for written credit-related derivative contracts 11 Total exposures arising from derivative contracts Exposures arising from SFTs 12 Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions 36,543 38,670 14 Counterparty credit risk (*CCR*) exposure for SFT assets 15 Agent transaction exposures 16 Total exposures arising from SFTs 17 Off-balance sheet exposures 18 Less: Adjustments for conversion to credit equivalent amounts 19 Off-balance sheet exposure at gross notional amount 10 Off-balance sheet items 11 Capital and total exposures 12 Off-balance sheet items 23 Adjustments for specific and collective provisions 10 Adjustments for specific and collective provisions 10 Adjustments for specific and collective provisions 11 Total exposures after adjustments for specific and collective provisions 12 Adjustments for specific and collective provisions 13 Adjustments for specific and collective provisions 14 Counterparty credit risk (*CCR*) exposure at gross notional amount 15 Agent transaction exposures after adjustments for specific and collective provisions 16 Total exposures after adjustments for specific and collective provisions 17 Off-balance sheet items 18 Adjustments for specific and collective provisions 17 Off-balance sheet items 18 Adjustments for specific and collective provisions 17 Off-balance sheet adjustments for specific and collective provisions 17 Off-balance sheet items 18 Adjustments for specific and collective provisions 19 Off-balance sheet adjustments for specific and collective provisions 19 Off-balance sheet adjustments for specific and collective provisions 19 Off-balance sheet adjustments for specific and collective provisions 19 Off-balance sheet adjustments for specific and collective provisions 10 Off-balance sheet adjustments for specific and collective provi	8		-	-
Less: Adjusted effective notional offsets and add-on deductions for written credit-related derivative contracts	9		-	-
Total exposures arising from derivative contracts 31,557 25,552 Exposures arising from SFTs 12 Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions 36,543 38,670 13 Less: Netted amounts of cash payables and cash receivables of gross SFT assets - - 14 Counterparty credit risk (*CCR*) exposure for SFT assets 769 1,001 15 Agent transaction exposures - - 16 Total exposures arising from SFTs 37,312 39,671 Other off-balance sheet exposures 17 Off-balance sheet exposures at gross notional amount 547,321 539,299 18 Less: Adjustments for conversion to credit equivalent amounts (457,210) (450,656) 19 Off-balance sheet items 90,111 88,643 Capital and total exposures 20 Tier 1 capital 128,343 128,327 20a Total exposures before adjustments for specific and collective provisions (7,120) (5,367) 21 Total exposures after adjustments for specific and collective provis	10			
Exposures arising from SFTs 12 Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions 13 Less: Netted amounts of cash payables and cash receivables of gross SFT assets 14 Counterparty credit risk ('CCR') exposure for SFT assets 15 Agent transaction exposures 16 Total exposures arising from SFTs 17 Other off-balance sheet exposures 18 Less: Adjustments for conversion to credit equivalent amounts 19 Off-balance sheet items 10 Off-balance sheet items 20 Tier 1 capital 20 Total exposures before adjustments for specific and collective provisions 20 Adjustments for specific and collective provisions 21 Total exposures after adjustments for specific and collective provisions 22 Total exposures after adjustments for specific and collective provisions 21 Total exposures after adjustments for specific and collective provisions 22 Total exposures after adjustments for specific and collective provisions 23 Total exposures after adjustments for specific and collective provisions 24 Total exposures after adjustments for specific and collective provisions 25 Total exposures after adjustments for specific and collective provisions 26 Total exposures after adjustments for specific and collective provisions 27 Total exposures after adjustments for specific and collective provisions 28 Total exposures after adjustments for specific and collective provisions 29 Total exposures after adjustments for specific and collective provisions 20 Total exposures after adjustments for specific and collective provisions 20 Total exposures after adjustments for specific and collective provisions 20 Total exposures after adjustments for specific and collective provisions 20 Total exposures after adjustments for specific and collective provisions		contracts	-	-
12 Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions 13 Less: Netted amounts of cash payables and cash receivables of gross SFT assets 14 Counterparty credit risk ('CCR') exposure for SFT assets 15 Agent transaction exposures 16 Total exposures arising from SFTs 17 Off-balance sheet exposures 18 Less: Adjustments for conversion to credit equivalent amounts 19 Off-balance sheet items 20 Tier 1 capital 20 Total exposures before adjustments for specific and collective provisions 20 Adjustments for specific and collective provisions 21 Total exposures after adjustments for specific and collective provisions 22 Total exposures after adjustments for specific and collective provisions 21 Total exposures after adjustments for specific and collective provisions 22 Total exposures after adjustments for specific and collective provisions 23 Agent transactions 24 Agent transactions 25 Agent transaction specific and collective provisions 26 Agent transaction specific and collective provisions 27 Agent transactions are countried accounting transactions 28 Agent transaction specific and collective provisions 29 Agent transaction specific and collective provisions 20 Adjustments for specific and collective provisions 21 Total exposures after adjustments for specific and collective provisions 22 Adjustments for specific and collective provisions 23 Agent transaction specific and collective provisions 24 Agent transaction specific and collective provisions 25 Agent transaction specific and collective provisions 26 Agent transaction specific and collective provisions 27 Agent transaction specific and collective provisions 28 Agent transaction specific and countries and collective provisions 29 Agent transaction specific and countries are countries are countries and collective provisions 29 Agent transaction specific and countries are countries	11	Total exposures arising from derivative contracts	31,557	25,552
13 Less: Netted amounts of cash payables and cash receivables of gross SFT assets - - 14 Counterparty credit risk ('CCR') exposure for SFT assets 769 1,001 15 Agent transaction exposures - - 16 Total exposures arising from SFTs 37,312 39,671 Other off-balance sheet exposures 17 Off-balance sheet exposure at gross notional amount 547,321 539,299 18 Less: Adjustments for conversion to credit equivalent amounts (457,210) (450,656) 19 Off-balance sheet items 90,111 88,643 Capital and total exposures 128,343 128,327 20 Tier 1 capital 128,343 128,327 20a Total exposures before adjustments for specific and collective provisions 1,711,184 1,667,383 20b Adjustments for specific and collective provisions (7,120) (5,367) 21 Total exposures after adjustments for specific and collective provisions 1,704,064 1,662,016 Leverage ratio		Exposures arising from SFTs	·	
14 Counterparty credit risk ('CCR') exposure for SFT assets 769 1,001 15 Agent transaction exposures - - 16 Total exposures arising from SFTs 37,312 39,671 Other off-balance sheet exposures 17 Off-balance sheet exposure at gross notional amount 547,321 539,299 18 Less: Adjustments for conversion to credit equivalent amounts (457,210) (450,656) 19 Off-balance sheet items 90,111 88,643 Capital and total exposures 128,343 128,327 20 Tier 1 capital 128,343 128,327 20a Total exposures before adjustments for specific and collective provisions 1,711,184 1,667,383 20b Adjustments for specific and collective provisions (7,120) (5,367) 21 Total exposures after adjustments for specific and collective provisions 1,704,064 1,662,016 Leverage ratio	12	Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions	36,543	38,670
15 Agent transaction exposures 16 Total exposures arising from SFTs 37,312 39,671 Other off-balance sheet exposures 17 Off-balance sheet exposure at gross notional amount 547,321 539,299 18 Less: Adjustments for conversion to credit equivalent amounts (457,210) (450,656) 19 Off-balance sheet items 90,111 88,643 Capital and total exposures 20 Tier 1 capital 128,343 128,327 20a Total exposures before adjustments for specific and collective provisions 1,711,184 1,667,383 20b Adjustments for specific and collective provisions 1,704,064 1,662,016 Leverage ratio 1,704,016 1,704,016	13	Less: Netted amounts of cash payables and cash receivables of gross SFT assets	-	-
16 Total exposures arising from SFTs 37,312 39,671 Other off-balance sheet exposures 17 Off-balance sheet exposure at gross notional amount 547,321 539,299 18 Less: Adjustments for conversion to credit equivalent amounts (457,210) (450,656) 19 Off-balance sheet items 90,111 88,643 Capital and total exposures 20 Tier 1 capital 128,343 128,327 20a Total exposures before adjustments for specific and collective provisions 1,711,184 1,667,383 20b Adjustments for specific and collective provisions (7,120) (5,367) 21 Total exposures after adjustments for specific and collective provisions 1,704,064 1,662,016 Leverage ratio	14	Counterparty credit risk ('CCR') exposure for SFT assets	769	1,001
Other off-balance sheet exposures 17 Off-balance sheet exposure at gross notional amount 547,321 539,299 18 Less: Adjustments for conversion to credit equivalent amounts (457,210) (450,656) 19 Off-balance sheet items 90,111 88,643 Capital and total exposures 20 Tier 1 capital 128,343 128,327 20a Total exposures before adjustments for specific and collective provisions 1,711,184 1,667,383 20b Adjustments for specific and collective provisions (7,120) (5,367) 21 Total exposures after adjustments for specific and collective provisions 1,704,064 1,662,016 Leverage ratio	15	Agent transaction exposures	-	-
Other off-balance sheet exposures 17 Off-balance sheet exposure at gross notional amount 547,321 539,299 18 Less: Adjustments for conversion to credit equivalent amounts (457,210) (450,656) 19 Off-balance sheet items 90,111 88,643 Capital and total exposures 20 Tier 1 capital 128,343 128,327 20a Total exposures before adjustments for specific and collective provisions 1,711,184 1,667,383 20b Adjustments for specific and collective provisions (7,120) (5,367) 21 Total exposures after adjustments for specific and collective provisions 1,704,064 1,662,016 Leverage ratio	16	Total exposures arising from SFTs	37,312	39,671
18 Less: Adjustments for conversion to credit equivalent amounts (457,210) (450,656) 19 Off-balance sheet items 90,111 88,643 Capital and total exposures 20 Tier 1 capital 128,343 128,327 20a Total exposures before adjustments for specific and collective provisions 1,711,184 1,667,383 20b Adjustments for specific and collective provisions (7,120) (5,367) 21 Total exposures after adjustments for specific and collective provisions 1,704,064 1,662,016 Leverage ratio		Other off-balance sheet exposures	,	
19 Off-balance sheet items 90,111 88,643 Capital and total exposures 128,343 128,327 20a Total exposures before adjustments for specific and collective provisions 1,711,184 1,667,383 20b Adjustments for specific and collective provisions (7,120) (5,367) 21 Total exposures after adjustments for specific and collective provisions 1,704,064 1,662,016 Leverage ratio	17	Off-balance sheet exposure at gross notional amount	547,321	539,299
19 Off-balance sheet items 90,111 88,643 Capital and total exposures 80,011 88,643 20 Tier 1 capital 128,343 128,327 20a Total exposures before adjustments for specific and collective provisions 1,711,184 1,667,383 20b Adjustments for specific and collective provisions (7,120) (5,367) 21 Total exposures after adjustments for specific and collective provisions 1,704,064 1,662,016 Leverage ratio	18	Less: Adjustments for conversion to credit equivalent amounts	(457,210)	(450,656)
20Tier 1 capital128,343128,32720aTotal exposures before adjustments for specific and collective provisions1,711,1841,667,38320bAdjustments for specific and collective provisions(7,120)(5,367)21Total exposures after adjustments for specific and collective provisions1,704,0641,662,016Leverage ratio			90,111	88,643
20a Total exposures before adjustments for specific and collective provisions1,711,1841,667,38320b Adjustments for specific and collective provisions(7,120)(5,367)21 Total exposures after adjustments for specific and collective provisions1,704,0641,662,016Leverage ratio		Capital and total exposures	,	
20a Total exposures before adjustments for specific and collective provisions1,711,1841,667,38320b Adjustments for specific and collective provisions(7,120)(5,367)21 Total exposures after adjustments for specific and collective provisions1,704,0641,662,016Leverage ratio	20	Tier 1 capital	128,343	128,327
20b Adjustments for specific and collective provisions(7,120)(5,367)21 Total exposures after adjustments for specific and collective provisions1,704,0641,662,016Leverage ratio		1		
21 Total exposures after adjustments for specific and collective provisions 1,704,064 1,662,016 Leverage ratio				(5,367)
Leverage ratio			. , ,	
22 Leverage ratio 7.5% 7.7%			, ,	
	22	Leverage ratio	7.5%	7.7%

Table 9: LR1 – Summary comparison of accounting assets against leverage ratio exposure measure As at 31 Dec 2021 Value under the LR framework Item HK\$m Total consolidated assets as per published financial statements 1,820,185 Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation (186,092) Adjustment for securitised exposures that meet the operational requirements for the recognition of risk 3 Adjustment for fiduciary assets recognised on the balance sheet pursuant to the applicable accounting standard but excluded from the LR exposure measure Adjustments for eligible cash pooling transactions 18,429 Adjustments for derivative contracts 769 Adjustment for SFTs (i.e. repos and similar secured lending) Adjustment for off-balance sheet ('OBS') items (i.e. conversion to credit equivalent amounts of OBS exposures) 90,111 Adjustments for prudent valuation adjustments and specific and collective provisions that are allowed to be excluded from (7,246)exposure measure Other adjustments (32,092) 1,704,064 8 Leverage ratio exposure measure

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

Overview of RWA and the minimum capital requirements

Table	e 10: OV1 – Overview of RWA			
		a	b	с
			•	Minimum
				capital
		RW	'A ¹	requirements ²
		31 Dec	30 Sep	31 Dec
		2021	2021	2021
		HK\$m	HK\$m	HK\$m
1	Credit risk for non-securitisation exposures	586,770	567,644	49,378
2	Of which: STC approach	79,123	72,798	6,330
2a	Of which: BSC approach	-	-	-
3	Of which: Foundation IRB approach	-	-	-
4	Of which: Supervisory slotting criteria approach	29,339	25,139	2,488
5	Of which: Advanced IRB approach	478,308	469,707	40,560
6	Counterparty default risk and default fund contributions	7,247	6,177	612
7	Of which: Standardised approach for counterparty credit risk ('SA-CCR')	6,978	5,986	589
7a	Of which: Current exposure method ('CEM')	-	-	-
8	Of which: Internal models (counterparty credit risk) ('IMM(CCR)') approach	-	-	-
9	Of which: Others	269	191	23
10	Credit valuation adjustment ('CVA') risk	7,191	6,571	575
11	Equity positions in banking book under the simple risk-weight method and the internal			
	models method	19,989	19,323	1,695
12	Collective investment scheme ('CIS') exposures – Look-through ('LTA') approach*	Not applicable	Not applicable	Not applicable
13	CIS exposures – Mandate-based ('MBA') approach*	Not applicable	Not applicable	Not applicable
14	CIS exposures – Fall-back ('FBA') approach*	Not applicable	Not applicable	Not applicable
14a	CIS exposures – combination of approaches*	Not applicable	Not applicable	Not applicable
15	Settlement risk	-	-	-
16	Securitisation exposures in banking book	-	-	-
17	Of which: Securitisation internal ratings-based ('SEC-IRBA') approach	-	-	-
18	Of which: Securitisation external ratings-based ('SEC-ERBA') approach (including			
	internal assessment approach ('IAA'))	-	-	-
19	Of which: Securitisation standardised ('SEC-SA') approach	-	-	-
19a	Of which: Securitisation fall-back ('SEC-FBA') approach	=	-	-
20	Market risk	13,248	13,363	1,060
21	Of which: STM approach	313	303	25
22	Of which: IMM approach	12,935	13,060	1,035
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	60,924	62,181	4,874
24a	Sovereign concentration risk	-	-	-
25	Amounts below the thresholds for deduction (subject to 250% Risk-weight ('RW'))	19,097	19,188	1,619
26	Capital floor adjustment	-	-	-
26a	Deduction to RWA	(13,540)	(13,301)	(1,083)
26b	Of which: Portion of regulatory reserve for general banking risks and			
	collective provisions which is not included in Tier 2 Capital			
26c	Of which: Portion of cumulative fair value gains arising from the revaluation			
_	of land and buildings which is not included in Tier 2 Capital	(13,540)	(13,301)	(1,083)
27	Total	700,926	681,146	58,730

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

Total RWA increased by HK\$19.8bn since last quarter. Credit risk RWA for non-securitisation exposures was the key contributor which increased by HK\$19.1bn mainly driven by loan growth and credit rating migration.

