2022

HSBC Bank Canada

Regulatory Capital & Risk Management

Pillar 3 Supplementary Disclosures

As at December 31, 2022

HSBC

Contents

Notes to users

Regulatory Capital and Risk Management Pillar 3 Disclosures

The Office of the Superintendent of Financial Institutions ("OSFI") supervises HSBC Bank Canada (the "Bank") on a consolidated basis. OSFI has approved the Bank's application to apply the Advanced Internal Ratings Based ("AIRB") approach to credit risk on our portfolio and the Standardized Approach for measuring Operational Risk. Please refer to the Annual Report and Accounts 2022 for further information on the Bank's risk and capital management framework. Further information regarding HSBC Group Risk Management Processes can be found in HSBC Holdings plc Capital and Risk Management Pillar 3 Disclosures available on HSBC Group's investor relations web site.

The Pillar 3 Supplemental Disclosures are additional summary descriptions and quantitative financial information which supplement those already made in the Annual Report and Accounts 2022 for the disclosure requirements under OSFI's Pillar 3 Disclosure Requirements Advisory issued September 29, 2006 consistent with the "International Convergence of Capital Measurement and Capital Standards" ('Basel II') issued by the Basel Committee on Banking Supervision (BCBS) in June 2006 and the "Composition of capital disclosure requirements" ('Basel III') issued by the BCBS in June 2012 under OSFI's advisory letter requirements issued in July 2013 and revised in May 2018

The Basel rules are structured around three "pillars":

- Pillar 1 - defines the Minimum capital requirements,
- Pillar 2 - requires banks to have robust Internal Capital Adequacy Assessment Processes (ICAAP) which will be part of regulators' Supervisory review
- Pillar 3 - defines the Market discipline/ disclosures required by Banks which should be consistent and comparable across Banks.

Pillar 3 complements the other two pillars of Basel framework i.e. minimum capital requirements and the supervisory review process. Its aim is to encourage market discipline by developing a set of disclosure requirements which will allow market participants to assess certain specified information on the scope of application of Basel 2/2.5 ('the Basel rules'), capital, particular risk exposures, risk assessment processes, and hence the capital adequacy of the institution.

The supervisory objectives of BCBS are to promote safety and soundness in the financial system and maintain an appropriate level of capital in the system, enhance competitive equality, constitute a more comprehensive approach to addressing risks, and focus on internationally active banks.

On June 26, 2012, the BCBS issued the Basel III rules on the information banks must publicly disclose when detailing the composition of their capital, which set out a framework to ensure that the components of banks capital bases are publicly disclosed in standardised formats across and within jurisdictions for banks subject to Basel III.

Basel III builds on Basel II. It also increases the level of risk-weighted assets for significant investments and deferred tax amounts due to temporary timing differences under defined thresholds, exposures to large or unregulated financial institutions meeting specific criteria, exposures to centralized counterparties and exposures that give rise to wrong way risk. In addition Basel III places a greater emphasis on common equity by introducing a new category of capital, Common Equity Tier 1 (CET1), which consists primarily of common shareholders equity net of regulatory adjustments. These regulatory adjustments include goodwill, intangible assets, deferred tax assets, pension assets and investments in financial institutions over certain thresholds. Overall, the Basel III rules increase the level of regulatory deductions relative to Basel II.

On 12 January 2018, OSFI announced its decision to update the existing capital floor for institutions using advanced approaches for credit risk and operational risk. The capital floor of 90%, based on the Basel I capital accord was replaced by a more risk-sensitive capital floor based on the standardized approach under Basel II framework, with floor factor set at 75%.

From Q1 2019, disclosure is based on OSFI's Pillar 3 disclosure requirements (April 2017), including Capital disclosure requirement and Leverage ratio disclosure requirement.

This report is unaudited and all amounts are in rounded millions of Canadian dollars, unless otherwise indicated. Balances reported in this Pillar 3 document reflect the OSFI Capital Adequacy Requirements (CAR) guidelines.

Starting 1 January 2019, counterparty credit risk exposures arising from derivatives are calculated under Standardized Approach for Counterparty Credit Risk (SA-CCR), a new BCBS approach adopted by OSFI. Capital requirements for exposures to Central Counterparties (CCPs) have also been revised. The impact of these changes on credit risk RWA, Credit Valuation Adjustment (CVA) RWA and Leverage Ratio is immaterial.

In response to challenges posed by COVID-19 and current market conditions, OSFI announced a number of measures to support the Canadian banks in supplying credit to the economy, maintain stability and public confidence during an expected period of disruption. OSFI lowered the capital floor factor from 75% to 70% effective Q1 2020, which is expected to stay in place until the domestic implementation of the capital floor as part of Basel III reforms in Q2 2023. In addition, transitional arrangement for expected credit loss provisioning have been introduced for a portion of allowances that would otherwise be included in Tier 2 capital to instead be included in Common Equity Tier 1 (CET1) capital. The adjustment is dynamically measured as the increase in Stage 1 and Stage 2 allowances relative to the baseline level as at 31 December 2019, after tax effects and subject to a scaling factor of 70% in 2020, 50% in 2021 and 25% in 2022.

For leverage ratio, central bank reserves and sovereign-issued securities that qualify as High Quality Liquid assets (HQLA) under the Liquidity Adequacy Requirements Guideline can be temporarily excluded from the leverage ratio exposure measure. Starting 1 January 2022, banks are required to include the aforementioned HQLA securities in their leverage ratio exposure measures, as OSFI concluded in August 2021 that the level of uncertainty in the outlook for economic and financial conditions has now reduced. And OSFI announced in Sep 2022 that banks will be required to include central bank reserve in their leverage ratio exposure measures starting 1 April 2023. In Pillar 3 disclosures, banks are expected to separately make available each of the CET1, Tier 1, Total Capital, and Leverage ratios had the transitional arrangement not been applied.