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.

RWA flow statements

RWA flow statement for credit risk

Table 11: CR8 – RWA flow statement of credit risk¹ exposures under IRB approach

		a
		Amount
		HK\$m
1	RWA as at end of previous reporting period (30 Sep 2021)	494,846
2	Asset size	8,187
3	Asset quality	5,131
4	Model updates	<u>-</u>
5	Methodology and policy	<u>-</u>
6	Acquisitions and disposals	-
7	Foreign exchange movements	638
8	Other	(1,155)
9	RWA as at end of reporting period (31 Dec 2021)	507,647

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

RWA increased by HK\$12.8bn during the fourth quarter of 2021. It was mainly due to an increase of HK\$8.2bn from asset size driven by loan growth and an increase of HK\$5.1bn from asset quality due to credit rating migration.

RWA flow statement for market risk

Table 12: MR2 – RWA flow statement of market risk exposures under IMM approach

		a	b	С	d	e	f
		Value at risk ('VaR') HK\$m	Stressed VaR HK\$m	Incremental risk charge ('IRC') HK\$m		Other HK\$m	Total RWA HK\$m
1	RWA as at end of previous reporting period (30 Sep 2021)	4,472	8,588	-	-	-	13,060
2	Movement in risk levels	(271)	128	-	-	-	(143)
3	Model updates/changes	-	-	-	-	-	-
4	Methodology and policy	-	-	-	-	-	-
5	Acquisitions and disposals	-	-	-	-	-	-
6	Foreign exchange movements	6	12	-	-	-	18
7	Other	-	-	-	-	-	-
8	RWA as at end of reporting period (31 Dec 2021)	4,207	8,728	-	-	-	12,935

Loss-absorbing capacity

Table 13: KM2(A) – Key metrics – LAC requirements for material subsidiaries

rai	ole 13: KM2(A) – Key metrics – LAC requirements for material subsidiaries						
			a	b	С	d	e
			•	*	At	•	
			31 Dec	30 Sep	30 Jun	31 Mar	31 Dec
	Footnotes	S	2021	2021	2021	2021	2020
Of	the material entity at LAC consolidation group level						
1	Internal loss-absorbing capacity available (HK\$m)		163,242	158,556	158,496	159,296	160,551
2	Risk-weighted amount under the LAC Rules (HK\$m)		734,128	713,496	734,532	707,658	705,528
3	Internal LAC risk-weighted ratio (%)		22.2	22.2	21.6	22.5	22.8
4	Exposure measure under the LAC Rules (HK\$m)		1,703,019	1,660,971	1,678,738	1,619,098	1,640,313
5	Internal LAC leverage ratio (%)		9.6	9.5	9.4	9.8	9.8
6a	Does the subordination exemption in the antepenultimate paragraph of		Not	Not	Not	Not	Not
	Section 11 of the FSB TLAC Term Sheet apply?	l a	applicable	applicable	applicable	applicable	applicable
6b	Does the subordination exemption in the penultimate paragraph of Section		Not	Not	Not	Not	Not
	11 of the FSB TLAC Term Sheet apply?	l a	applicable	applicable	applicable	applicable	applicable
6c	If the capped subordination exemption applies, the amount of funding						
	issued that ranks pari passu with excluded liabilities and that is recognised						
	as external loss-absorbing capacity, divided by funding issued that ranks						
	pari passu with excluded liabilities and that would be recognised as		Not	Not	Not	Not	Not
	external loss-absorbing capacity if no cap was applied	l a	pplicable	applicable	applicable	applicable	applicable

¹ The subordination exemptions under Section 11 of the Financial Stability Board ('FSB') Total Loss-absorbing Capacity ('TLAC') Term Sheet do not apply in Hong Kong under the LAC Rules.

Table 14: TLAC1(A) – TLAC composition

		a
	As at 31 Dec 2021	Amount
-	Regulatory capital elements of internal loss-absorbing capacity and adjustments (HK\$m)	
1	Common Equity Tier 1 ('CET1') capital	116,599
2	Additional Tier 1 ('AT1') capital before LAC adjustments	11,744
3	AT1 capital instruments ineligible as internal loss-absorbing capacity as not issued directly or indirectly to, and held directly or	
	indirectly by, the resolution entity or non-HK resolution entity in the material subsidiary's resolution group	-
4	Other adjustments	-
5	AT1 capital eligible under the LAC Rules	11,744
6	Tier 2 (T2') capital before LAC adjustments	10,415
7	Amortised portion of T2 capital instruments that are internal LAC debt instruments issued directly or indirectly to, and held	
	directly or indirectly by, the resolution entity or non-HK resolution entity in the material subsidiary's resolution group	-
8	T2 capital instruments ineligible as internal loss-absorbing capacity as not issued directly or indirectly to, and held directly or	
	indirectly by, the resolution entity or non-HK resolution entity in the material subsidiary's resolution group	-
9	Other adjustments	-
10	T2 capital eligible under the LAC Rules	10,415
11	Internal loss-absorbing capacity arising from regulatory capital	138,758
	Non-regulatory capital elements of internal loss-absorbing capacity (HK\$m)	,
12	Internal non-capital LAC debt instruments issued directly or indirectly to, and held indirectly or indirectly by, the resolution entity	
	or non-HK resolution entity in the material subsidiary's resolution group	24,484
17	Internal loss-absorbing capacity arising from non-capital LAC debt instruments before adjustments	24,484
	Non-regulatory capital elements of internal loss-absorbing capacity: adjustments (HK\$m)	
18	Internal loss-absorbing capacity before deductions	163,242
19	Deductions of exposures between the material subsidiary's LAC consolidation group and group companies outside that group that	
	correspond to non-capital items eligible for internal loss-absorbing capacity	-
20	Deduction of holdings of its own non-capital LAC liabilities	-
21	Other adjustments to internal loss-absorbing capacity	-
22	Internal loss-absorbing capacity after deductions	163,242
	Risk-weighted amount and exposure measure under the LAC Rules for internal loss-absorbing capacity purposes (HK\$m)	
23	Risk-weighted amount under the LAC Rules	734,128
24	Exposure measure under the LAC Rules	1,703,019
	Internal LAC ratios and buffers (%)	
25	Internal LAC risk-weighted ratio	22,2
26	Internal LAC leverage ratio	9.6
27	CET1 capital (as a percentage of RWA under the BCR) available after meeting the LAC consolidation group's minimum capital	
	and LAC requirements	10.2
28	Institution-specific buffer requirement (capital conservation buffer plus countercyclical capital buffer requirements plus higher loss	
	absorbency requirement, expressed as a percentage of RWA under the BCR)	4.299
29	Of which: capital conservation buffer requirement	2.500
30	Of which: institution-specific countercyclical capital buffer requirement	0.799
31	Of which: higher loss absorbency requirement	1.000

Table 15: TLAC2 – Hang Seng Bank Limited creditor ranking

	-		Creditor ranking (HK\$m)		(\$m)	Sum of values in
		1	1	2	3	columns
		(most junior)	(most junior)		(most senior)	1 to 3
1	Is the resolution entity or a non-HK resolution entity the creditor/investor?					
	(yes or no) ¹	No	Yes	Yes	Yes	
2	Description of creditor ranking	Ordinary	Ordinary	AT1		
		shares ²	shares ²	instruments	LAC loans	
3	Total capital and liabilities net of credit risk mitigation	3,657	6,001	11,744	24,484	45,886
4	Subset of row 3 that is excluded liabilities	-	-	-	-	-
5	Total capital and liabilities less excluded liabilities	3,657	6,001	11,744	24,484	45,886
6	Subset of row 5 that are eligible as internal loss-absorbing capacity	3,657	6,001	11,744	24,484	45,886
7	Subset of row 6 with 1 year ≤ residual maturity < 2 years	-	-	-	-	-
8	Subset of row 6 with 2 years ≤ residual maturity < 5 years	-	-	-	6,240	6,240
9	Subset of row 6 with 5 years ≤ residual maturity < 10 years	-	-	-	18,244	18,244
10	Subset of row 6 with residual maturity \geq 10 years, but excluding perpetual					
	securities	-	-	-	-	-
11	Subset of row 6 that is perpetual securities	3,657	6,001	11,744	-	21,402

¹ Any direct/indirect holdings by the resolution entity is reported as 'yes'.

² Excludes the value of reserves attributable to ordinary shareholders.

Main features of regulatory capital instruments and non-capital LAC debt instruments

The following is a summary of CET1 capital, AT1 capital and non-capital LAC debt instruments that meet both regulatory capital and LAC requirements, or only LAC (but not regulatory capital) requirements.

Table 16: CCA(A) – Main features of regulatory capital instruments and non-capital LAC debt instruments

(i) In	struments that meet both regulatory capital and LAC requirements	a
	31 Dec 2021	Quantitative / qualitative information
		Ordinary shares
1	Issuer	Hang Seng Bank Limited
2	Unique identifier (e.g. CUSIP, ISIN or Bloomberg identifier for private placement)	HK0011000095
3	Governing law(s) of the instrument	Laws of Hong Kong
3a	Means by which enforceability requirement of Section 13 of the TLAC Term Sheet is achieved (for non-capital LAC debt instruments governed by non-Hong Kong law)	N/A
	Regulatory treatment	
4	Transitional Basel III rules ¹	N/A
5	Post-transitional Basel III rules ²	CET1
6	Eligible at solo / group / solo and group (for regulatory capital purposes)	Solo and Group
6a	Eligible at solo / LAC consolidation group / solo and LAC consolidation group (for LAC purposes)	Solo and LAC consolidation group
7	Instrument type (types to be specified by each jurisdiction)	Ordinary shares
8	Amount recognised in regulatory capital (currency in millions, as of most recent reporting date)	HK\$ 9,658 million
8a	Amount recognised in loss-absorbing capacity (currency in millions, as of most recent reporting date)	HK\$ 9,658 million
9	Par value of instrument	No par value (Total amount HK\$ 9,658 million)
10	Accounting classification	Shareholders' equity
11	Original date of issuance	Various
12	Perpetual or dated	Perpetual
13	Original maturity date	No maturity
14	Issuer call subject to prior supervisory approval	N/A
15	Optional call date, contingent call dates and redemption price	N/A
16	Subsequent call dates, if applicable	N/A
	Coupons / dividends	
17	Fixed or floating dividend/coupon	N/A
18	Coupon rate and any related index	N/A
19	Existence of a dividend stopper	N/A
20	Fully discretionary, partially discretionary or mandatory	Fully discretionary
21	Existence of step up or other incentive to redeem	N/A
22	Non-cumulative or cumulative	Non-cumulative
23	Convertible or non-convertible	Non-convertible
24	If convertible, conversion trigger(s)	N/A
25	If convertible, fully or partially	N/A
26	If convertible, conversion rate	N/A
27	If convertible, mandatory or optional conversion	N/A
28	If convertible, specify instrument type convertible into	N/A
29	If convertible, specify issuer of instrument it converts into	N/A
30	Write-down feature	No
31	If write-down, write-down trigger(s)	N/A
32	If write-down, full or partial	N/A
33	If write-down, permanent or temporary	N/A
34	If temporary write-down, description of write-up mechanism	N/A
34a	Type of subordination	Contractual
	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to	Immediately subordinate to AT1 instruments
35	instrument in the insolvency creditor hierarchy of the legal entity concerned)	(columns b and c)
36	Non-compliant transitioned features	No
	If yes, specify non-compliant features	N/A
31	n yes, speeny non-compnant reatures	17/11

Footnote:

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

Terms and conditions

Terms and conditions - Ordinary shares

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

³ Subject to FIRO

⁴ Terms and conditions to be read in conjunction with the Master terms and conditions (the 'Master terms and conditions')

Master terms and conditions

Terms and conditions

Table 16: CCA(A) – Main features of regulatory capital instruments and non-capital LAC debt instruments (continued)

			ı
A	21 D - 2021	b Operation ()	C C
As at	31 Dec 2021	Perpetual subordinated loan	itative information
		(US\$ 900 million)	Perpetual subordinated loan (US\$ 600 million)
1	Issuer	Hang Seng Bank Limited	Hang Seng Bank Limited
2	Unique identifier	N/A	N/A
3	Governing law(s) of the instrument	Laws of Hong Kong	Laws of Hong Kong
3	Means by which enforceability requirement of Section 13 of the TLAC Term	Laws of Holig Kolig	Laws of Hong Rong
3a	Sheet is achieved	N/A	N/A
	Regulatory treatment		
4	Transitional Basel III rules ¹	N/A	N/A
5	Post-transitional Basel III rules ²	AT1	AT1
6	Eligible at solo / group / solo and group	Solo and Group	Solo and Group
6a	Eligible at solo / LAC consolidation group / solo and LAC consolidation group	Solo and LAC consolidation group	Solo and LAC consolidation group
7	Instrument type (types to be specified by each jurisdiction)	Perpetual debt instrument	Perpetual debt instrument
8	Amount recognised in regulatory capital	HK\$ 7,044 million	HK\$ 4,700 million
8a	Amount recognised in loss-absorbing capacity	HK\$ 7,044 million	HK\$ 4,700 million
9	Par value of instrument	US\$ 900 million	US\$ 600 million
10	Accounting classification	Shareholders' equity	Shareholders' equity
11	Original date of issuance	14 June 2019	18 June 2019
	Perpetual or dated	Perpetual	Perpetual
13	Original maturity date	No maturity	No maturity
14	Issuer call subject to prior supervisory approval	Yes	Yes
15	Optional call date, contingent call dates and redemption price	17 September 2024 at par value	18 June 2024 at par value
16	Subsequent call dates, if applicable	Callable on any interest payment date after first call date	Callable on any interest payment date after first call date
	Coupons / dividends	arter first can date	anci inst can date
	Coupons / urvuenus	Fixed until 17 September 2024 and	Fixed until 18 June 2024 and
17	Fixed or floating dividend/coupon	thereafter floating	thereafter floating
18	Coupon rate and any related index	6.030% until 17 September 2024, and thereafter 3-month US\$ LIBOR + 4.020%	6.000% until 18 June 2024, and thereafter 3-month US\$ LIBOR + 4.060%
19	Existence of a dividend stopper	No	No
20	Fully discretionary, partially discretionary or mandatory	Fully discretionary	Fully discretionary
21	Existence of step up or other incentive to redeem	No	No
22	Non-cumulative or cumulative	Non-cumulative	Non-cumulative
23	Convertible or non-convertible	Non-convertible ³	Non-convertible ³
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	Yes	Yes
31	If write-down, write-down trigger(s)	Contractual write-down at point of non-viability of borrower. Contractual recognition of HKMA statutory powers under FIRO	Contractual write-down at point of non-viability of borrower. Contractual recognition of HKMA statutory powers under FIRO
32	If write-down, full or partial	May be written down partially	May be written down partially
33	If write-down, permanent or temporary	Permanent	Permanent
34	If temporary write-down, description of write-up mechanism	N/A	N/A
34a	Type of subordination	Contractual	Contractual
	Position in subordination hierarchy in liquidation	Immediately subordinate to non-capital	Immediately subordinate to non-capital
35	(specify instrument type immediately senior to instrument in the insolvency	LAC debt instruments	LAC debt instruments
	creditor hierarchy of the legal entity concerned)	(columns a to e under ii)	(columns a to e under ii)
36	Non-compliant transitioned features	No	No
37	If yes, specify non-compliant features	N/A	N/A

Individual loan agreement⁴ Individual loan agreement⁴

Table 16: CCA(A) – Main features of regulatory capital instruments and non-capital LAC debt instruments (continued)