Effective from Q1 2022 filing, OSFI updated the Reporting Manual for Basel Capital Adequacy Reporting (BCAR) with changes in the reporting of Risks not in VaR (RNIV). Banks should apply a similar methodology as is applied in the determination of Stressed VaR, with a multiplier of 3.

Road map to Pillar 3 disclosure requirement

Section	Identifier	Table and templates	Frequency	2022 Annual Report
Capital disclosure	CC1	Composition of Regulatory Capital	Quarterly	
Overview of risk management	OVA	Bank risk management approach	Annually	24-28
	OV1	Overview of RWA	Quarterly	
Linkages between financial statements and regulatory exposures	LI1	Differences between accounting and regulatory scopes of consolidation and mapping of financial statements with regulatory risk categories		
	LI2	Main sources of differences between regulatory exposure amounts and carrying values in financial statements		
	LIA	Explanations of differences between accounting and regulatory exposure amounts	na[1]	
Credit risk	CRA	General information about credit risk	Annually	28-32
	CR1	Credit quality of assets	Semi-annually	35-37
	CR2	Changes in stock of defaulted loans and debt securities	na[1]	
	CRB	Additional disclosure related to the credit quality of assets	Annually	
	CRC	CRC – Qualitative disclosure requirements related to credit risk mitigation techniques	Annually	42-43
	CR3	Credit risk mitigation techniques – overview	Semi-annually	
	CRD	Qualitative disclosures on banks' use of external credit ratings under the standardized approach for credit risk	na[1]	
	CR4	Standardized approach – credit risk exposure and Credit Risk Mitigation (CRM) effects	Semi-annually	
	CR5	Standardized approach – exposures by asset classes and risk weights	Semi-annually	
	CRE	Qualitative disclosures related to IRB models	na[1]	
	CR6	IRB Credit risk exposures by portfolio and PD range	Semi-annually	
	CR7	IRB – Effect on RWA of credit derivatives used as CRM techniques	na[2]	
	CR8	RWA flow statements of credit risk exposures under IRB	Quarterly	
	CR9	IRB – Backtesting of probability of default (PD) per portfolio	na[1]	
	CR10	IRB (specialized lending and equities under the simple risk weight method)	Semi-annually	
Counterparty credit risk	CCRA	Qualitative disclosure related to counterparty credit risk	Annually	69-70
	CCR1	Analysis of counterparty credit risk (CCR) exposure by approach	Semi-annually	
	CCR2	Credit valuation adjustment (CVA) capital charge	Semi-annually	
	CCR3	Standardized approach of CCR exposures by regulatory portfolio and risk weights	na[2]	
	CCR4	IRB – CCR exposures by portfolio and PD scale	Semi-annually	
	CCR5	Composition of collateral for CCR exposure	Semi-annually	
	CCR6	Credit derivatives exposures	na[1]	
	CCR7	RWA flow statements of CCR exposures under the Internal Model Method (IMM)	na[2]	
	CCR8	Exposures to central counterparties	Semi-annually	
Securitization	SECA	Qualitative disclosure requirements related to securitization exposures		
	SEC1	Securitization exposures in the banking book		
	SEC2	Securitization exposures in the trading book		
	SEC3	Securitization exposures in the banking book and associated regulatory capital requirements – bank acting as originator or as sponsor		
	SEC4	Securitization exposures in the banking book and associated capital requirements – bank acting as investor	na[2]	
Market risk	MRA	Qualitative disclosure requirements related to market risk	Annually	
	MRB	Qualitative disclosures for banks using the Internal Models Approach (IMA)	Annually	
	MR1	Market risk under standardised approach	Semi-annually	
	MR2	RWA flow statements of market risk exposures under an IMA	Quarterly	
	MR3	IMA values for trading portfolios	Semi-annually	
	MR4	Comparison of VaR estimates with gains/losses	Semi-annually	
Leverage Ratio	LR1	Summary comparison of accounting assets vs. leverage ratio exposure measure	Quarterly	
	LR2	Leverage Ratio Common Disclosure Template	Quarterly	

1. *Non D-SIBs are permitted to adopt and disclose any of the above listed tables that are relevant in reflecting the risks and activities of the institution. We assessed accordingly and decided not to adopt this particular table*
2. *Table does not have any reportable values as at 31th Dec 2022*

Table 1 : Composition of Regulatory Capital (CC1)

		All-in Basis [1]	
		At	
		31 Dec 2022	30 Sep 2022
	Common Equity Tier 1 capital: instruments and reserves ($m)		
1	Directly issued qualifying common share capital (and equivalent for non-joint stock companies) plus related stock surplus	**1,125**	1,125
2	Retained earnings	**4,479**	4,277
3	Accumulated other comprehensive income (and other reserves)	**(786)**	(766)
4	Directly issued capital subject to phase out from CET1 (only applicable to non-joint stock companies)	**—**	—
5	Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)	**—**	—
6	Common Equity Tier 1 capital before regulatory adjustments	**4,818**	4,636
	Common Equity Tier 1 capital: regulatory adjustments ($m)		—
28	Total regulatory adjustments to Common Equity Tier 1	**380**	283
29	Common Equity Tier 1 capital (CET1)	**5,198**	4,919
29a	Common Equity Tier 1 capital (CET1) with transitional arrangements for ECL provisioning not applied	**5,179**	4,902
	Additional Tier 1 capital: instruments		
30	Directly issued qualifying Additional Tier 1 instruments plus related stock surplus	**1,100**	1,100
31	– of which: classified as equity under applicable accounting standards	**1,100**	1,100
32	– of which: classified as liabilities under applicable accounting standards	**—**	—
33	Directly issued capital instruments subject to phase out from Additional Tier 1	**—**	—
34	Additional Tier 1 instruments (and CET1 instruments not included in row 5) issued by subsidiaries and held by third parties (amount allowed in group AT1)	**—**	—
35	*of which: instruments issued by subsidiaries subject to phase out*	**—**	—
36	Additional Tier 1 capital before regulatory adjustments	**1,100**	1,100
	Additional Tier 1 capital: regulatory adjustments ($m)		
43	Total regulatory adjustments to Additional Tier 1 capital	**—**	—
44	Additional Tier 1 capital (AT1)	**1,100**	1,100
45	Tier 1 capital (T1 = CET1 + AT1)	**6,298**	6,019
45a	Tier 1 capital with transitional arrangements for ECL provisioning not applied	**6,279**	6,002
	Tier 2 capital: instruments and allowances ($m)		
46	Directly issued qualifying Tier 2 instruments plus related stock surplus	**1,000**	1,000
47	Directly issued capital instruments subject to phase out from Tier 2	**—**	—
48	(amount allowed in group Tier 2)	**—**	—
49	– of which: instruments issued by subsidiaries subject to phase out	**—**	—
50	Impairment allowances	**39**	18
51	Tier 2 capital before regulatory adjustments	**1,039**	1,018
	Tier 2 capital: regulatory adjustments ($m)		
57	Total regulatory adjustments to Tier 2 capital	**—**	—
58	Tier 2 capital (T2)	**1,039**	1,018
59	Total capital (TC = T1 + T2)	**7,337**	7,037
59a	Total capital with transitional arrangements for ECL provisioning not applied	**7,337**	7,037
60	Total risk-weighted assets (RWA)	**44,656**	44,481
61	Common Equity Tier 1 (as percentage of risk-weighted assets)	**11.6**	11.1
61a	Common Equity Tier 1 with transitional arrangements for ECL provisioning not applied	**11.6**	11.0
62	Tier 1 (as percentage of risk-weighted assets)	**14.1**	13.5
62a	Tier 1 with transitional arrangements for ECL provisioning not applied	**14.1**	13.5
63	Total capital (as percentage of risk-weighted assets)	**16.4**	15.8
63a	Total capital with transitional arrangements for ECL provisioning not applied	**16.4**	15.8
	OSFI all-in target (%)		
69	Common Equity Tier 1 capital all-in target ratio	**7.0**	7.0
70	Tier 1 capital all-in target ratio	**8.5**	8.5
71	Total capital all-in target ratio	**10.5**	10.5
	(only applicable between 1 Jan 2013 and 1 Jan 2022)		
80	Current cap on CET1 instruments subject to phase out arrangements	**—**	—
81	Amounts excluded from CET1 due to cap (excess over cap after redemptions and maturities)	**—**	—
82	Current cap on AT1 instruments subject to phase out arrangements	**—**	—
83	Amounts excluded from AT1 due to cap (excess over cap after redemptions and maturities)	—	—
84	Current cap on T2 instruments subject to phase out arrangements	**—**	—
85	Amounts excluded from T2 due to cap (excess over cap after redemptions and maturities)	—	—

1. *"All-in" regulatory capital assumes that all Basel III regulatory adjustments are applied effective January 1, 2013 and that the capital value of instruments which no longer qualify as regulatory capital under Basel III rules will be phased out at a rate of 10% per year from January 1, 2022*

Table 2 : Overview of Risk Weighted Assets (OV1)

		At		
		31 Dec 2022	30 Sep 2022	**31 Dec 2022**
		RWA[1]	RWA	**Capital requirements [2]**
		$m	$m	**$m**
1	Credit risk (excluding counterparty credit risk)	**36,561**	36,285	**2,925**
2	– of which Standardized approach (SA) [3]	**2,436**	2,222	**195**
3	– of which internal rating based (IRB) approach	**34,125**	34,063	**2,730**
4	Counterparty credit risk	**917**	1,233	**73**
4a	– of which credit valuation adjustment (CVA)[4]	**291**	354	**23**
5	– of which Standardized approach for counterparty credit risk (SA-CCR)	**626**	879	**50**
6	– of which internal model method (IMM)	**—**	—	**—**
7	Equity positions in banking book[5]	**15**	9	**1**
8	Equity investments in funds – look-through approach	**25**	25	**2**
9	Equity investments in funds – mandate-based approach	**—**	—	**—**
10	Equity investments in funds – fall-back approach	**—**	—	**—**
11	Settlement risk	**—**	—	**—**
12	Securitisation exposures in banking book	**—**	—	**—**
13	– of which IRB ratings based approach (RBA)	**—**	—	**—**
14	– of which IRB supervisory formula approach (SFA)	**—**	—	**—**
15	– of which SA/ simplified supervisory formula approach (SSFA)	**—**	—	**—**
16	Market risk	**781**	610	**62**
17	– of which Standardized approach (SA)	**136**	133	**11**
18	– of which internal model method (IMM)	**645**	477	**52**
19	Operational risk	**3,993**	3,893	**319**
20	– of which Basic indicator approach	**—**	—	**—**
21	– of which Standardized approach	**3,993**	3,893	**319**
22	– of which Advanced measurement approach	**—**	—	**—**
23	Amounts below the thresholds for deduction (subject to 250% risk weight)			**—**
24	Floor adjustment[6]	**2,364**	2,426	**189**
25	Total RWA (1+4+7+8+9+10+11+12+16+19+23+24)	**44,656**	44,481	**3,571**

1. *RWA includes 6% adjustment to IRB risk-weighted assets for scaling factor*
2. *'Capital requirement' represents the minimum total capital charge set at 8% of RWAs by the OSFI Capital Adequacy Requirements (CAR) guidelines*
3. *Amount includes Other assets not included in standardized or IRB approaches*
4. *Starting Q1 2019, OSFI has allowed a 0.7 scalar to be applied to the exposure amount determined under SA-CCR for the purpose of calculating CVA*
5. *Amount includes banking book equity exposure which are not material and risk weighted @100% in accordance with OSFI CAR guidelines*
6. *The Bank is subject to a regulatory capital floor prescribed by OSFI*

Credit Risk

Credit risk is the risk of financial loss if a customer or counterparty fails to meet an obligation under contract. Credit risk arises principally from direct lending, trade finance and the leasing business, but also from other products such as guarantees and credit derivatives.