(**\ T	TACA AND AND AND AND AND AND AND AND AND AN		T ,
	nstruments that meet only LAC (but not regulatory capital) requirements	a Organization / grad	b litating information
As a	t 31 Dec 2021		litative information
		Subordinated loan (HK\$ 5,460 million)	Subordinated loan (HK\$ 4,680 million)
1	Issuer	Hang Seng Bank Limited	Hang Seng Bank Limited
2		N/A	N/A
2	Unique identifier Governing law(s) of the instrument	Laws of Hong Kong	
3		Laws of Hong Kong	Laws of Hong Kong
3a	Means by which enforceability requirement of Section 13 of the TLAC Term Sheet is achieved	N/A	N/A
	Regulatory treatment		
4	Transitional Basel III rules ¹	N/A	N/A
5	Post-transitional Basel III rules ²	Ineligible	Ineligible
6	Eligible at solo / group / solo and group	Ineligible	Ineligible
6a	Eligible at solo / LAC consolidation group / solo and LAC consolidation group	Solo and LAC consolidation group	Solo and LAC consolidation group
7	Instrument type (types to be specified by each jurisdiction)	Non-capital LAC debt instrument	Non-capital LAC debt instrument
8	Amount recognised in regulatory capital	N/A	N/A
8a	Amount recognised in loss-absorbing capacity	HK\$ 5,460 million	HK\$ 4,680 million
0a 9	Par value of instrument	HK\$ 5,460 million	HK\$ 4,680 million
10	Accounting classification	Liability – amortised cost	Liability – amortised cost
11	Original date of issuance	30 May 2019	10 June 2019
12	Perpetual or dated	Dated	Dated
12	r expetual of dated		
13	Original maturity date	Interest payment date falling in May 2028	Interest payment date falling in June 2029
14	Issuer call subject to prior supervisory approval	Yes	Yes
15	Optional call date, contingent call dates and redemption price	Interest payment date falling in May 2027 at par value	Interest payment date falling in June 2028 at par value
16	Subsequent call dates, if applicable	Callable on any interest payment date after first call date	Callable on any interest payment date after first call date
	Coupons / dividends		
17	Fixed or floating dividend/coupon	Floating	Floating
18	Coupon rate and any related index	3-month HK\$ HIBOR + 1.425%	3-month HK\$ HIBOR + 1.564%
19	Existence of a dividend stopper	No	No
20	Fully discretionary, partially discretionary or mandatory	Mandatory	Mandatory
21	Existence of step up or other incentive to redeem	No	No
22	Non-cumulative or cumulative	Non-cumulative	Non-cumulative
23	Convertible or non-convertible	Non-convertible ³	Non-convertible ³
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	Yes	Yes
31	If write-down, write-down trigger(s)	Contractual write-down at point of non-viability of borrower.	Contractual write-down at point of non-viability of borrower.
		Contractual recognition of HKMA statutory powers under FIRO	Contractual recognition of HKMA statutory powers under FIRO
32	If write-down, full or partial	May be written down partially	May be written down partially
33	If write-down, permanent or temporary	Permanent	Permanent
34	If temporary write-down, description of write-up mechanism	N/A	N/A
34a	Type of subordination	Contractual	Contractual
35	Position in subordination hierarchy in liquidation	Immediately subordinate to the claims of all unsubordinated creditors	Immediately subordinate to the claims of all unsubordinated creditors
36	Non-compliant transitioned features	No	No
37	If yes, specify non-compliant features	N/A	N/A
	The state of the s	<u> </u>	<u> </u>

Terms and conditions <u>Individual loan agreement</u> <u>Individual loan agreement</u> <u>Individual loan agreement</u>

Table 16: CCA(A) – Main features of regulatory capital instruments and non-capital LAC debt instruments (continued)

	0.1.75	c d Quantitative / qualitative information				
As at	31 Dec 2021					
		Subordinated loan (US\$ 400 million)	Subordinated loan (HK\$ 6,240 million)			
1	Issuer	Hang Seng Bank Limited	Hang Seng Bank Limited			
2	Unique identifier	N/A	N/A			
3	Governing law(s) of the instrument	Laws of Hong Kong	Laws of Hong Kong			
3	Means by which enforceability requirement of Section 13 of the TLAC Term	Laws of Hong Rong	Laws of Hong Rong			
3a	Sheet is achieved	N/A	N/A			
	Regulatory treatment					
4	Transitional Basel III rules ¹	N/A	N/A			
5	Post-transitional Basel III rules ²	Ineligible	Ineligible			
6	Eligible at solo / group / solo and group	Ineligible	Ineligible			
6a	Eligible at solo / LAC consolidation group / solo and LAC consolidation group	Solo and LAC consolidation group	Solo and LAC consolidation group			
7	Instrument type (types to be specified by each jurisdiction)	Non-capital LAC debt instrument	Non-capital LAC debt instrument			
8	Amount recognised in regulatory capital	N/A	N/A			
8a	Amount recognised in loss-absorbing capacity	HK\$ 3,119 million	HK\$ 6,240 million			
9	Par value of instrument	US\$ 400 million	HK\$ 6,240 million			
10	Accounting classification	Liability – amortised cost	Liability – amortised cost			
11	Original date of issuance	10 June 2019	13 June 2019			
12	Perpetual or dated	Dated	Dated			
12	respectation differ	Interest payment date falling in June	Interest payment date falling in June			
13	Original maturity date	2030	2026			
14	Issuer call subject to prior supervisory approval	Yes	Yes			
15	Optional call date, contingent call dates and redemption price	Interest payment date falling in June 2029 at par value	Interest payment date falling in June 2025 at par value			
16	Subsequent call dates, if applicable	Callable on any interest payment date after first call date	Callable on any interest payment date after first call date			
	Coupons / dividends					
17	Fixed or floating dividend/coupon	Floating	Floating			
18	Coupon rate and any related index	3-month US\$ LIBOR + 1.789%	3-month HK\$ HIBOR + 1.342%			
19	Existence of a dividend stopper	No	No			
20	Fully discretionary, partially discretionary or mandatory	Mandatory	Mandatory			
21	Existence of step up or other incentive to redeem	No	No			
22	Non-cumulative or cumulative	Non-cumulative	Non-cumulative			
23	Convertible or non-convertible	Non-convertible ³	Non-convertible ³			
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	Yes	Yes			
		Contractual write-down at point of	Contractual write-down at point of			
		non-viability of borrower. Contractual	non-viability of borrower. Contractual			
31	If write-down, write-down trigger(s)	recognition of HKMA statutory	recognition of HKMA statutory			
		powers under FIRO	powers under FIRO			
32	If write-down, full or partial	May be written down partially	May be written down partially			
33	If write-down, permanent or temporary	Permanent	Permanent			
34	If temporary write-down, description of write-up mechanism	N/A	N/A			
34a	Type of subordination	Contractual	Contractual			
35	Position in subordination hierarchy in liquidation	Immediately subordinate to the claims	Immediately subordinate to the claims			
	* *	of all unsubordinated creditors	of all unsubordinated creditors			
36	Non-compliant transitioned features	No	No			
37	If yes, specify non-compliant features	N/A	N/A			

Terms and conditions <u>Individual loan agreement</u> <u>Individual loan agreement</u> <u>Individual loan agreement</u>

Table 16: CCA(A) – Main features of regulatory capital instruments and non-capital LAC debt instruments (continued)

A = =4	21 Pag 2021	e
As at	: 31 Dec 2021	Subordinated loan
		(HK\$ 5,000 million)
1	Issuer	Hang Seng Bank Limited
2	Unique identifier	N/A
3	Governing law(s) of the instrument	Laws of Hong Kong
3	Means by which enforceability requirement of Section 13 of the TLAC Term Sheet is	Laws of Hong Kong
3a	achieved	N/A
	Regulatory treatment	
4	Transitional Basel III rules ¹	N/A
5	Post-transitional Basel III rules ²	Ineligible
6	Eligible at solo / group / solo and group	Ineligible
6a	Eligible at solo / LAC consolidation group / solo and	Solo and LAC consolidation group
	LAC consolidation group	
7	Instrument type (types to be specified by each jurisdiction)	Non-capital LAC debt instrument
8	Amount recognised in regulatory capital	N/A
8a	Amount recognised in loss-absorbing capacity	HK\$ 4,985 million
9	Par value of instrument	HK\$ 5,000 million
10	Accounting classification	Liability – amortised cost
11	Original date of issuance	30 November 2021
12	Perpetual or dated	Dated
13	Original maturity date	Interest payment date falling in November 2027
14	Issuer call subject to prior supervisory approval	Yes
15	Optional call date, contingent call dates and redemption price	Interest payment date falling in November 2026 at par value
16	Subsequent call dates, if applicable	Callable on any interest payment date after first call date
	Coupons / dividends	
17	Fixed or floating dividend/coupon	Floating
18	Coupon rate and any related index	3-month HK\$ HIBOR + 1.00%
19	Existence of a dividend stopper	No
20	Fully discretionary, partially discretionary or mandatory	Mandatory
21	Existence of step up or other incentive to redeem	No
22	Non-cumulative or cumulative	Non-cumulative
23	Convertible or non-convertible	Non-convertible ³
24	If convertible, conversion trigger(s)	N/A
25	If convertible, fully or partially	N/A
26	If convertible, conversion rate	N/A
27	If convertible, mandatory or optional conversion	N/A
28	If convertible, specify instrument type convertible into	N/A
29	If convertible, specify issuer of instrument it converts into	N/A
30	Write-down feature	Yes
31	If write-down, write-down trigger(s)	Contractual write-down at point of non-viability of borrower. Contractual recognition of HKMA statutory powers under FIRO
32	If write-down, full or partial	May be written down partially
33	If write-down, permanent or temporary	Permanent
34	If temporary write-down, description of write-up mechanism	N/A
34a	Type of subordination	Contractual
35	Position in subordination hierarchy in liquidation	Immediately subordinate to the claims of all unsubordinated creditors
36	Non-compliant transitioned features	No
37	If yes, specify non-compliant features	N/A
<u> </u>	Towns and conditions	<u> </u>

Terms and conditions <u>Individual loan agreement</u>⁴

Credit risk

Overview and responsibilities

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.

The principal objectives of our credit risk management function are:

- to maintain across the Group a strong culture of responsible lending and a robust credit risk policy and control framework;
- to both partner and challenge our businesses in defining, implementing and continually re-evaluating our credit risk appetite under actual and stress scenario conditions; and
- to ensure there is independent, expert scrutiny of credit risks, their costs and their mitigation.

The credit risk functions within Wholesale Credit and Market Risk and Wealth and Personal Banking Risk are the constituent parts of the Group's Risk functions that support the Group's Chief Risk Officer in overseeing credit risks. Their major duties comprise undertaking independent review of large and high-risk credit proposals, overseeing large exposure policy and reporting on our wholesale and retail credit risk management disciplines, owning our credit policy and credit system programmes, overseeing portfolio management and reporting on risk matters to senior executive management and to regulators.

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 challenge 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.

Credit quality of assets

Tables 17 to 21 present information on the credit quality of exposures by exposure category, geographical location, industry and residual maturity on a regulatory consolidation basis. For further detail on the credit quality of IRB and STC exposures, refer to Table 33 to 34 and 36 respectively.

The loans covered in these tables 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 17: CR1 – Credit quality of exposures

		a	b	c	d Of which Expect ('ECL') account	_	f	g
		Gross carrying amounts of			for credit los approach e			
		Defaulted exposures	Non- defaulted exposures	Allowances/	Allocated in regulatory category of specific provisions	Allocated in regulatory category of collective provisions	Of which ECL accounting provisions for credit losses on IRB approach exposures	Net values (a + b - c)
	As at 31 Dec 2021	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
1	Loans	10,429	1,077,006	6,931	257	325	6,349	1,080,504
2	Debt securities	-	366,937	9	-	-	9	366,928
3	Off-balance sheet exposures	-	547,321	180	-	4	176	547,141
4	Total	10,429	1,991,264	7,120	257	329	6,534	1,994,573

¹ The categorisation of ECL accounting provisions into regulatory categories 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, the ECL accounting provisions classified into Stage 1 and Stage 2 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 an impairment gain or loss, are treated as specific provisions.

Ta	ble 18: CR2 – Changes in defaulted loans and debt securities		
			a
		Footnote	Amount HK\$m
1	Defaulted loans and debt securities at end of the previous reporting period (30 Jun 2021)		7,011
2	Loans and debt securities that have defaulted since the last reporting period		4,734
3	Returned to non-defaulted status		(22)
4	Amounts written off		(814)
5	Other changes	1	(480)
6	Defaulted loans and debt securities at end of the current reporting period (31 Dec 2021)		10,429

¹ Other changes included repayment and foreign exchange movements.

Table 19: CRB1 – Exposures by geographical location ¹	
	Gross carrying
	amounts at
	31 Dec
	2021
Footnote	HK\$m
Hong Kong SAR	1,748,359
Mainland China	226,695
Others 2	26,639
Total	2,001,693

¹ The geographical locations shown in this table above represent the location of the principal operations of the subsidiary and by the location of the branch responsible for advancing the funds.

² Any segment which constitutes less than 10% of total gross carrying amounts is disclosed on an aggregated basis under the category 'Others'.

Table 20: CRB2 – Exposures by industry	
	Gross carrying
	amounts at
	31 Dec
	2021
	HK\$m
Industrial, commercial and financial	
- Property development and investment	351,283
- Financial concerns	363,107
- Stockbrokers	1,591
- Wholesale and retail trade	104,111
- Manufacturing	83,456
- Transport and transport equipment	30,919
- Recreational activities	1,540
- Information technology	22,488
- Others	338,074
Individuals	611,517
Trade finance	93,607
Total	2,001,693
Table 21: CRB3 – Exposures by residual maturity	
	Gross carrying
	amounts at
	31 Dec
	2021
	HK\$m
Less than 1 year	874,874
Between 1 and 5 years	521,645
More than 5 years	601,944
Undated	3,230
Total	2,001,693

Impaired exposures, past due unimpaired exposures and renegotiated exposures

Tables 22 to 25 analyse impaired exposures, impairment allowances, past due unimpaired 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 2021 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 22: CRB4 – Impaired exposures and related allowances and write-offs by industry

		Gross loans and	Gross impaired	Overdue			Impairment provisions (charged to) /	Advances written off
As at 31 Dec 2021	Footnote	advances to customers ¹ HK\$m	loans and advances HK\$m	loans and advances ² HK\$m	Specific provisions ³ HK\$m	Collective provisions ³ HK\$m	released from profit and loss HK\$m	during the year HK\$m
Residential mortgages		304,830	432	189	(12)	(10)	7	39
Real estate		270,315	5,020	94	(757)	(2,360)	2,687	1
Others	4	430,095	4,977	3,388	(1,931)	(1,858)	149	1,193
Total		1,005,240	10,429	3,671	(2,700)	(4,228)	2,843	1,233

- 1 The amounts shown in column 'Gross loans and advances to customers' represent loans and advances to customers gross of provisions in the financial statements under the regulatory consolidation scope and therefore is different from the 'Gross loans and advances to customers' shown in table 26 which is prepared on accounting consolidation basis. The difference of total gross loans of HK\$915m represents the Bank's loans and advances to the Group's subsidiaries which are outside the regulatory scope of consolidation.
- 2 The amounts shown in column 'Overdue loans and advances' represent gross loans and advances to customers that were overdue for more than 3 months as at 31 December 2021.
- 3 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 1 under table 17 of this document.
- 4 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'.

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 23: CRB5 - Impaired exposures and related allowances and write-offs by geographical location

		Gross loans and	Gross impaired	Overdue			Impairment provisions (charged to) /	Advances written off
		advances to customers ¹	loans and advances	loans and advances ²	Specific provisions ³	Collective provisions ³	released from profit and loss	during the year
As at 31 Dec 2021	Footnote	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Hong Kong SAR		898,882	8,794	3,131	(2,177)	(3,875)	2,701	888
Mainland China		89,466	1,442	504	(485)	(347)	142	345
Others	4	16,892	193	36	(38)	(6)	-	-
Total		1,005,240	10,429	3,671	(2,700)	(4,228)	2,843	1,233

- 1 The amounts shown in column 'Gross loans and advances to customers' represent loans and advances to customers gross of provisions in the financial statements under the regulatory consolidation scope and therefore is different from the 'Gross loans and advances to customers' shown in table 26 which is prepared on accounting consolidation basis. The difference of total gross loans of HK\$915m represents the Bank's loans and advances to the Group's subsidiaries which are outside the regulatory scope of consolidation.
- 2 The amounts shown in column 'Overdue loans and advances' represent gross loans and advances to customers that were overdue for more than 3 months as at 31 December 2021.
- 3 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 1 under table 17 of this document.
- 4 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'.