Table 3 : Credit quality of assets (CR1)

		a	**b**	**c**	**d**
		Gross carrying values of			
		Defaulted exposures	**Non - defaulted exposures**	**Allowances/ impairments**	**Net values (a+b-c)**
		$m	**$m**	**$m**	**$m**
1	Debt securities	**—**	**23,427**	**—**	**23,427**
2	Loans	**302**	**84,746**	**344**	**84,704**
3	Off-balance sheet exposures	**143**	**52,676**	**34**	**52,785**
4	**Total at 31 Dec 2022**	**445**	**160,849**	**378**	**160,916**
1	Debt securities	—	15,016	—	15,016
2	Loans	285	87,417	362	87,340
3	Off-balance sheet exposures	92	52,403	43	52,452
4	Total at 31 Dec 2021	377	154,836	405	154,808

Table 4 : Concentration of exposures by industry or counterparty types (CRB-A)

	31 Dec 2022			31 Dec 2021		
	Gross Carrying Value	**Exposure at Default**	**RWA**	Gross Carrying Value	Exposure at Default	RWA
	$m	**$m**	**$m**	$m	$m	$m
Corporate	**83,448**	**59,287**	**29,890**	78,228	54,207	27,620
– Agriculture	**2,940**	**2,247**	**930**	2,647	2,006	841
– Automotive	**2,811**	**2,061**	**1,005**	2,870	1,982	1,047
– Business Service Industry	**2,727**	**1,901**	**1,121**	2,588	1,782	949
– Construction related industry	**5,310**	**3,241**	**1,842**	4,787	2,814	1,690
– Energy	**7,855**	**4,845**	**2,578**	8,229	5,015	2,835
– Finance & Insurance industry	**4,785**	**3,237**	**1,205**	4,630	3,013	1,118
– Hotel & Accommodation	**2,132**	**1,923**	**1,024**	1,914	1,716	976
– Individuals	**155**	**125**	**108**	184	139	110
– Manufacturing	**13,568**	**9,486**	**5,446**	12,020	8,149	4,488
– Mining, Logging And Forestry	**3,369**	**2,137**	**1,031**	2,496	1,401	736
– Other Service	**4,450**	**3,248**	**1,953**	4,228	3,031	1,777
– Real Estate	**18,389**	**14,361**	**6,272**	18,061	13,736	5,959
– Retail Trade	**2,408**	**1,760**	**670**	2,161	1,510	586
– Transportation And Storage	**4,284**	**3,140**	**1,729**	4,175	3,135	1,923
– Wholesale trade	**8,265**	**5,575**	**2,976**	7,238	4,778	2,585
Sovereign	**29,083**	**28,332**	**224**	28,581	27,718	208
Bank	**3,237**	**2,692**	**245**	4,186	3,718	343
Total Corporate, Sovereign and Bank	**115,768**	**90,311**	**30,359**	110,995	85,643	28,171
Residential Mortgages	**33,929**	**33,929**	**2,752**	33,063	33,062	2,624
HELOC's	**5,828**	**2,604**	**511**	5,489	2,535	514
Other Retail (excluding QRR and SME)	**4,338**	**1,247**	**609**	4,204	1,276	564
Qualifying Revolving Retail (QRR)	**1,047**	**333**	**127**	1,076	349	122
Retail SME	**384**	**384**	**233**	386	385	231
Total Retail	**45,526**	**38,497**	**4,232**	44,218	37,607	4,055
Total Gross Credit Exposure[1]	**161,294**	**128,808**	**34,591**	155,213	123,250	32,226

Table 5 : Residual maturity breakdown of exposures (CRB-B)

	31 Dec 2022			31 Dec 2021		
	Gross Carrying Value	**Exposure at Default**	**RWA**	Gross Carrying Value	Exposure at Default	RWA
	$m	**$m**	**$m**	$m	$m	$m
Within 1 year	**62,439**	**46,842**	**12,884**	68,744	52,054	13,024
1-5 years	**89,615**	**77,259**	**20,029**	77,239	66,261	17,394
Greater than 5 years	**9,240**	**4,707**	**1,678**	9,230	4,935	1,808
No specific maturity	**—**	**—**	**—**	—	—	—
Total Gross Credit Exposure[1]	**161,294**	**128,808**	**34,591**	155,213	123,250	32,226

Table 6 : Geographical breakdown[2] of exposures (CRB-C)

	31 Dec 2022			31 Dec 2021		
	Gross Carrying Value	**Exposure at Default**	**RWA**	Gross Carrying Value	Exposure at Default	RWA
	$m	**$m**	**$m**	$m	$m	$m
Canada	**145,470**	**116,201**	**31,934**	141,569	112,634	29,686
United States of America	**8,657**	**6,821**	**1,537**	5,400	3,801	1,208
United Kingdom	**322**	**211**	**90**	340	226	77
Other countries	**6,845**	**5,575**	**1,030**	7,904	6,589	1,255
Total Gross Credit Exposure[1]	**161,294**	**128,808**	**34,591**	155,213	123,250	32,226

1. Gross carrying value of the exposure and excludes 'Other Assets.
2. Amounts shown by geographical region and country in this table are based on the country of residence of the counterparty.