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 24: CRB6 -	_ Alonnora	เทลโพรเร ด1	t accounting nast	due unim	naired exposiires
Table 24. CRD0	/ Ignig u	mary 515 Of	accounting pasi	duc unini	panea exposures

	Up to	30-	60-	
	29 days	59 days	89 days	Total
As at 31 Dec 2021	HK\$m	HK\$m	HK\$m	HK\$m
Loans and advances to customers held at amortised cost:				
- Personal	3,298	419	119	3,836
- Corporate and commercial	540	3	2	545
Total	3,838	422	121	4,381

Table 25: CRB7 - Breakdown of renegotiated loans between impaired and unimpaired

	31 Dec
	2021
	HK\$m
Impaired	2,555
Unimpaired	-
Total	2,555

Loans and advances to customers

Tables 26 to 28 analyse the loans and advances to customers by geographical locations, by industries, and by which are overdue and rescheduled on an accounting consolidation basis. The accounting consolidation basis is different from the regulatory consolidation basis as explained in the 'Basis of consolidation' section of this document.

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 26: Gross loans and advances to customers by geographical location

	_				
		Hong Kong	Mainland		
		SAR	China	Others	Total
As at 31 Dec 2021	Footnote	HK\$m	HK\$m	HK\$m	HK\$m
Gross loans and advances to customers	1	853,212	122,009	29,104	1,004,325

¹ The amounts shown in column 'Gross loans and advances to customers' represent the loans and advances to customers gross of provisions in the financial statements on the accounting consolidation basis and therefore is different from the 'Gross loans and advances to customers' shown in tables 22 and 23 which are prepared under the regulatory consolidation scope. The difference of total gross loans of HK\$915m represents the Bank's loans and advances to the Group's subsidiaries which are outside the regulatory scope of consolidation.

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 27: Gross loans and advances to customers by industry sector

	Gross loans and	% of gross advances
	advances	covered by collateral
As at 31 Dec 2021	HK\$m	%
Industrial, commercial and financial sectors		
- property development	73,939	39.7%
- property investment	153,957	87.1%
- financial concerns	1,974	9.6%
- stockbrokers	9	100.0%
- wholesale and retail trade	28,117	55.6%
- manufacturing	21,851	36.7%
- transport and transport equipment	16,834	52.1%
- recreational activities	837	55.4%
- information technology	6,868	5.9%
- other	97,142	75.6%
Individuals		
- loans and advances for the purchase of flats under the		
Government Home Ownership Scheme,		
Private Sector Participation Scheme and		
Tenants Purchase Scheme	38,320	100.0%
residential properties	242,820	100.0%
- credit card loans and advances	28,435	0.0%
- other	31,336	56.3%
Gross loans and advances for use in Hong Kong	742,439	76.7%
Trade finance	41,732	20.0%
Gross loans and advances for use outside Hong Kong	220,154	33.2%
Gross loans and advances to customers	1,004,325	64.8%

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.

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 28: Overdue loans and advances to customers		
As at 31 Dec 2021	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	1,197	0.12%
- more than six months but not more than one year	257	0.03%
- more than one year	2,217	0.22%
Total	3,671	0.37%
of which:		
- specific provisions	(1,586)	
- covered portion of overdue loans and advances	2,010	
- uncovered portion of overdue loans and advances	1,661	
- current market value of collateral held against the		
covered portion of overdue loans and advances	2,495	
Rescheduled loans and advances to customers	2,331	0.23%

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\$1,156m and HK\$1,187 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 2021 was HK\$35m.

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 2021.

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 29: Off-balance sheet exposures other than derivative transactions	
	31 Dec
	2021
	HK\$m
Contract amounts	
Direct credit substitutes	2,542
Transaction-related contingencies	18,237
Trade-related contingencies	22,444
Forward asset purchases	81
Forward forward deposits placed	2,963
Commitments that are unconditionally cancellable without prior notice	448,942
Commitments which have an original maturity of not more than one year	1,202
Commitments which have an original maturity of more than one year	50,910
Total	547,321
RWA	52,630

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 uses advanced IRB approach for the majority of its business under the approval granted by the HKMA. This includes the following major classes of non-securitisation exposures:

- 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, 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, including cash items and other assets.

At 31 December 2021, 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 30: CRE1 - 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) ¹	92%	86%
Sovereign exposures	100%	100%
Bank exposures (including securities firms)	100%	100%
Residential mortgage loans	90%	84%
Other retail exposures	93%	79%
Equity exposures	100%	100%
Other exposures	100%	100%

1 Specialised lending exposures adopt regulatory slotting approach under the IRB framework.

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 IRB approach is 83% for corporate exposures and 100% for sovereign and 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 propensity 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 and 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.

(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 31: CRE2 – Wholesale IRB credit risk models

Regulatory asset		Number of significant		Number of years loss	Regulatory
classes measured	Component	models	Model description and methodology	data	Floors
Central governments and central	PD	1	A shadow rating approach that includes macroeconomic and political factors, constrained with expert judgement.	>10	No
banks	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	Statistical models that combine 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.

(iii) Application of IRB parameters (continued)

Table 32: CRE3 – Material retail IRB credit risk models

Regulatory asset	G. A	Number of significant		Number of years loss	Regulatory
Hong Kong - Hang Seng Personal	PD	models 1	Model description and methodology Statistical model built on internal behavioural data and calibrated to a long-run default rate.	>10	Floors 0.03%
Residential Mortgages* – (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	10%
_	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
Hong Kong – Hang Seng Credit Cards	PD	1	Statistical model built on internal behavioural data and calibrated to a long-run default rate by segment.	>10	0.03%
(Qualifying revolving	LGD	1	Statistical model based on forecasting the amount of expected future losses with downturn adjustment.	>10	
retail exposures and Other retail exposures to individuals)	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
Hong Kong – Hang Seng Personal Loans	PD	1	Statistical model built on internal behavioural data and calibrated to a long-run default rate by segment.	>10	0.03%
(Other retail exposures	LGD	1	Statistical model based on forecasting the amount of expected future losses with downturn adjustment.	> 10	
to individuals) -	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

^{*} Apart from the regulatory floors on PD and LGD, Hong Kong residential mortgage exposures are also subject to regulatory risk-weighted floor of 15%/25% for loans that granted before/after 19 May 2017.

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 a hybrid approach, which includes elements of Through-The-Cycle (TTC) and Point-in-Time (PiT) approaches. 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. The LGD models for retail exposures are developed based on the Group's internal loss and default experiences including recovery values for different types of collaterals for secured retail exposures such as residential mortgages; for unsecured retail exposures such as qualifying revolving retail exposures, LGD models are developed based on past recovery experiences, account behaviours and repayment ability.

(iv) Model Governance

Throughout HSBC, models are governed under the remit of the HSBC Group Model Risk Committee (MRC), operating in line with HSBC's model risk policy. The MRC is responsible to authorize MOFs where required, to operate under its remit and are responsible for model risk management within their areas. IRB capital models is under the oversight of Group and Regional respective MOFs. Wholesale Credit and Traded Risk MOF and Retail Credit Risk MOF ('Local MOFs') are established respectively in the Bank with comparable terms of reference as HSBC Group MOF or HSBC Regional MOF.

Local MOFs 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 MOF / HSBC Regional MOF 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 MOFs and HSBC Group MOF or HSBC Regional MOF.

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.

Table 33.1: CR6 – 0	Credit risk exp	osures by po	rtfolio and	PD ranges – f	or IRB app	roach (Wholes	sale)					
	a	b	c	d	e	f	g	h	i	j	k	1
				EAD								
				post-credit								
		Off-		risk								
	Original	balance		mitigation								
	on-balance	sheet		('CRM')								
	sheet gross	-	Average	and post-	_	Number of	_	Average		RWA		
As at 31 Dec 2021	exposure	pre-CCF	CCF	CCF	PD	obligors	LGD	maturity		density		Provisions^
PD scale	HK\$m	HK\$m	%	HK\$m	%		%	years	HK\$m	%	HK\$m	HK\$m
Sovereign	245.040			245.040	0.01	20	262	1.00	11.005		12	
0.00 to < 0.15	347,848	-	-	347,848	0.01	39	26.2	1.23	11,097	3	13	
0.15 to < 0.25	-	-	-	-	-	-	-	-	-	-	-	
0.25 to < 0.50	-	-	-	-	-	-	-	-	-	-	-	
0.50 to < 0.75	<u> </u>	-			-	<u> </u>	-	.			-	
0.75 to < 2.50	-	-	-	-	-		-		-	-		
2.50 to < 10.00 10.00 to < 100.00	-	-	<u> </u>	-	-	<u> </u>	<u> </u>	<u> </u>	<u>-</u>	-	-	
100.00 (Default)	-	<u> </u>		-			-	-	-	-	-	
Sub-total	347,848	<u>-</u>		347,848	0.01	39	26.2	1.23	11,097	3	13	10
Sub-total	347,040	-	-	347,040	0.01	39	20.2	1,23	11,097	3	13	10
Bank												
0.00 to < 0.15	78,315	3,404	99.3	81,695	0.04	856	37.1	1.16	8,988	11	12	
0.15 to < 0.25	1,378	828	58.0	1,858	0.22	80	44.8	0.69	600	32	2	
0.25 to < 0.50	345		-	345	0.37	48	45.0	0.60	179	52	1	
0.50 to < 0.75	57	1	5.0	57	0.63	25	45.0	0.12	35	61		
0.75 to < 2.50	27	10	55.0	33	0.91	16	33.7	0.86	18	55	_	
2.50 to < 10.00	-	-		-	-	-	-				-	
10.00 to < 100.00	-			-		-					-	
100.00 (Default)	-	-		-	-	-	-				-	
Sub-total	80,122	4,243	91.1	83,988	0.05	1,025	37.3	1.14	9,820	12	15	4
Corporate - small-ar	nd-medium size	ed corporates										
0.00 to < 0.15	4,178	4,630	30.0	5,569	0.12	97	20.8	1.95	613	11	1	
0.15 to < 0.25	3,417	2,697	33.1	4,210	0.22	158	21.8	2.05	684	16	2	
0.25 to < 0.50	8,729	4,185	27.0	9,858	0.37	257	25.4	2.38	2,805	28	9	
0.50 to < 0.75	14,945	3,981	34.0	16,297	0.63	406	24.8	2.75	5,980	37	25	
0.75 to < 2.50	59,669	20,040	30.8	65,841	1.37	1,197	26.8	2.01	31,321	48	244	
2.50 to < 10.00	9,525	4,073	26.7	10,613	3.50	263	31.6	1.75	7,530	71	117	
10.00 to < 100.00	69	31	13.6	74	10.61	11	21.9	3.38	59	80	2	
100.00 (Default)	2,199	-		2,199	100.00	26	35.3	1.63	6,963	317	292	
Sub-total	102,731	39,637	30.4	114,661	3.17	2,415	26.5	2.12	55,955	49	692	689
Corporate - others						•••						
0.00 to < 0.15	118,226	54,461	32.9	136,136	0.08	398	45.1	2.06	31,453	23	51	
0.15 to < 0.25	44,160	38,573	24.7	53,779	0.22	301	45.9	1.83	22,114	41	54	
0.25 to < 0.50	37,928	23,515	19.1	42,426	0.37	310	43.4	1.78	21,458	51	68	
0.50 to < 0.75	54,649	36,530	28.1	64,898	0.63	422	38.2	1.77	37,530	58	156	
0.75 to < 2.50	117,629	55,459	24.0	130,926	1.32	1,192	34.1	1.73	94,465	72	591	
2.50 to < 10.00	25,363	15,026	21.2	28,541	3.98	310	37.5	1.54	29,921	105	411	
10.00 to < 100.00	7,922	2,807	23.3	8,576	45.46	45	32.5	1.75	9,911	116	1,328	
100.00 (Default)	7,199	226 251	262	7,199	100.00	3.062	35.9	1.19	11,723	163	2,098	450
Sub-total	413,076	226,371	26.2	472,481	3.12	3,062	40.2	1.83	258,575	55	4,757	4,765

	redit risk expo	osures by po	rtfolio and	PD ranges – f	or IRB appr	oach (Retail)						
	a	b	c	d	e	f	g	h	i	j	k	1
		Off-										
	Original	balance		EAD								
	on-balance	sheet exposures	Avonogo	post CRM	Average	Numbon	Average	Average		RWA		
As at 31 Dec 2021	sheet gross exposure	pre-CCF	Average CCF	and post- CCF	Average	of obligors	LGD	0	DWA	density	FI	Provisions^
PD scale	HK\$m	HK\$m	<u> </u>	HK\$m	<u> 1D</u>	or obligors	<u> </u>	years	HK\$m	%	HK\$m	HK\$m
Retail – qualifying rev					,,,			J 444-2		,,,		
0.00 to < 0.15	11,335	164,475	38.9	75,252	0.07	1,803,298	105.2		3,428	5	54	
0.15 to < 0.25	2,028	11,844	47.3	7,631	0.22	175,099	104.6		930	12	18	
0.25 to < 0.50	3,799	18,763	35.4	10,434	0.40	198,656	102.7		2,000	19	43	
0.50 to < 0.75	2,051	3,796	54.6	4,123	0.60	55,856	101.8		1,075	26	25	
0.75 to < 2.50	5,532	10,830	36.5	9,481	1.43	89,588	101.1		4,727	50	137	
2.50 to < 10.00	3,243	2,810 322	66.1	5,100	4.70	48,023	100.8 99.2		5,895	116 191	241	
10.00 to < 100.00 100.00 (Default)	1,175	322	166.0	1,709	32.11 100.00	14,286 753	94.9		3,266	154	527 53	
Sub-total	29,226	212,840	39.7	113,793	0.99	2,385,559	104.2		21,417	19	1,098	1,076
ous tour	27,220	212,040	37.1	113,773	0.22	2,505,557	104.2		21,417	17	1,070	1,070
Retail – residential me	ortgage exposu	ires										
0.00 to < 0.15	205,856	1,644	100.0	207,500	0.08	59,728	20.6		47,172	23	35	
0.15 to < 0.25	31,057	249	100.0	31,306	0.18	25,039	17.5		6,588	21	10	
0.25 to < 0.50	407	3	100.0	410	0.34	93	19.9		84	20	-	
0.50 to < 0.75	20,600	163	100.0	20,763	0.53	9,019	16.7		4,308	21	19	
0.75 to < 2.50	13,370	105	100.0	13,475	0.93	12,843	16.3		2,948	22	20	
2.50 to < 10.00	4,639	35	100.0	4,674	4.77	3,306	15.4		2,308	49	34	
10.00 to < 100.00 100.00 (Default)	3,928	28	100.0	3,956	19.84	2,492	16.0 14.7		3,557 579	90 169	126 4	
Sub-total	280,200	2,227	100.0	282,427	0.64	112,663	19.6		67,544	24	248	_
oud total	200,200	2,227	100.0	202,427	0.04	112,003	17.0		07,544		240	
Retail – small busines	s retail exposu	res										
0.00 to < 0.15	2,597	10	100.0	2,607	0.07	1,133	9.6		52	2	-	
0.15 to < 0.25	444	2	100.0	446	0.19	120	15.5		27	6	-	
0.25 to < 0.50	-	-	-	-	-	-	-		-	-	-	
0.50 to < 0.75	594	2	100.0	596	0.56	214	6.4		29	5	1	
0.75 to < 2.50	377	2	100.0	379	1.25	85	23.9		100	26	1	
2.50 to < 10.00	410	-	-	410	5.04	171	9.1		56	14	2	
10.00 to < 100.00	4	-		4	100.00	2	23.1		10	250	-	
100.00 (Default) Sub-total	4,426	16	100.0	4,442	100.00 0.79	1,725	11.0		274	250	4	1
Sub-total	4,420	10	100.0	4,442	0.79	1,723	11.0		214	U		
Other retail exposures	s to individuals	S										
0.00 to < 0.15	3,211	2,118	10.4	3,432	0.08	24,485	14.7		115	3		
0.15 to < 0.25	1,576	2,479	15.4	1,957	0.21	22,035	16.0		129	7	1	
0.50									2.520	53	15	
0.25 to < 0.50	4,529	1,122	19.7	4,750	0.33	47,443	95.7		2,520		15	
0.50 to < 0.75	1,700	17	129.9	1,721	0.59	8,409	72.3		993	58	8	
0.50 to < 0.75 0.75 to < 2.50	1,700 6,332	17 933	129.9 31.8	1,721 6,628	0.59 1.37	8,409 29,757	72.3 61.5		993 4,619	58 70	8 58	
0.50 to < 0.75 0.75 to < 2.50 2.50 to < 10.00	1,700 6,332 2,398	933 174	129.9 31.8 40.5	1,721 6,628 2,468	0.59 1.37 4.67	8,409 29,757 13,604	72.3 61.5 76.9		993 4,619 2,777	58 70 113	8 58 90	
0.50 to < 0.75 0.75 to < 2.50 2.50 to < 10.00 10.00 to < 100.00	1,700 6,332 2,398 492	17 933	129.9 31.8	1,721 6,628 2,468 506	0.59 1.37 4.67 18.36	8,409 29,757 13,604 4,434	72.3 61.5 76.9 88.8		993 4,619 2,777 934	58 70 113 185	58 90 84	
0.50 to < 0.75 0.75 to < 2.50 2.50 to < 10.00 10.00 to < 100.00 100.00 (Default)	1,700 6,332 2,398 492 35	17 933 174 17	129.9 31.8 40.5 69.9	1,721 6,628 2,468 506 35	0.59 1.37 4.67 18.36 100.00	8,409 29,757 13,604 4,434 431	72.3 61.5 76.9 88.8 54.5		993 4,619 2,777 934 68	58 70 113 185 194	8 58 90 84 15	224
0.50 to < 0.75 0.75 to < 2.50 2.50 to < 10.00 10.00 to < 100.00	1,700 6,332 2,398 492	933 174	129.9 31.8 40.5	1,721 6,628 2,468 506	0.59 1.37 4.67 18.36	8,409 29,757 13,604 4,434	72.3 61.5 76.9 88.8		993 4,619 2,777 934	58 70 113 185	58 90 84	224
0.50 to < 0.75 0.75 to < 2.50 2.50 to < 10.00 10.00 to < 100.00 100.00 (Default)	1,700 6,332 2,398 492 35	17 933 174 17	129.9 31.8 40.5 69.9	1,721 6,628 2,468 506 35	0.59 1.37 4.67 18.36 100.00	8,409 29,757 13,604 4,434 431	72.3 61.5 76.9 88.8 54.5		993 4,619 2,777 934 68	58 70 113 185 194	8 58 90 84 15	224
0.50 to < 0.75 0.75 to < 2.50 2.50 to < 10.00 10.00 to < 100.00 100.00 (Default)	1,700 6,332 2,398 492 35 20,273	17 933 174 17 - 6,860	129.9 31.8 40.5 69.9	1,721 6,628 2,468 506 35 21,497	0.59 1.37 4.67 18.36 100.00 1.70	8,409 29,757 13,604 4,434 431 150,598	72.3 61.5 76.9 88.8 54.5		993 4,619 2,777 934 68	58 70 113 185 194	8 58 90 84 15	224
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	1,700 6,332 2,398 492 35 20,273	17 933 174 17 - 6,860 es by portfolic	129.9 31.8 40.5 69.9	1,721 6,628 2,468 506 35 21,497	0.59 1.37 4.67 18.36 100.00 1.70	8,409 29,757 13,604 4,434 431 150,598	72.3 61.5 76.9 88.8 54.5	h	993 4,619 2,777 934 68	58 70 113 185 194	8 58 90 84 15	224
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	1,700 6,332 2,398 492 35 20,273	17 933 174 17 - 6,860 es by portfolic b	129.9 31.8 40.5 69.9 - 17.8 0 and PD ran	1,721 6,628 2,468 506 35 21,497 ges – for IRB a	0.59 1.37 4.67 18.36 100.00 1.70	8,409 29,757 13,604 4,434 431 150,598	72.3 61.5 76.9 88.8 54.5 60.7	h	993 4,619 2,777 934 68 12,155	58 70 113 185 194	8 58 90 84 15 271	
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	1,700 6,332 2,398 492 35 20,273 dit risk exposure	17 933 174 17 - 6,860 es by portfolic b Off- balance	129.9 31.8 40.5 69.9 - 17.8 0 and PD ran	1,721 6,628 2,468 506 35 21,497 ges – for IRB a	0.59 1.37 4.67 18.36 100.00 1.70	8,409 29,757 13,604 4,434 431 150,598	72.3 61.5 76.9 88.8 54.5 60.7	h	993 4,619 2,777 934 68 12,155	58 70 113 185 194	8 58 90 84 15 271	
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	1,700 6,332 2,398 492 35 20,273 dit risk exposure a Original on-balance	17 933 174 17 - 6,860 b Off- balance sheet	129.9 31.8 40.5 69.9 - 17.8 and PD ran c	1,721 6,628 2,468 506 35 21,497 ges – for IRB a d	0.59 1.37 4.67 18.36 100.00 1.70 pproach (Tot	8,409 29,757 13,604 4,434 431 150,598	72.3 61.5 76.9 88.8 54.5 60.7		993 4,619 2,777 934 68 12,155	58 70 113 185 194 57	8 58 90 84 15 271	
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 Table 33.3: CR6 – Crec	1,700 6,332 2,398 492 35 20,273 dit risk exposure a Original on-balance sheet gross	17 933 174 17 - 6,860 b Off- balance sheet exposures	129.9 31.8 40.5 69.9 - 17.8 and PD ran c	1,721 6,628 2,468 506 35 21,497 ges – for IRB a d EAD post CRM and post-	0.59 1.37 4.67 18.36 100.00 1.70 pproach (Tot	8,409 29,757 13,604 4,434 431 150,598 al) f	72.3 61.5 76.9 88.8 54.5 60.7	Average	993 4,619 2,777 934 68 12,155	58 70 113 185 194 57	8 58 90 84 15 271	1
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	1,700 6,332 2,398 492 35 20,273 dit risk exposure a Original on-balance sheet gross exposure	17 933 174 17 - 6,860 b Off- balance sheet	129.9 31.8 40.5 69.9 - 17.8 and PD ran c Average CCF	1,721 6,628 2,468 506 35 21,497 ges – for IRB a d EAD post CRM and post- CCF	0.59 1.37 4.67 18.36 100.00 1.70 pproach (Tot	8,409 29,757 13,604 4,434 431 150,598	72.3 61.5 76.9 88.8 54.5 60.7		993 4,619 2,777 934 68 12,155	58 70 113 185 194 57 j	8 58 90 84 15 271 k	1 Provisions^
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 Table 33.3: CR6 – Crec	1,700 6,332 2,398 492 35 20,273 dit risk exposure a Original on-balance sheet gross	17 933 174 17 - 6,860 b Off- balance sheet exposures	129.9 31.8 40.5 69.9 - 17.8 and PD ran c	1,721 6,628 2,468 506 35 21,497 ges – for IRB a d EAD post CRM and post-	0.59 1.37 4.67 18.36 100.00 1.70 pproach (Tot	8,409 29,757 13,604 4,434 431 150,598 al) f	72.3 61.5 76.9 88.8 54.5 60.7	Average	993 4,619 2,777 934 68 12,155	58 70 113 185 194 57	8 58 90 84 15 271	1

^{*} 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.

Table 34: CR10 – Specialised lending under supervisory slotting criteria approach – other than high-volatility commercial real estate ('HVCRE')

As at 31 Dec 2	2021	a	b	c	d(i)	d(ii)	d(iii)	d(iv)	d(v)	e	f
			Off-	_]	EAD amou	nt	-		
Supervisory Rating		On-balance sheet exposure amount	balance sheet exposure amount	Supervi- sory risk- weight ('SRW')	Project finance ('PF')	Object finance ('OF')	Commodities finance ('CF')	Income- producing real estate ('IPRE')	Total	RWA	Expected loss amount
Grade	Remaining Maturity	HK\$m	HK\$m	%	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Strong^	Less than 2.5 years	15,052	853	50%	-	-	-	15,483	15,483	7,742	
Strong	Less than 2.5 years	4,975	1,521	70%	-	-	-	5,481	5,481	3,837	22
Strong	Equal to or more than 2.5 years	9,828	1,043	70%	-	-	-	10,198	10,198	7,138	41
Good^	Less than 2.5 years	4,843	152	70%	-	-	-	4,921	4,921	3,445	20
Good	Less than 2.5 years	1,915	724	90%	-	-	-	2,183	2,183	1,965	17
Good	Equal to or more than 2.5 years	1,695	54	90%	-	-	-	1,746	1,746	1,571	14
Satisfactory		1,015	553	115%	-	-	-	1,197	1,197	1,377	34
Weak		906	1	250%	-	-	-	906	906	2,264	72
Default		-	-	0%	-	-	-	-	-	-	
Total		40,229	4,901		-	-	-	42,115	42,115	29,339	220

[^] Use of preferential risk-weights.

Table 35: CR10 – Equity exposures under the simple risk-weight method

As at 31 Dec 2021	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	-	-	300%	-	-
All other equity exposures	4,997	-	400%	4,997	19,989
Total	4,997	-		4,997	19,989

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 36: CR5 – Credit risk exposur	es by asset c	lasses and	by risk wei	ghts – for S	TC approac	h					
[a	b	c	d	e	f	g	h	ha	i	j
As at 31 Dec 2021 Risk weight	0%	10%	20%	35%	50%	75%	100%	150%	250%	Others	Total credit risk exposures amount (post CCF and post CRM)
	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	174	-	-	-	-	-	-	-	-		174
2 PSE exposures	19,148	-	8,264	-	1	-	-	-	-	-	27,413
2a Of which: Domestic PSEs	-	-	4,748	-	-	-	-	-	-	-	4,748
2b Of which: Foreign PSEs	19,148	-	3,516	-	1	-	-	-	-	-	22,665
3 Multilateral development bank											
exposures	-	-	-	-	_	-	_	-	-	-	-
4 Bank exposures	-	-	61	-	-	-	-	-	-	-	61
5 Securities firm exposures	-	-	-	-	1	-	-	-	-	-	1
6 Corporate exposures	-	-	674	-	798	-	55,474	-	-	-	56,946
7 CIS exposures	-	-	-	-	-	-	-	-	-	-	-
8 Cash items	-	-	-	-	-	-	-	-	-	-	-
Exposures in respect of failed delivery on transactions entered into on a basis other than a delivery-versus-payment basis	_		_							_	_
10 Regulatory retail exposures	-		-	-	-	4,512	-	-	-	-	4,512
11 Residential mortgage loans	-	-	-	26,269	-	834	2,774	-	-		29,877
12 Other exposures which are not past due exposures	_			_	_		5,023		_		5,023
13 Past due exposures	1						3,023 87	241			
14 Significant exposures to commercial entities							- 07				327
15 Total	19,323		8,999	26,269	800	5,346	63,358	241			124,336

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, terms, control and valuation with regard to different types of collateral security are established to ensure that they are supported by empirical 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 and deposits; 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 mitigants, 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.

Table 37: CR3 – Overview of recognised credit risk mitigation

	a	b1	b	d	f
	Exposures		Exposures secured by	Exposures secured	Exposures secured by recognised
	unsecured: carrying amount	Exposures to be secured		by recognised	credit derivative
As at 31 Dec 2021	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
1 Loans	377,367	703,137	579,218	123,919	-
2 Debt securities	366,194	734	-	734	-
3 Total	743,561	703,871	579,218	124,653	-
4 of which: Defaulted	2,403	5,326	4,155	1,171	-

Table 38: CR7 - Effects on RWA of recognised credit derivative contracts used as recognised credit risk mitigation - for IRB approach

	a	b
	Pre-credit	Actual
	derivatives RWA	RWA
As at 31 Dec 2021	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)	29,339	29,339
5 Corporate – Specialised lending (high-volatility commercial real estate)	-	-
6 Corporate – Small-and-medium sized corporates	55,955	55,955
7 Corporate – Other corporates	258,575	258,575
8 Sovereigns	9,614	9,614
9 Sovereign foreign public sector entities	=	-
10 Multilateral development banks	1,483	1,483
11 Bank exposures – Banks	9,421	9,421
12 Bank exposures – Securities firms	399	399
13 Bank exposures – Public sector entities (excluding sovereign foreign public sector entities)	-	-
14 Retail – Small business retail exposures	274	274
15 Retail – Residential mortgages to individuals	66,693	66,693
16 Retail – Residential mortgages to property-holding shell companies	851	851
17 Retail – Qualifying revolving retail exposures	21,417	21,417
18 Retail – Other retail exposures to individuals	12,155	12,155
19 Equity – Equity exposures under market-based approach (simple risk-weight method)	19,989	19,989
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	605	605
27 Other – Other items	40,866	40,866
28 Total (under the IRB calculation approaches)	527,636	527,636

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

Table 39: CR4 – Credit risk exposures and effects of recognised credit risk mitigation – for STC approach

		a	b	c	d	e	f
		Exposures and pre	•	Exposures and pos	-	RWA and R	WA density
		On-balance	Off-balance	On-balance	Off-balance		
As	at 31 Dec 2021	sheet amount	sheet amount	sheet amount	sheet amount	RWA	RWA density
		HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	%
	Exposure classes						
1	Sovereign exposures	-	-	174	-	-	-
2	PSE exposures	27,238	400	27,238	175	1,654	6
2a	Of which: Domestic PSEs	4,573	400	4,573	175	950	20
2b	Of which: Foreign PSEs	22,665	-	22,665	-	704	3
3	Multilateral development bank exposures	-	-	-	-	-	-
4	Bank exposures	61	-	61	-	12	20
5	Securities firm exposures	1	-	1	-	1	50
6	Corporate exposures	57,830	28,238	54,715	2,231	56,006	98
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	5,417	10,193	4,503	9	3,384	75
11	Residential mortgage loans	29,924	4,346	29,877	-	12,594	42
12	Other exposures which are not past due	12,035	6,968	4,911	112	5,023	100
13	Past due exposures	329	-	329	-	449	136
14	Significant exposures to commercial entities	-	-	-	-	-	-
15	Total	132,835	50,145	121,809	2,527	79,123	64

Remark:

Exposure pre-CCF and pre-CRM is reported under obligor's corresponding exposure class. Where the exposure is covered by a guarantee, the credit protection covered portion of the exposure is reported under the exposure class of credit protection provider in columns (c) & (d).