Table 7 : Credit risk mitigation techniques – overview (CR3)

		Exposures unsecured: carrying amount	Exposures secured: carrying amount [2]	Exposures secured by collateral	Exposures secured by guarantees / credit derivatives
		$m	$m	$m	$m
1	Loans	**14,572**	**70,477**	**65,448**	**5,029**
2	Debt securities	**10,814**	**12,613**	**11,729**	**884**
3	**Total at 31 Dec 2022**	**25,386**	**83,090**	**77,177**	**5,913**
4	Of which defaulted	**55**	**246**	**227**	**19**
1	Loans	22,213	65,489	63,663	1,826
2	Debt securities	7,012	8,004	7,722	282
3	Total at 31 Dec 2021	29,225	73,493	71,385	2,018
4	Of which defaulted	25	260	253	7

1. *Amount equals to the carrying value gross of allowances.*
2. *Amount represents the gross carrying value of the exposure secured (fully or partially by either collateral or guarantees)*

Table 8 : Standardized approach – credit conversion factor (‘CCF’) and credit risk mitigation (‘CRM’) effects (CR4)

		Exposures before CCF and CRM		Exposures post-CCF and CRM		RWA and RWA density	
		On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWAs	RWA density
		$m	$m	$m	$m	$m	%
	Asset classes						
1	Sovereigns and their central banks	**—**	**—**	**—**	**—**	**—**	**—**
6	Corporates	**608**	**643**	**607**	**—**	**118**	**19**
7	Regulatory Retail Portfolios	**463**	**2,617**	**461**	**—**	**346**	**75**
10	Equity	**—**	**—**	**—**	**—**	**—**	**—**
13	Other assets[2]	**2,516**	**—**	**2,516**	**—**	**1,972**	**78**
14	**Total at 31 Dec 2022**	**3,587**	**3,260**	**3,584**	**—**	**2,436**	**68**
1	Sovereigns and their central banks	—	—	—	—	—	—
6	Corporates	587	492	587	—	211	36
7	Regulatory Retail Portfolios	385	2,468	383	—	287	75
10	Equity	—	—	—	—	—	—
13	Other assets[2]	2,203	—	2,203	—	1,339	61
14	Total at 31 Dec 2021	3,175	2,960	3,173	—	1,837	58

1. *CCF - Credit Conversion Factor, CRM - Credit Risk Mitigation.*
2. *Comprises exposures subject to credit risk framework but are not included in standardized or IRB approaches including settlement risk and other balance sheet assets that are risk-weighted at 100%.*

Table 9: Standardized approach – exposures by asset class and risk weight (CR5)

	Risk weight (‘RW’) %	0	20	50	75	100	150	250	Total credit exposure amount (post-CCF and post-CRM)
		$m	$m	$m	$m	$m	$m	$m	$m
	Asset classes								
1	Sovereigns and their central banks	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
6	Corporates	**205**	**356**	**—**	**—**	**47**	**—**	**—**	**608**
7	Regulatory Retail Portfolios	**—**	**—**	**—**	**460**	**1**	**—**	**—**	**461**
10	Equity	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
13	Other assets	**513**	**174**	**—**	**—**	**1,758**	**—**	**71**	**2,516**
14	**Total at 31 Dec 2022**	**718**	**530**	**—**	**460**	**1,806**	**—**	**71**	**3,585**
1	Sovereigns and their central banks	—	—	—	—	—	—	—	—
6	Corporates	176	251	—	—	160	—	—	587
7	Regulatory Retail Portfolios	—	—	—	382	1	—	—	383
10	Equity	—	—	—	—	—	—	—	—
13	Other assets	546	591	—	—	963	—	103	2,203
14	Total at 31 Dec 2021	722	842	—	382	1,124	—	103	3,173

Table 10: IRB – Credit risk exposures by portfolio and PD range (CR6)