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

	b		c		d	e	f		g	h	i
		External	External				Number of o	bligors ^{2,3}			Average historical
		rating	rating	External rating		Arithmetic			Defaulted	defaulted	annual
		equivalent	equivalent	equivalent			Beginning of	End of	obligors in	obligors in	default
Portfolio	PD Range	(S&P)	(Moody's)	(Fitch)	average PD ¹	by obligors ¹	the year	the year	the year	the year	rate
As at 31 Dec 2					%	%					%
Sovereign	0.00 to < 0.15	AAA to BBB	Aaa to Baa2	AAA to BBB	0.01	0.01	24	20	-	-	-
	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-	-	-	-	-	-	-	-
		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+	0.04	0.06	55	53	-	-	-
	0.15 to < 0.25	BBB+	Baa2	BBB	0.22	0.22	6	6	-	-	-
	0.25 to < 0.50	BBB	Baa3	BBB-	0.37	0.37	5	4	-	-	-
	0.50 to < 0.75	BBB-	Baa3	BBB-	0.63	0.63	5	5	-	-	-
	0.75 to < 2.50	BB+ to BB-	Ba1 to B1	BB+ to B+	0.87	0.87	2	4	-	-	-
		B+ to B-	B2 to Caa1	B to CCC+	3.05	3.05	1	-	-	-	-
	10.00 to < 100.00	CCC+ to C	Caa1 to C	CCC to C	-	-	-	-		-	-
Corporate –	0.00 to < 0.15	AAA to A-	Aaa to Baa1	AAA to BBB+	0.13	0.12	75	62			-
small-and-	0.15 to < 0.25	BBB+	Baa2	BBB	0.22	0.22	110	142			-
medium	0.25 to < 0.50	BBB	Baa3	BBB-	0.37	0.37	232	210	-	-	0.48
sized	0.50 to < 0.75	BBB-	Baa3	BBB-	0.63	0.63	371	336	-	-	-
corporates	0.75 to < 2.50	BB+ to BB-	Ba1 to B1	BB+ to B+	1.35	1.50	1,204	1,079	3	-	0.17
		B+ to B-	B2 to Caa1	B to CCC+	4.14	3.82	265	240	5	-	1.27
·	10.00 to < 100.00	CCC+ to C	Caa1 to C	CCC to C	10.26	11.33	9	9	4		21.75
Corporate -	0.00 to < 0.15	AAA to A-	Aaa to Baa1	AAA to BBB+	0.10	0.10	190	198			
others ⁴	0.15 to < 0.25	BBB+	Baa2	BBB	0.22	0.22	167	208			0.41
	0.25 to < 0.50	BBB	Baa3	BBB-	0.37	0.37	245	237	-	-	0.29
	0.50 to < 0.75	BBB-	Baa3	BBB-	0.63	0.63	301	308	2	-	0.32
	0.75 to < 2.50	BB+ to BB-	Ba1 to B1	BB+ to B+	1.34	1.53	956	925	11	1	0.59
	2.50 to < 10.00	B+ to B-	B2 to Caa1	B to CCC+	4.36	4.07	204	228	5	-	2.02
	10.00 to < 100.00	CCC+ to C	Caa1 to C	CCC to C	14.13	14.50	6	21	3	-	12.22

Note:

¹ The weighted average PD% and the arithmetic average PD% by obligors are based on the position at the beginning of the year.

² The number of obligors represents the obligor rated by key wholesale IRB models directly.

³ 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.

⁴ Specialised lending exposures are excluded.

Table 40.2: CR9 – Back-testing of PD per portfolio – for IRB approach (Retail)

a	b	С	d	e	f		g	h	i
					Number of	obligors ²		of which:	Average
								new	historical
				Arithmetic			Defaulted	defaulted	annual
		External rating	Weighted	average PD	Beginning of	End of	obligors in	obligors in	default
Portfolio	PD Range	equivalent**	average PD ¹	by obligors ¹	the year	the year	the year	the year	rate
As at 31 Dec 2021			%	%					%
Retail – QRRE	0.00 to < 0.15		0.07	0.07	1,899,267	1,919,485	823	5	0.04
	0.15 to < 0.25		0.22	0.22	181,281	183,650	195	6	0.10
	0.25 to < 0.50		0.40	0.40	197,314	209,451	375	1	0.17
	0.50 to < 0.75		0.60	0.59	58,070	58,348	203	6	0.35
	0.75 to < 2.50		1.43	1.35	223,411	231,221	1,037	15	0.49
	2.50 to < 10.00		4.78	4.57	70,155	70,105	1,460	2	2.23
	10.00 to < 100.00		32.25	38.68	18,559	16,012	2,236	•	11.42
Retail – residential mortgage	0.00 to < 0.15		0.08	0.10	56,173	60,661	16		0.03
exposures	0.15 to < 0.25		0.18	0.17	27,587	25,533	9	-	0.03
	0.25 to < 0.50		0.35	0.35	137	98	-	-	0.06
	0.50 to < 0.75		0.53	0.53	9,012	9,197	6	-	0.18
	0.75 to < 2.50		0.93	0.95	14,322	13,294	17	-	0.16
	2.50 to < 10.00		4.78	4.78	3,499	3,449	14		0.75
	10.00 to < 100.00		18.28	18.28	2,920	2,617	77	-	5.82
Retail – small business retail	0.00 to < 0.15		0.08	0.07	1,079	1,311			-
exposures	0.15 to < 0.25		0.19	0.19	133	150			-
	0.25 to < 0.50		0.48	0.48	60	-	-		-
	0.50 to < 0.75		0.55	0.55	167	263	-	-	-
	0.75 to < 2.50		1.23	1.24	101	103	-	-	-
	2.50 to < 10.00		6.10	6.07	203	200	-	-	0.27
	10.00 to < 100.00		-	-	-	-	-		-
Other retail exposures to	0.00 to < 0.15		0.08	0.08	13,999	13,253	1		0.02
individuals	0.15 to < 0.25		0.21	0.20	11,985	11,199	8	-	0.07
	0.25 to < 0.50		0.32	0.33	47,625	46,556	70	3	0.15
	0.50 to < 0.75		0.58	0.60	10,489	9,430	36	3	0.32
	0.75 to < 2.50		1.38	1.43	32,324	29,294	304	32	0.85
	2.50 to < 10.00		4.63	4.70	16,665	14,543	529	45	2.84
	10.00 to < 100.00		19.53	20.16	5,923	4,720	590	2	10.31

^{**} External rating equivalent is not applicable to retail exposures.

Note:

^{1.} The weighted average PD% and the arithmetic average PD% by obligors are based on the position at the beginning of the year.

^{2.} The number of obligors is based on account level information for all retail IRB portfolios.

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 Banking (Capital) (Amendment) Rules 2020 came into effect on 30 June 2021 and the Group replaces the current exposure method ('CEM') with standardised (counterparty credit risk) ('SA-CCR') approach to calculate its default risk exposures accordingly.

The SA-CCR retains the same general structure as that used in the CEM, consisting of two key regulatory components: replacement cost and potential future exposure ('PFE'). In addition, an 'alpha' factor of 1.4 is applied to the sum of these components in arriving at the exposure at default ('EAD').

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 and SFT trading undertaken with the counterparty.

Credit valuation adjustment

CVA represent the risk of loss as a result of adverse changes to the credit quality of counterparties in derivative transactions. The Group 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 2021, 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 Bank's 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 HASE framework and limit framework.

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.

To manage the significant concentration of risk in CCPs that results from this, the Bank has adopted a risk appetite framework to manage risk accordingly, at the level of individual CCP and globally. The Bank undertakes in-depth due diligence of the unique risks associated with these organisations.

Table 41: CCR1 – Analysis of counterparty default risk exposures (other than those to CCPs) by approaches

		a	b	c	d	e	f
As a	at 31 Dec 2021	Replacement cost ('RC') HK\$m	PFE	Effective expected positive exposure ('EPE') HK\$m	Alpha (α) used for computing default risk exposure	Default risk exposure after CRM HK\$m	RWA HK\$m
1	SA-CCR approach (for derivative contracts)	4,619	16,338		1.4	29,340	6,978
1a	CEM (for derivative contracts)	-	-		1.4	-	-
2	IMM (CCR) approach			-	-	-	-
3	Simple approach (for SFTs)					-	-
4	Comprehensive approach (for SFTs)					2,577	262
5	VaR for SFTs					-	-
6	Total						7,240

Table 42: CCR2 - CVA capital charge

		a	b
		EAD post-CRM	RWA
As	at 31 Dec 2021	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	29,340	7,191
4	Total	29,340	7,191

Table 43: CCR8 – Exposures to CCPs

		a	b
			U
		Exposure after CRM	RWA
A -	at 31 Dec 2021		
As		HK\$m	HK\$m
1	Exposures of the AI as clearing member or clearing client to qualifying CCPs (total)		
2	Default risk exposures to qualifying CCPs (excluding items disclosed in rows 7 to 10), of which:	248	5
3	(i) Over-the-counter ('OTC') derivative transactions	248	5
4	(ii) Exchange-traded derivative contracts	-	-
5	(iii) Securities financing transactions	-	-
6	(iv) Netting sets subject to valid cross-product netting agreements	-	-
7	Segregated initial margin		
8	Unsegregated initial margin	17	-
9	Funded default fund contributions	77	2
10	Unfunded default fund contributions	-	
11	Exposures of the AI as clearing member or clearing 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) OTC derivative transactions	-	-
14	(ii) Exchange-traded derivative contracts	-	-
15	(iii) Securities financing transactions	-	<u>-</u>
16	(iv) Netting sets subject to valid cross-product netting agreements		<u>-</u>
17	Segregated initial margin		
18	Unsegregated initial margin	-	-
19	Funded default fund contributions	-	-
20	Unfunded default fund contributions	-	

Table 44: CCR5 – Composition of collateral for counterparty default risk exposures (including those for contracts or transactions cleared through CCPs)

			Derivative	contracts		SF	`s	
		Fair value of collateral	0	Fair va posted co		Fair value of recognised	Fair value of	
		Segregated	Unsegregated	nsegregated Segregated		collateral received	posted collateral	
As at 31 Dec 2021		HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	
1	Cash – domestic currency	-	-	-	202	-	-	
2	Cash – other currencies	-	1,901	-	960	13,667	26,002	
3	Domestic sovereign debt	-	-	-	-	-	-	
4	Other sovereign debt	-	38	-	-	7,496	14,976	
5	Government agency debt	-	-	-	-	-	-	
6	Corporate bonds	-	-	-	-	14,749	8	
7	Equity securities	-	-	-	-	-	-	
8	Other collateral	-	-	-	-	5,049	2,552	
9	Total		1,939	-	1,162	40,961	43,538	

Counterparty default risk under internal ratings-based approach

Table 45: 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
	EAD post-	Ü	Number of		Average	1	ь
As at 31 Dec 2021	CRM	Average PD		Average LGD	maturity	RWA	RWA density
PD scale	HK\$m	%	0.011.501.5	%	years	HK\$m	%
Sovereign		,,		,,	jeurs		,,,
0.00 to < 0.15	56	0.02	1	45.0	1.00	3	6
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	56	0.02	1	45.0	1.00	3	6
Bank							
0.00 to < 0.15	24,970	0.04	105	39.1	1.77	3,769	15
0.15 to < 0.25	726	0.22	11	45.0	0.94	304	42
0.25 to < 0.50	927	0.37	6	45.0	0.99	537	58
0.50 to < 0.75	51	0.63	1	45.0	1.00	39	77
0.75 to < 2.50	40	1.20	2	45.0	0.33	29	72
2.50 to < 10.00	-	-	-	-	-	-	_
10.00 to < 100.00	-	-	-	-	-	-	-
100.00 (Default)	-	-	-	-	-	-	-
Sub-total	26,714	0.06	125	39.4	1.72	4,678	18
Corporates							
0.00 to < 0.15	2,832	0.07	20	36.0	1.44	507	18
0.15 to < 0.25	300	0.22	15	52.1	2.14	174	58
0.25 to < 0.50	521	0.37	26	54.1	1.08	278	53
0.50 to < 0.75	161	0.63	28	53.4	1.77	140	87
0.75 to < 2.50	316	1.29	38	58.0	1.50	334	106
2.50 to < 10.00	314	3.98	19	61.2	1.00	517	165
10.00 to < 100.00	-	-	-	-	-	-	-
100.00 (Default)	-	-	-	-	-	-	_
Sub-total	4,444	0.50	146	43.2	1.43	1,950	44
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)	31,214	0.12	272	40.0	1.68	6,631	21

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.

Counterparty default risk under standardised approach

Table 46: CCR3 - Counterparty default risk exposures (other than those to CCPs) by asset classes and by risk weights - for STC approach

> Total default risk exposure after CRM HK\$m

	Risk weight	0% HK\$m	10% HK\$m	20% HK\$m	35% HK\$m	50% HK\$m	75% HK\$m	100% HK\$m	150% HK\$m	250% HK\$m	Others HK\$m	after CRM HK\$m
	Exposure class											
1	Sovereign exposures	-	-	-	-	-	-	-	-	-	-	-
2	PSE exposures	-	-	93	-	-	-	-	-	-	-	93
2a	Of which: Domestic PSEs	-	-	93	-	-	-	-	-	-	-	93
2b	Of which: Foreign PSEs	-	-	-	-	-	-	-	-	-	-	-
3	Multilateral development bank exposures	-	-	-	-	-	-	-	-	-	-	
4	Bank exposures	-	-	-	-	-	-	-	-	-	-	-
5	Securities firm exposures	-	-	-	-	-	-	-	-	-	-	
6	Corporate exposures	-	-	-	-	-	-	400	-	-	-	400
7	CIS exposures	-	-	-	-	-	-	-	-	-	-	-
8	Regulatory retail exposures	-	-	-	-	-	76	-	-	-	-	76
9	Residential mortgage loans	-	-	-	-	-	-	-	-	-	-	-
10	Other exposures which are not past due exposures	-	-	-	-	-	-	130	-	-	-	130
11	Significant exposures to commercial entities	-	-	-	-	-	-	-	-	-	-	
12	Total		-	93	-	-	76	530	-	-	-	699

Market risk

Overview and governance

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

Exposure to market risk is separated into two portfolios:

- Trading portfolios: these comprise positions held for client servicing and market-making, with the intention of short-term resale and/or to hedge risks resulting from such positions.
- Non-trading portfolios: these comprise positions that primarily arise from the interest rate management of our retail and commercial banking assets and liabilities, financial investments measured at fair value through other comprehensive income, debt instruments measured at amortised cost.

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 established risk appetite.

Market risk governance

The Group's total VaR, trading VaR and stressed VaR ('SVaR') reside in Global Markets which manages market risk, within overall risk limits set by the CRO and approved by the Board.

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 risk 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 asset class and risk type. Granular sensitivity limits are set for each trading desk taking into consideration market liquidity, customer demand and capital constraints, amongst other factors.

VaR

VaR is a technique that estimates the potential mark-to-market losses on derivative, security and money market 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 an integral part of our market risk management framework and is calculated for a scope of trading and non-trading positions which is wider than the set of trading positions which are capitalised under a VaR treatment.

Our models are predominantly based on historical simulation. VaR for trading portfolios is calculated at a 99% confidence level for a one-day holding period.

Our VaR models use historical series of market rates and prices, implicitly taking into account inter-relationships between different markets and rates such as interest rates and foreign exchange rates.

The primary categories of risk factors driving market risk are summarised below:

Risk factor	Description
Foreign exchange	Risk arising from change in foreign exchange rates and volatilities.
	Risk arising from changes in the level of interest rates and credit spreads that may impact prices of interest rate and credit spread sensitive assets.
Equity	Risk arising from changes in equity prices, volatilities and dividend yields.
Commodity	Risk arising from changes in commodity prices.

Our models use a mixed approach when applying changes in market rates and prices:

- For equity, credit and foreign exchange risk factors, VaR scenarios are calculated on a relative return basis.
- For interest rates, a mixed approach is used. The scenarios applied to volatilities are on a relative return basis, whereas the scenarios applied to interest rate curves are calculated using a hybrid of absolute and relative returns. This approach enables the VaR to smoothly adapt to either low or high interest rate environments and to support negative rates.

The Group uses the past two years as the historical data set in our VaR models and the scenarios are updated on a weekly basis. These scenarios are then applied to the market baselines and positions on a daily basis. The models incorporate the effect of option features on the underlying exposures.

The valuation approach used in our models varies:

- non-linear instruments use a full revaluation approach; and
- linear instruments, such as bonds and swaps, use a sensitivity based approach.

The nature of the VaR models means that an increase in observed market volatility will lead to an increase in VaR even without any changes in the underlying positions.

VaR model limitations

Although a valuable guide to risk, VaR is used with awareness 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 1-day holding period for risk management purposes of trading and non-trading books assumes that this short period is sufficient to hedge or liquidate all positions;
- 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 risks not in VaR ('RNIV') framework captures risks from exposures in the trading book that are not captured well by the VaR model. Our VaR model is designed to capture significant basis risk such as cross-currency basis. Other basis risks that are not completely covered in VaR are complemented by our RNIV calculations and are integrated into our capital framework.

Risk factors are reviewed on a regular basis and either incorporated directly in the VaR models, where possible, or quantified through either the VaR-based RNIV approach or a stress test approach within the RNIV framework. While VaR-based RNIVs are calculated by using historical scenarios, stress-type RNIVs are estimated on the basis of stress scenarios whose severity is calibrated to be in line with the capital adequacy requirements.

Backtesting

The Group validates on a daily basis the accuracy of the VaR models by back-testing them against both actual and hypothetical profit and loss. 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. A VaR model is deemed satisfactory if it experiences fewer than five profit or loss exceptions in a 250-day period. VaR backtesting is performed at various levels of our Group entity hierarchy. Back-testing using the regulatory hierarchy includes entities which have approval to use VaR in the calculation of market risk regulatory capital requirements.

Stress testing

Stress testing is an integral part of our market risk management framework which is used to evaluate the potential impact on portfolio values of more extreme, although plausible, events or movements in a set of financial variables. In such scenarios, losses can be greater than those predicted by VaR modelling.

Stress testing is implemented at the legal entity and the overall Group levels. The risk appetite around potential stress losses for the Group is set and monitored against referral limits.

Market risk reverse stress tests are designed to identify vulnerabilities in our portfolios by looking for scenarios that lead to loss levels considered severe for the relevant portfolio. These scenarios may be local or idiosyncratic in nature, and complement the systematic top-down stress testing.

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.

The market risk stress testing incorporates historical and hypothetical events.

Market risk capital models

The Gorup has permission to use a number of market risk capital models to calculate regulatory capital as listed in the table below. For regulatory purposes, the trading book comprises all positions in financial instruments and commodities held with trading intent and positions where it can be demonstrated that they hedge positions in the trading book. Trading book positions must either be free of any restrictive covenants on their tradability or be capable of being hedged.

A financial instrument is defined as any contract that gives rise to both a financial asset to one party and a financial liability or equity instrument to another party.

Positions in the trading book are subject to market risk-based rules, i.e. market risk capital, calculated using regulatory approved models. Where the Group does not have permission to use internal models, market risk capital is calculated using the standardised approach.

Model Component	Confidence level	Liquidity horizon	Model description and methodology
VaR	99%	,	Uses most recent two years' history of daily returns to determine a loss distribution. The result is scaled, using the square root of 10, to provide an equivalent 10-day loss.
Stressed VaR	99%	_	Stressed VaR is calibrated to a one-year period of stress observed in history.

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

We calculate VaR for regulatory purposes only in respect of the trading books for which we have received approval to use an internal model from the regulator. Regulatory VaR levels contribute to the calculation of market risk RWAs.

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 that:

- 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; and
- 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.

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

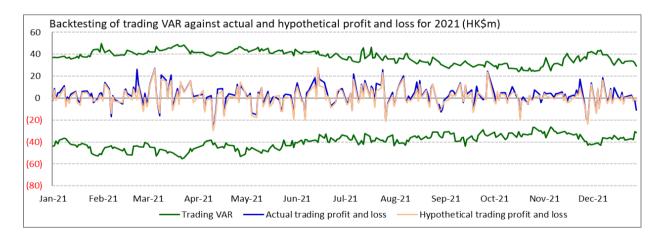
M	arket risk under standardised approach	
Ta	ble 47: MR1 – Market risk under STM approach	
		a
	04 D - 0004	RWA
As	at 31 Dec 2021	HK\$m
	Outright product exposures	
1	Interest rate exposures (general and specific risk)	312
2	Equity exposures (general and specific risk)	-
3	Foreign exchange (including gold) exposures	-
4	Commodity exposures	1
	Option exposures	
5	Simplified approach	-
6	Delta-plus approach	
7	Other approach	-
8	Securitisation exposures	-
9	Total	313

Analysis of VaR, stressed VaR and incremental risk charge measures

Table 48: MR3 – IMM approach values for market risk exposures

	a
	Value
As at 31 Dec 2021	HK\$m
VaR (10 days – one-tailed 99% confidence interval)	
1 Maximum Value	175
2 Average Value	126
3 Minimum Value	83
4 Period End	99
Stressed VaR (10 days – one-tailed 99% confidence interval)	
5 Maximum Value	374
6 Average Value	228
7 Minimum Value	156
8 Period End	200
IRC (99.9% confidence interval)	
9 Maximum value	-
10 Average value	-
11 Minimum value	<u> </u>
12 Period end	<u> </u>
CRC (99.9% confidence interval)	
13 Maximum value	<u>-</u>
14 Average value	-
15 Minimum value	-
16 Period end	-
17 Floor	-

Table 49: MR4 - Comparison of VaR estimates with gains or losses



In 2021, there was no profit or loss exception at the Group consolidated level.

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 uncertainty, model risk, concentration, administration cost, unearned credit spreads and investing and funding costs.

Table 50: PV1 – Prudent valuation adjustments

		a	b	c	d	e	f	g	h
As	at 31 Dec 2021	Equity HK\$m	Interest rates HK\$m	Foreign Exchange HK\$m	Credit HK\$m	Commo- dities HK\$m	Total HK\$m	Of which: In the trading book HK\$m	Of which: In the banking book HK\$m
1	Close-out uncertainty	(31)	(78)	(3)	-	- 1111ψIII	(112)	(29)	(83)
2	-for which: Mid-market value	(31)	(33)	(2)	-	_	(66)	(14)	(52)
3	Close-out costs	-	(15)	(1)	-	-	(16)	(11)	(5)
4	Concentration	-	(30)	-	-	-	(30)	(4)	(26)
5	Early termination	-	-	-	-	-	-	-	-
6	Model risk	-	-	-	-	-	-	-	-
7	Operational risks	(3)	(4)	-	-	-	(7)	(3)	(4)
8	Investing and funding costs	-	-	-	-	-	-	-	-
9	Unearned credit spreads	(1)	(3)	(3)	-	-	(7)	(7)	-
10	Future administrative costs	-	-	-	-	-	-	-	-
11	Other adjustments	-	-	-	-	-	-	-	-
12	Total adjustments	(35)	(85)	(6)	-	-	(126)	(39)	(87)

Note:

The numbers above represent negative valuation adjustments for assets measured at fair value.

Liquidity information

The liquidity coverage ratio ('LCR') aims to ensure that a bank has sufficient unencumbered high quality liquid assets ('HQLA') to meet its liquidity needs in a 30 calendar day liquidity stress scenario. The group also uses the net stable funding ratio ('NSFR') as a basis for ensuring operating entities raise sufficient stable funding to support their business activities. The NSFR requires institutions to maintain minimum amount of stable funding based on assumptions of asset liquidity.

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 51: LIQA - LCRs and NSFRs on three liquidity reporting bases

	LCR	NSFR
As at 31 Dec 2021	%	%
Hong Kong Office	196.0	148.1
Unconsolidated	191.0	146.9
Consolidated	192.7	147.4

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 are set out in pages 96 to 101 of the Group's 2021 Annual Report*. The balance sheet items, broken down into maturity buckets are disclosed in Note 21 'Maturity Analysis of assets and liabilities' on the consolidated financial statements in pages 202 to 204 of the Group's 2021 Annual Report*.

Annual Report (Printed version) Annual Report (Text version)

 Pages 96 to 101
 Pages 101 to 105

 Pages 202 to 204
 Pages 227 to 228

^{*} Refers to printed version. The page reference of Annual Report (text version) is as follows:

The Group is required to calculate its LCR and NSFR on a consolidated basis in accordance with rule 11(1) of the BLR and to maintain both LCR and NSFR of not less than 100%.

Table 52: Average liquidity coverage ratio	
	Quarter ended
	31 Dec
	2021
	%
Average liquidity coverage ratio	191.8

The average LCR was 191.8% for the quarter ended 31 December 2021. The liquidity position of the Group remained strong and above statutory requirement of 100%.

The composition of the Group's 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 comprise mainly of government debt securities.

Table 53: Total weighted amount of high quality liquid assets	
	Weighted value (average) for the quarter ended
	31 Dec 2021
	HK\$m
Level 1 assets	350,120
Level 2A assets	17,013
Level 2B assets	2,321
Total weighted amount of HQLA	369,454

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

In times of stress it cannot automatically be assumed that one currency can always be converted for another, even if those currencies are 'hard' currencies. LCR is therefore assessed by single currency for those that are material. In some currencies, convertibility is restricted by regulators and central banks and this restriction results in local currency not being convertible offshore or even onshore. All operating entities are required to monitor material single currency LCR. Limits are approved by local Asset and Liability Management Committee ('ALCO')/Tactical Asset and Liability Management Committee (TALCO'), and monitored by local 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), the additional collateral required to post in the event of one-notch and two-notch downgrade in credit ratings is nil.

A summary of the Group's current policies and practices for the management of liquidity and funding risk is set out in pages 96 to 101 of the Group's 2021 Annual Report*.

^{*} Refers to printed version. The page reference of Annual Report (text version) is pages 101 to 105.

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 2021 was 74.

Tab	le 54: LIQ1 – Liquidity coverage ratio – for category 1 institution	Quarter ended	31 Dec 2021
		(74 data	points)
		a	b
		Unweighted	
		value	Weighted value
Bas	is of disclosure: consolidated	(average)	(average)
		HK\$m	HK\$m
A	High quality liquid assets		
1	Total HQLA		369,454
В	Cash outflows		
2	Retail deposits and small business funding, of which:	877,084	70,844
3	Stable retail deposits and stable small business funding	240,920	7,228
4	Less stable retail deposits and less stable small business funding	636,164	63,616
4a	Retail term deposits and small business term funding	-	-
5	Unsecured wholesale funding (other than small business funding) and debt securities and prescribed		
	instruments issued by the institution, of which:	314,224	148,611
6	Operational deposits	41,444	9,713
7	Unsecured wholesale funding (other than small business funding) not covered in Row 6	257,222	123,340
8	Debt securities and prescribed instruments issued by the institution and redeemable within the LCR period	15,558	15,558
9	Secured funding transactions (including securities swap transactions)		6
10	Additional requirements, of which:	80,678	16,636
11	Cash outflows arising from derivative contracts and other transactions, and additional liquidity needs arising		
	from related collateral requirements	6,000	6,000
12	Cash outflows arising from obligations under structured financing transactions and repayment of funding		_
	obtained from such transactions	3,386	3,386
13	Potential drawdown of undrawn committed facilities (including committed credit facilities and committed		
	liquidity facilities)	71,292	7,250
14	Contractual lending obligations (not otherwise covered in Section B) and other contractual cash outflows	21,286	21,286
15	Other contingent funding obligations (whether contractual or non-contractual)	469,884	2,511
16	Total cash outflows		259,894
C	Cash inflows		
17	Secured lending transactions (including securities swap transactions)	8,443	3,813
18	Secured and unsecured loans (other than secured lending transactions covered in Row 17) and operational		
	deposits placed at other financial institutions	82,003	43,343
19	Other cash inflows	30,073	19,354
20	Total cash inflows	120,519	66,510
D	Liquidity coverage ratio (adjusted value)		
21	Total HQLA		369,454
22	Total net cash outflows		193,384
23	LCR (%)		191.8%

 $\overline{\text{Table 55: LIQ2} - \text{Net stable funding ratio} - \text{for category 1 institution}}$

			Quarte	er ended 31 Dec 20)21	
	-	Unw		residual maturity	,	
Bas	is of disclosure: consolidated	No specified	<6 months or			
		term to	repayable	6 months to	12 months	Weighted
		maturity	on demand	< 12 months	or more	amount
	Eastwate	•	HK\$m			
_	Footnote	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Α.	Available stable funding ('ASF') item					
1	Capital:	160,815	-	-	-	160,815
2	Regulatory capital	160,815	-	-	-	160,815
2a	Minority interests not covered by row 2	-	-	-	-	-
3	Other capital instruments	-	-	-	-	-
4	Retail deposits and small business funding:	-	886,873	-	-	810,386
5	Stable deposits		243,989	-	-	231,790
6	Less stable deposits		642,884	-	-	578,596
7	Wholesale funding:	-	379,254	10,321	912	168,267
8	Operational deposits		45,016	· •	-	22,508
9	Other wholesale funding		334,238	10,321	912	145,759
10	Liabilities with matching interdependent assets	_	-	- 10,021		
11	Other liabilities:	67,658	83,802	10,810	24,765	30,170
12	Net derivative liabilities	07,030	05,002	10,010	24,703	30,170
13	All other funding and liabilities not included in the					
13	above categories	67,658	83,802	10.010	24,765	20.170
1.4		07,038	03,002	10,810	24,703	30,170
14 D	Total ASF					1,169,638
B.	Required stable funding ('RSF') item					
15	Total HQLA for NSFR purposes 1		366,04	6		9,574
16	Deposits held at other financial institutions for operational					
	purposes	-	-	-	-	
17	Performing loans and securities:	38,792	299,085	126,960	685,585	711,068
18	Performing loans to financial institutions secured by					
	Level 1 HQLA	-	7,890	-	-	789
19	Performing loans to financial institutions secured by					
	non-Level 1 HQLA and unsecured performing loans to					
	financial institutions	6	70,322	5,311	12,513	25,723
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:	24.060	105 113	106.021	222.702	450 204
21	<u> </u>	34,868	185,112	106,031	333,703	458,384
21	With a risk-weight of less than or equal to 35%					
	under the STC approach	27	9,173	127	2,301	6,157
22	Performing residential mortgages, of which:	-	7,761	7,807	312,029	217,567
23	With a risk-weight of less than or equal to 35%					
	under the STC approach	-	6,783	6,728	277,211	186,942
24	Securities that are not in default and do not qualify as					
	HQLA, including exchange-traded equities	3,918	28,000	7,811	27,340	8,605
25	Assets with matching interdependent liabilities	-	-		-	-
26	Other assets:	80,759	16,642	-	1,045	69,363
27	Physical traded commodities, including gold	8,470	10,0.2		2,010	7,199
28	Assets posted as initial margin for derivative contracts	0,170				7,177
20	and contributions to default funds of CCPs	1 200				1 172
20	Net derivative assets	1,380				1,173
29		2				2
30	Total derivative liabilities before adjustments for					
	deduction of variation margin posted	2,982				149
31	All other assets not included in the above categories	67,925	16,642	-	1,045	60,840
32	Off-balance sheet items 1			544,357		3,328
33	Total RSF					793,333
34	Net Stable Funding Ratio (%)					147.4%

Table 55: LIQ2 – Net stable funding ratio – for category 1 institution (continued)

			Quarter ended 30 Sep 2021				
		_	Unv	veighted value by	residual maturity		
Bas	is of disclosure: consolidated		No specified	<6 months or			
			term to	repayable	6 months to	12 months	Weighted
			maturity	on demand	< 12 months	or more	amount
	Fo	otnote	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Α.	Available stable funding ('ASF') item						
1	Capital:		159,595	_	_	_	159,595
2	Regulatory capital		159,595	-	-	-	159,595
2a	Minority interests not covered by row 2		157,575	_		_	-
3	Other capital instruments					-	
4	Retail deposits and small business funding:			872,984		<u>-</u>	797,712
5	Stable deposits	-	-				
6	1	_		240,532	<u>-</u>		228,505
7	Less stable deposits			632,452	-	-	569,207
	Wholesale funding:	_	-	370,434	7,066	1,041	160,479
8	Operational deposits			43,359	-	-	21,680
9	Other wholesale funding		-	327,075	7,066	1,041	138,799
10	Liabilities with matching interdependent assets		-	-	-	-	
11	Other liabilities:		56,538	85,233	15,093	19,965	27,511
12	Net derivative liabilities		-				
13	All other funding and liabilities not included in the						
	above categories		56,538	85,233	15,093	19,965	27,511
14	Total ASF						1,145,297
B.	Required stable funding ('RSF') item						
15	Total HQLA for NSFR purposes	1		355,09	5		10,044
16	Deposits held at other financial institutions for operational						
	purposes		-	-	-	-	-
17	Performing loans and securities:		36,985	281,488	134,928	673,379	702,774
18	Performing loans to financial institutions secured by						
	Level 1 HQLA		_	7,831	-	-	783
19	Performing loans to financial institutions secured by			,			
	non-Level 1 HQLA and unsecured performing loans to						
	financial institutions		6	71,171	10,576	14,230	30,200
20	Performing loans, other than performing residential						<u> </u>
	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:		33,266	168,221	112,394	332,550	450,620
21	With a risk-weight of less than or equal to 35%						
	under the STC approach		33	5,221	150	3,107	4,722
22	Performing residential mortgages, of which:		-	7,669	7,862	305,621	213,147
23	With a risk-weight of less than or equal to 35%						
	under the STC approach		-	6,782	6,712	271,978	183,533
24	Securities that are not in default and do not qualify as						
	HQLA, including exchange-traded equities		3,713	26,596	4,096	20,978	8,024
25	Assets with matching interdependent liabilities		-	-	-	-	_
26	Other assets:		76,456	20,857	-	1,045	65,074
27	Physical traded commodities, including gold		8,741				7,430
28	Assets posted as initial margin for derivative contracts						
	and contributions to default funds of CCPs		1,463				1,244
29	Net derivative assets		67				67
30	Total derivative liabilities before adjustments for						
	deduction of variation margin posted		2,412				121
31	All other assets not included in the above categories		63,773	20,857	-	1,045	56,212
32	Off-balance sheet items	1	,		539,349	, , , , , , , , , , , , , , , , , , , ,	3,475
33	Total RSF						781,367
34	Net Stable Funding Ratio (%)						146.6%
							- 101070

The unweighted values disclosed in these rows are not required to split by residual maturity.