PD scale	Original on-balance sheet gross exposure $m	Off-balance sheet exposure pre-CCF $m	Average CCF %	EAD post-CRM and post-CCF $m	Average PD %	Number of obligors	Average LGD %	Average maturity years	RWA $m	RWA density %	Expected loss $m	Provisions $m
Sovereign												
0.00 to <0.15	**27,849**	**1,231**	**39**	**28,331**	**0.01**	**88**	**7.1**	**1.76**	**224**	**0.8**	**—**	**1.0**
0.15 to <0.25	**—**	**2**	**41**	**1**	**0.37**	**3**	**20.6**	**1.22**	**—**	**18.9**	**—**	**—**
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	**27,849**	**1,233**	**48**	**28,332**	**0.01**	**91**	**7.1**	**1.76**	**224**	**0.8**	**—**	**1.0**
Banks												
0.00 to <0.15	**2,136**	**988**	**51**	**2,634**	**0.05**	**149**	**17.7**	**2.13**	**220**	**8.4**	**—**	**—**
0.15 to <0.25	**29**	**2**	**20**	**30**	**0.22**	**5**	**35.0**	**0.07**	**6**	**19.6**	**—**	**—**
0.25 to <0.50	**16**	**12**	**—**	**16**	**0.37**	**2**	**46.7**	**1.00**	**9**	**52.4**	**—**	**—**
0.50 to <0.75	**1**	**3**	**20**	**2**	**0.63**	**5**	**31.1**	**1.04**	**1**	**54.1**	**—**	**—**
0.75 to <2.50	**—**	**50**	**20**	**10**	**2.25**	**1**	**27.2**	**2.50**	**9**	**94.1**	**—**	**—**
2.50 to <10.00	—	—	—	—	—	—	—	—	—	—	—	—
10.00 to <100.00	—	—	—	—	—	—	—	—	—	—	—	—
100.00 (Default)	—	—	—	—	—	—	—	—	—	—	—	—
Sub-total	**2,182**	**1,055**	**48**	**2,692**	**0.06**	**162**	**18.1**	**2.10**	**245**	**9.1**	**—**	**—**
Corporate – SME												
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	—	—	—	—	—	—	—	—	—	—	—	—
Corporate – Other												
0.00 to <0.15	**5,380**	**11,815**	**44**	**10,561**	**0.09**	**783**	**42.3**	**1.88**	**2,468**	**23.4**	**4.0**	**4.0**
0.15 to <0.25	**7,142**	**6,980**	**42**	**10,083**	**0.22**	**1,338**	**35.5**	**1.91**	**3,530**	**35.0**	**8.0**	**7.0**
0.25 to <0.50	**8,590**	**6,801**	**43**	**11,509**	**0.37**	**1,324**	**34.8**	**1.73**	**4,992**	**43.4**	**15.0**	**21.0**
0.50 to <0.75	**6,248**	**6,024**	**41**	**8,712**	**0.63**	**1,071**	**33.4**	**1.75**	**4,735**	**54.3**	**18.0**	**27.0**
0.75 to <2.50	**10,659**	**7,782**	**43**	**13,965**	**1.23**	**2,690**	**33.1**	**1.76**	**9,685**	**69.4**	**56.0**	**58.0**
2.50 to <10.00	**1,805**	**1,199**	**48**	**2,382**	**4.75**	**588**	**31.2**	**1.54**	**2,370**	**99.5**	**35.0**	**23.0**
10.00 to <100.00	**577**	**328**	**43**	**719**	**15.31**	**133**	**34.2**	**1.48**	**1,136**	**158.0**	**38.0**	**27.0**
100.00 (Default)	**261**	**128**	**53**	**328**	**100.00**	**82**	**38.8**	**1.09**	**541**	**164.8**	**100.0**	**100.0**
Sub-total	**40,662**	**41,057**	**43**	**58,259**	**1.46**	**8,009**	**35.5**	**1.78**	**29,457**	**50.6**	**274.0**	**267.0**
Wholesale AIRB - Total at 31 Dec 2022	**70,693**	**43,345**	**43**	**89,283**	**0.96**	**8,262**	**26.0**	**1.78**	**29,926**	**33.5**	**274.0**	**268.0**

Table 11: IRB – Credit risk exposures by portfolio and PD range (CR6) (continued)

PD scale	Original on-balance sheet gross exposure $m	Off-balance sheet exposure pre-CCF $m	Average CCF %	EAD post-CRM and post-CCF $m	Average PD %	Number of obligors	Average LGD %	Average maturity years	RWA $m	RWA density %	Expected loss $m	Provisions $m
Retail Residential Mortgages												
0.00 to <0.15	**20,518**	**—**	**—**	**20,518**	**0.06**	**44,228**	**18.0**	**—**	**654**	**3.2**	**2.3**	**8.0**
0.15 to <0.25	**6,329**	**—**	**—**	**6,329**	**0.19**	**11,176**	**19.7**	**—**	**501**	**7.9**	**2.3**	**16.2**
0.25 to <0.50	**3,807**	**—**	**—**	**3,807**	**0.32**	**6,233**	**17.7**	**—**	**399**	**10.5**	**2.1**	**9.0**
0.50 to <0.75	**1,142**	**—**	**—**	**1,142**	**0.55**	**2,067**	**19.4**	**—**	**194**	**17.0**	**1.2**	**3.6**
0.75 to <2.50	**1,431**	**—**	**—**	**1,431**	**1.57**	**2,569**	**18.7**	**—**	**469**	**32.7**	**5.0**	**6.6**
2.50 to <10.00	**523**	**—**	**—**	**523**	**4.60**	**1,029**	**18.2**	**—**	**314**	**60.0**	**5.0**	**3.2**
10.00 to <100.00	**149**	**—**	**—**	**149**	**25.51**	**243**	**16.9**	**—**	**155**	**104.0**	**6.4**	**4.0**
100.00 (Default)	**30**	**—**	**—**	**30**	**100.00**	**65**	**16.4**	**—**	**66**	**220.0**	**—**	**14.8**
Sub-total	**33,929**	**—**	**—**	**33,929**	**0.47**	**67,610**	**18.4**	**—**	**2,752**	**8.1**	**23.0**	**66.2**
HELOC												
0.00 to <0.15	**5**	**—**	**—**	**5**	**0.07**	**12**	**19.4**	**—**	**—**	**—**	**—**	**—**
0.15 to <0.25	**4**	**—**	**—**	**4**	**0.20**	**7**	**15.0**	**—**	**—**	**—**	**—**	**—**
0.25 to <0.50	**726**	**3,240**	**26**	**1,552**	**0.38**	**18,665**	**18.5**	**—**	**197**	**12.6**	**1.1**	**3.7**
0.50 to <0.75	**119**	**327**	**28**	**211**	**0.53**	**1,346**	**15.6**	**—**	**28**	**13.4**	**0.2**	**0.6**
0.75 to <2.50	**410**	**754**	**33**	**660**	**0.99**	**5,520**	**19.4**	**—**	**166**	**25.1**	**1.3**	**2.9**
2.50 to <10.00	**117**	**83**	**30**	**142**	**4.16**	**895**	**18,8**	**—**	**82**	**57.9**	**1.1**	**1.6**
10.00 to <100.00	**24**	**5**	**33**	**25**	**26.84**	**135**	**18.2**	**—**	**28**	**112.5**	**1.2**	**—**
100.00 (Default)	**5**	**9**	**—**	**5**	**100.00**	**84**	**17.4**	**—**	**10**	**229.6**	**—**	**0.7**
Sub-total	**1,410**	**4,418**	**27**	**2,604**	**1.18**	**26,664**	**18.5**	**—**	**511**	**19.6**	**4.0**	**11.0**
Retail Qualifying revolving exposures												
0.00 to <0.15	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
0.15 to <0.25	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
0.25 to <0.50	**38**	**706**	**19**	**169**	**0.31**	**40,300**	**54.0**	**—**	**15**	**8.8**	**0.3**	**—**
0.50 to <0.75	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
0.75 to <2.50	**55**	**145**	**26**	**93**	**1.17**	**13,955**	**70.5**	**—**	**30**	**32.1**	**0.8**	**1.2**
2.50 to <10.00	**48**	**38**	**40**	**63**	**4.12**	**5,556**	**76.1**	**—**	**53**	**85.6**	**1.9**	**4.1**
10.00 to <100.00	**5**	**8**	**29**	**7**	**24.47**	**832**	**72.5**	**—**	**16**	**207.0**	**1.2**	**0.8**
100.00 (Default)	**1**	**3**	**—**	**1**	**100.00**	**283**	**72.3**	**—**	**13**	**938.2**	**—**	**0.6**
Sub-total	**147**	**900**	**21**	**333**	**2.22**	**60,926**	**63.2**	**—**	**127**	**38.0**	**4.2**	**6.6**
Retail SME												
0.00 to <0.15	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
0.15 to <0.25	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
0.25 to <0.50	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
0.50 to <0.75	**115**	**111**	**100**	**226**	**0.63**	**1,610**	**53.2**	**—**	**102**	**45.1**	**0.7**	**1**
0.75 to <2.50	**91**	**26**	**99**	**117**	**2.19**	**696**	**54.7**	**—**	**89**	**76.1**	**1.4**	**0.7**
2.50 to <10.00	**14**	**11**	**97**	**25**	**7.88**	**463**	**41.5**	**—**	**17**	**69.5**	**0.8**	**0.4**
10.00 to <100.00	**6**	**9**	**100**	**14**	**23.71**	**1,097**	**32.1**	**—**	**11**	**77.3**	**1.1**	**0.9**
100.00 (Default)	**2**	**—**	**—**	**2**	**100.00**	**247**	**58.2**	**—**	**14**	**761.8**	**0.1**	**1.1**
Sub-total	**228**	**157**	**100**	**384**	**2.91**	**4,113**	**52.1**	**—**	**233**	**60.7**	**4.0**	**4.0**
Retail Other												
0.00 to <0.15	**66**	**—**	**—**	**66**	**0.12**	**421**	**61.0**	**—**	**12**	**18.3**	**—**	**0.8**
0.15 to <0.25	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
0.25 to <0.50	**133**	**460**	**25**	**246**	**0.26**	**10,324**	**34.5**	**—**	**44**	**17.9**	**0.2**	**0.4**
0.50 to <0.75	**322**	**116**	**30**	**357**	**0.53**	**7,627**	**52.6**	**—**	**146**	**40.9**	**1.0**	**1.1**
0.75 to <2.50	**40**	**50**	**27**	**53**	**1.49**	**1,081**	**33.2**	**—**	**22**	**41.4**	**0.3**	**0.4**
2.50 to <10.00	**46**	**7**	**43**	**49**	**3.25**	**655**	**31.1**	**—**	**23**	**46.5**	**0.5**	**0.6**
10.00 to <100.00	**11**	**5**	**66**	**14**	**20.30**	**9,255**	**35.6**	**—**	**11**	**76.3**	**1.0**	**0.6**
100.00 (Default)	**1**	**1**	**—**	**1**	**100.00**	**2,299**	**36.5**	**—**	**5**	**451.0**	**0.4**	**0.3**
Sub-total	**619**	**639**	**26**	**786**	**1.14**	**31,662**	**44.7**	**—**	**263**	**33.4**	**3.0**	**4.3**
Total Retail at 31 Dec 2022	**36,333**	**6,114**	**28**	**38,036**	**0.57**	**190,975**	**19.7**	**—**	**3,886**	**10.2**	**38.0**	**92.0**

Table 12: IRB – Credit risk exposures by portfolio and PD range (CR6) (continued)