Other disclosures

Interest rate exposures in the banking book

Interest rate risk in the banking book (TRRBB') is the potential adverse impact of changes in interest rates on earnings and capital. The component of IRRBB that can be economically neutralised in the market is transferred to Markets Treasury to manage, in accordance with internal transfer pricing rules. In its management of IRRBB, the Group aims to balance mitigating the effect of future interest rate movements which could reduce net interest income against the cost of hedging. The monitoring of the projected net interest income and economic value of equity (EVE') sensitivity under varying interest rate scenarios is a key part of this.

Governance and structure

Asset, Liability and Capital Management ('ALCM') monitor and control non-traded interest rate risk. This includes reviewing and challenging the business prior to the release of new products and in respect of proposed behavioural assumptions used for hedging activities. ALCM is also responsible for maintaining and updating the transfer pricing framework, informing the ALCO of the Group's overall banking book interest rate risk exposure and managing the balance sheet in conjunction with Markets Treasury.

The ALCO defines each operating entity's transfer pricing curve, reviews and approves the transfer pricing policy, including behaviouralisation assumptions used for products where there is either no defined maturity or customer optionality exists.

The ALCO is also responsible for monitoring and reviewing each entity's overall structural interest rate risk position. Interest rate behaviouralisation policies are formulated in line with the Group's behaviouralisation policies and approved at least annually by local ALCOs. Banking book assets and liabilities are transferred to Markets Treasury based on their repricing and maturity characteristics.

Markets Treasury manages the banking book interest rate positions transferred to it within the Market Risk limits approved by RMM.

Sensitivity of economic value of equity

An Δ EVE Sensitivity is the extent to which the EVE will change due to a pre-specified movement in interest rates (six interest rate shock scenarios perscribed by the HKMA), where all other economic variables are held constant. Variations in market interest rates can affect the economic value of assets, liabilities and OBS positions. The economic value of an instrument represents an assessment of the present value of its expected net cash flows, discounted to reflect market rates. The economic value perspective reflects this sensitivity. It provides a more comprehensive view of the potential long-term effects of changes in interest rates.

Sensitivity of net interest income

ΔNet interest income ('NII') is the sensitivity of expected net interest income under varying interest rate scenarios, where all other economic variables are held constant. Sensitivity of net interest income reflects the Group's sensitivity of earnings due to changes in market interest rates. Based on the reported interest rate repricing positions in the Interest Rate Risk Return, the impact on earnings is assessed over the next 12 months using the interest rate shock scenarios prescribed by the HKMA.

The ΔEVE and ΔNII shown in Table 56 are indicative and based on scenarios and assumptions prescribed by the HKMA under its completion instruction for the Return of Interest Rate Risk in the banking book - (MA(BS)12A), which is completed and reported quarterly on a consolidated basis.

Key modelling and parametric assumptions used in calculating ΔEVE and ΔNII in Table 56 include:

- i. for ΔEVE, commercial margins and other spread components have been excluded from the cash flows used in the computation and discount rate used;
- ii. all the positions captured are assumed to run to maturity and slotted into the appropriate time bands according to the earliest interest repricing date (as per MA(BS)12A) including for non-maturity deposits; and
- iii. no prepayment or early redemption risk assumed as the Group does not have material long term fixed rate positions, the majority of the loans are on a floating basis and average term for fixed rate deposits is one to three months therefore the risk is immaterial.

The Group uses internal measurement system (TMS') to generate Δ EVE for purposes of internal assessment of capital adequacy which is different from the modelling assumptions prescribed for this disclosure, however, the cumulative impact on the quantification of economic value of equity sensitivity is small. This includes:

- i. behaviouralisation of non-maturity products, the extent of which can be driven by:
 - a. the amount of the current balance that can be assessed as stable under business-as-usual conditions; and
 - b. for managed rate balances the historic market interest rate re-pricing behaviour observed; or
 - c. for non-interest bearing balances the duration for which the balance is expected to remain under business-as-usual conditions. This assessment is often driven by the reinvestment tenors available to Markets Treasury to neutralise the risk through the use of fixed rate government bonds or interest rate derivatives, and for derivatives the availability of cash flow hedging capacity.

- ii. internal measurement consider aggregated results of all currencies and not only material currencies as prescribed by HKMA under completion instruction for the Return of Interest Rate Risk in the banking book (MA(BS)12A);
- iii. negative rate flooring is set at -1% for the overnight tenor to 0% for 20 year tenor unlike the modelling assumptions prescribed under this disclosure which is set at -2% for all currencies; and
- iv. economic value gains weighted 50% and losses weighted 100% under internal measurement unlike modelling assumptions for this disclosure where economic value gains are weighted at 0%.

Average and longest repricing maturity for non-maturity deposits ('NMDs') in 2021 was 1 day.

Table 56: IRRBB1 – Quantitative information on interest rate risk in banking book

		L		J
	a	b	c	d
	<u>Δ</u> E	VE	ΔΝ	<u>III</u>
	31 Dec 2021	31 Dec 2020	31 Dec 2021	31 Dec 2020
	HK\$m	HK\$m	HK\$m	HK\$m
1 Parallel up	4,500	3,795	1,408	690
2 Parallel down	-	-	(1,379)	(783)
3 Steepener	-	-		
4 Flattener	2,403	1,918		
5 Short rate up	3,757	3,060		
6 Short rate down	-	-		
7 Maximum	4,500	3,795	1,408	690
Period	31 De	c 2021	31 Dec	2020
8 Tier 1 capital	128	,343	130,	353

The worst scenario for change in the economic value of equity is 'Parallel up' scenario with specific size of interest rate shock for each currency. The major contributors to the change in economic value of equity is from the net gap positions for HKD, USD, AUD, CNY and JPY currencies.

The worst scenario for change in the net interest income over the next twelve months is 'Parallel up' scenario with specific size of interest rate shock for each currency.

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 57: Mainland activities exposures			
	On-balance	Off-balance	
	sheet	sheet	Total
	exposure	exposure	exposures
As at 31 Dec 2021	HK\$m	HK\$m	HK\$m
Type of Counterparties			
1 Central government, central government-owned entities			
and their subsidiaries and joint ventures ('JVs')	67,968	4,363	72,331
2 Local governments, local government-owned entities			
and their subsidiaries and JVs	33,899	3,348	37,247
3 People's Republic of China (PRC') nationals residing in Mainland China or other entities			_
incorporated in Mainland China and their subsidiaries and JVs	115,844	25,291	141,135
4 Other entities of central government not reported in item 1 above	8,917	224	9,141
5 Other entities of local governments not reported in item 2 above	4,958	111	5,069
6 PRC nationals residing outside Mainland China or			_
entities incorporated outside Mainland China where			
the credit is granted for use in Mainland China	30,655	2,082	32,737
7 Other counterparties where the exposures are considered by			_
the reporting institution to be non-bank Mainland China exposures	13,508	137	13,645
Total	275,749	35,556	311,305
Total assets after provision	1,682,935	·	<u>-</u>
On-balance sheet exposures as percentage of total assets	16.39%		

On-balance sheet exposures as percentage of total assets remained stable as compared with 30 June 2021.

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 58: International claims						
			Non Bank	Non-Financial		
		Official	Financial	Private		
	Banks	Sector	Institution	Sector	Others	Total
As at 31 Dec 2021	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Developed countries	44,666	61,479	19,678	80,316	-	206,139
Offshore centres	12,516	22,583	6,500	143,129	=	184,728
of which: Hong Kong SAR	11,408	1,385	5,889	122,926	-	141,608
Developing Asia and Pacific	58,978	19,464	9,038	71,778	=	159,258
of which: China	41,980	19,420	8,923	65,984	-	136,307

At 31 December 2021, 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.

Foreign exchange exposure

Structural foreign exchange exposure represent net assets or capital investments in subsidiaries, branches or the fair value of the Group's long-term foreign currency equity investments, the functional currencies of which are currencies other than the HK dollar. An entity's functional currency is normally that of the primary economic environment in which the entity operates. The Group's structural foreign exchange exposures are managed with the primary objective of ensuring, where practical, that the Group's consolidated capital ratios and capital ratios of individual banking subsidiaries are largely protected from the effect of changes in exchange rates.

Exchange differences on structural exposures are recognised in 'Other comprehensive income'. The Group uses Hong Kong dollar as our presentation currency in our consolidated financial statements. Therefore, our consolidated balance sheet is affected by exchange differences between Hong Kong dollar and all the non-Hong Kong dollar functional currencies of underlying subsidiaries.

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

At 31 December 2021, the US dollars ('USD'), Chinese renminbi ('RMB'), Euro ('EUR'), Australian dollars ('AUD'), New Zealand dollars ('NZD') and other foreign currencies 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 net options position is calculated on the basis of delta-weighted positions of all foreign exchange options contracts.

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

Table 59:	Foreign	exchange	exposure

						Other	Total
						foreign	foreign
	USD	RMB	EUR	AUD	NZD	currencies	currencies
As at 31 Dec 2021	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Non-structural position							
Spot assets	219,435	221,981	11,461	24,729	3,164	102,894	583,664
Spot liabilities	(201,605)	(218,557)	(11,271)	(20,417)	(4,374)	(42,776)	(499,000)
Forward purchases	529,072	270,381	5,364	8,704	3,356	13,505	830,382
Forward sales	(545,370)	(274,539)	(5,569)	(13,274)	(2,033)	(73,529)	(914,314)
Net options position	(1,379)	1,420	(131)	113	(32)	43	34
Net long/(short) non-							
structural position	153	686	(146)	(145)	81	137	766
Structural position	-	19,504	-	-	-	1,627	21,131

Other information

Abbreviations

A	
AI	Authorised institution
ALCM	Asset, Liability and Capital Management
ALCO	Asset and Liability Management Committee
ASF	Available stable funding
AT1	Additional tier 1
AUD	Australian dollar
AVAs	Additional valuation adjustments
В	
Bank	Hang Seng Bank Limited
BCBS	Basel Committee on Banking Supervision
BCR	Banking (Capital) Rules
BDR	Banking (Disclosure) Rules
BLR	Banking (Liquidity) Rules
BSC	Basic approach
C	
CCF	Credit conversion factor
CCP	Central counterparty
CCR	Counterparty credit risk
CCyB	Countercyclical capital buffer
CEM	Current exposure method
CET1	Common equity tier 1
CF	Commodities finance
CIS	Collective investment scheme
CNY	Onshore Chinese Yuan
CRC	Comprehensive risk charge
CRM	Credit risk mitigation
CSA	Credit support annex
CVA	Credit valuation adjustment
D	
D-SIB	Domestic systemically important authorised institution
DTAs	Deferred tax assets
E	
EAD	Exposure at default
ECAI	External Credit Assessment Institution
ECL	Expected Credit Loss
EL	Expected loss
EPE	Expected positive exposure
EVE	Economic value of equity
EUR	Euro
F	
FBA	Fall-back approach
FIRO	Financial Institutions (Resolution) Ordinance
FSB	Financial Stability Board
G	
G-SIB	Global systemically important authorised institution
Group	Hang Seng Bank Limited together with its subsidiaries

H	
HK\$bn	Billions (thousands of millions) of Hong Kong dollars
HK\$m	Millions of Hong Kong dollars
HKD	Hong Kong dollar
HKMA	Hong Kong Monetary Authority
HKFRS	Hong Kong Financial Reporting Standards
Hong Kong SAR	The Hong Kong Special Administrative Region of the
	People's Republic of China
HSBC	HSBC Holdings together with its subsidiary undertakings
HQLA	High quality liquid assets
HVCRE	High-volatility commercial real estate
I	
IAA	Internal assessment approach
IMM	Internal models approach
IMM(CCR)	Internal models (counterparty credit risk) approach
IMS	Internal measurement system
IPRE	Income-producing real estate
IRB	Internal ratings-based approach
IRC	Incremental risk charge
IRRBB	Interest rate risk in the banking book
ISDA	International Swaps and Derivatives Association
J	
J	Jurisdiction
JPY	Japanese yen
JVs	Joint ventures
L	
LAC	Loss-absorbing capacity
LAC Rules	Financial Institutions (Resolution) (Loss-absorbing
	Capacity Requirements - Banking Sector) Rules
LCR	Liquidity coverage ratio
LGD	Loss given default
LR	Leverage ratio
LTA	Look through approach
M	
MBA	Mandate-based approach
MOF	Model Oversight Forum
MSRs	Mortgage servicing rights
N	3.22.9.9.
N/A	Not applicable
NBFI	Non-Bank Financial Institution
NII	Net interest income
NMD	Non-maturity deposit
NSFR	Net stable funding ratio
NZD	New Zealand dollars
0	
OBS	Off-balance sheet
OF	Object finance
OTC	Over-the-counter
P	
PD	Probability of default
PF	Project finance
PFE	Potential future exposure
PRA	Prudential Regulation Authority
PRC	People's Republic of China
PSE	Public sector entity
PVA	Prudent valuation adjustment
PVIF	Present value of in-force long-term insurance business
0	1 resent value of in-torce long-term hisurance business
QRRE	Qualifying revolving retail exposures
Aurr	Zamin's ing reverting remain exposures

R	
RAS	Risk Appetite Statement
RC	Replacement cost
RMB	Chinese Renminbi
RMM	Risk Management Meeting
RNIV	Risk not in VaR
RSF	Required stable funding
RW	Risk-weight
RWA	Risk-weighted asset/risk-weighted amount
S	
SA-CCR	Standardised approach for counterparty credit risk
SEC-ERBA	Securitisation external ratings-based approach
SEC-FBA	Securitisation fall-back approach
SEC-IRBA	Securitisation internal ratings-based approach
SEC-SA	Securitisation standardised approach
SFT	Securities financing transaction
SME	Small and medium-sized enterprises
SRW	Supervisory risk-weight
STC	Standardised (credit risk) approach
STO	Standardised (operational risk) approach
STM	Standardised (market risk) approach
SVaR	Stressed VaR
T	
T2	Tier 2
TLAC	Total loss-absorbing capacity
TALCO	Tactical Asset and Liability Management Committee
U	
USD	US dollar
V	
VaR	Value at risk