PD scale	Original on-balance sheet gross exposure $m	Off-balance sheet exposure pre-CCF $m	Average CCF %	EAD post-CRM and post-CCF $m	Average PD %	Number of obligors	Average LGD %	Average maturity years	RWAs $m	RWA density %	Expected loss $m	Provisions $m
Sovereign												
0.00 to <0.15	27,156	1,416	39	27,715	0.01	95	8.3	1.39	206	0.7	0.2	0.3
0.15 to <0.25	—	3	41	1	0.22	1	52.0	1	1	39.1	—	—
0.25 to <0.50	—	1	41	—	0.37	1	10.0	1.26	—	11.0	—	—
0.50 to <0.75	—	—	—	—	—	—	—	—	—	—	—	—
0.75 to <2.50	—	5	41	2	0.87	2	16.9	1	1	24.4	—	—
2.50 to <10.00	—	—	—	—	—	—	—	—	—	—	—	—
10.00 to <100.00	—	—	—	—	—	—	—	—	—	—	—	—
100.00 (Default)	—	—	—	—	—	—	—	—	—	—	—	—
Sub-total	27,156	1,425	39	27,718	0.01	99	8.3	1.39	208	0.8	0.2	0.3
Banks												
0.00 to <0.15	3,033	1,060	62	3,692	0.06	159	20.7	1.35	327	9.0	0.6	0.1
0.15 to <0.25	4	3	32	5	0.22	12	33.1	0.27	1	0.2	—	—
0.25 to <0.50	4	—	41	4	0.37	2	34.9	0.1	2	0.4	—	—
0.50 to <0.75	—	19	20	4	0.63	3	27.4	0.25	2	0.5	—	—
0.75 to <2.50	—	53	20	11	1.66	2	27.2	1.02	8	72.1	—	0.1
2.50 to <10.00	2	10	20	2	3.05	2	51.7	0.4	3	150.0	—	—
10.00 to <100.00	—	—	—	—	—	—	—	—	—	—	—	—
100.00 (Default)	—	—	—	—	—	—	—	—	—	—	—	—
Sub-total	3,041	1,145	58	3,718	0.07	180	20.8	1.34	343	9.2	0.6	0.2
Corporate – SME												
0.00 to <0.15	424	553	43	662	0.10	144	30.2	1.97	103	15.5	0.2	0.2
0.15 to <0.25	1,532	1,310	42	2,077	0.22	737	33.1	1.71	538	25.9	1.5	1.1
0.25 to <0.50	1,671	1,385	41	2,239	0.37	738	33.1	1.95	822	36.7	2.7	1.7
0.50 to <0.75	1,625	1,383	41	2,192	0.63	632	32.5	1.63	957	43.7	4.5	4.7
0.75 to <2.50	4,811	2,569	42	5,878	1.27	1,683	31.1	1.7	3,223	54.8	23.2	25.4
2.50 to <10.00	831	483	42	1,034	4.97	468	29.6	1.61	814	78.8	15.2	13.4
10.00 to <100.00	265	120	41	314	18.60	101	30.2	1.36	390	124.1	18.6	22.1
100.00 (Default)	158	28	50	172	100.00	50	51.9	1.11	206	119.8	86.2	86.2
Sub-total	11,317	7,831	42	14,569	2.64	4,553	32.0	1.72	7,055	48.4	152.1	154.8
Corporate – Other												
0.00 to <0.15	3,310	9,528	45	7,552	0.10	481	44.7	1.63	1,594	21.1	2.7	1.7
0.15 to <0.25	3,282	6,435	43	6,040	0.20	496	37.2	1.82	2,137	35.4	4.9	3.3
0.25 to <0.50	4,311	4,381	42	6,142	0.40	450	35.5	1.76	2,737	44.6	8.1	4.7
0.50 to <0.75	5,853	4,867	42	7,905	0.60	596	34.7	1.84	4,584	58.0	17.3	14.0
0.75 to <2.50	6,329	6,811	43	9,234	1.20	1,171	35.5	1.73	6,801	73.7	39.4	35.5
2.50 to <10.00	1,090	928	46	1,514	5.20	213	33.5	1.40	1,646	108.8	26.0	25.6
10.00 to <100.00	214	172	45	292	42.90	50	41.3	1.47	477	163.5	55.7	32.8
100.00 (Default)	72	51	61	103	100.00	19	47.7	1.49	104	101.3	45.8	45.8
Sub-total	24,461	33,173	43	38,781	1.30	3,476	37.4	1.74	20,080	51.8	199.9	163.4
Wholesale AIRB - Total at 31 Dec 2021	65,975	43,574	43	84,786	1.06	8,308	26.2	1.60	27,686	32.7	353.1	318.7

PD scale	Original on-balance sheet gross exposure	Off-balance sheet exposure pre-CCF	Average CCF	EAD post-CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density	Expected loss	Provisions
	$m	$m	%	$m	%		%	years	$m	%	$m	$m
Retail Residential Mortgages												
0.00 to <0.15	19,546	1	—	19,546	0.06	43,680	17.6	—	606	3.1	2.1	9.1
0.15 to <0.25	6,361	—	—	6,361	0.19	11,684	19.4	—	496	7.8	2.3	5.0
0.25 to <0.50	3,960	—	—	3,960	0.32	6,789	17.4	—	415	10.5	2.2	3.1
0.50 to <0.75	1,169	—	—	1,169	0.55	2,067	19.5	—	201	17.2	1.3	2.4
0.75 to <2.50	1,383	—	—	1,383	1.57	2,488	18.1	—	431	31.2	3.9	2.2
2.50 to <10.00	492	—	—	492	4.64	1,037	17.0	—	276	56.1	3.9	6.2
10.00 to <100.00	113	—	—	113	25.91	253	16.8	—	116	102.7	4.9	(5.0)
100.00 (Default)	38	—	—	38	100.00	84	16.6	—	83	218.4	—	15.8
Sub-total	33,062	1	—	33,062	0.47	68,082	18.0	—	2,624	7.9	20.6	38.8
HELOC												
0.00 to <0.15	3	—	—	3	0.06	17	13.8	—	—	—	—	—
0.15 to <0.25	1	—	—	1	0.22	7	15.2	—	—	—	—	—
0.25 to <0.50	692	2,984	26	1,454	0.38	18,293	18.1	—	180	12.4	1.0	1.3
0.50 to <0.75	115	313	28	203	0.53	1,335	15.9	—	28	13.8	0.2	0.2
0.75 to <2.50	450	674	35	687	1.04	5,586	18.7	—	170	24.7	1.3	1.4
2.50 to <10.00	126	87	29	152	3.96	1,018	18.5	—	84	55.3	1.1	2.5
10.00 to <100.00	24	2	33	25	26.54	122	19.1	—	30	120.0	1.3	1.1
100.00 (Default)	10	8	—	10	100.00	82	17.0	—	22	220.0	—	1.8
Sub-total	1,421	4,068	27	2,535	1.42	26,460	18.1	—	514	20.3	4.9	8.3
Retail Qualifying revolving												
0.00 to <0.15	—	—	—	—	—	—	—	—	—	—	—	—
0.15 to <0.25	—	—	—	—	—	—	—	—	—	—	—	—
0.25 to <0.50	44	689	19	174	0.31	40,793	53.4	—	15	8.6	0.3	0.4
0.50 to <0.75	—	—	—	—	—	—	—	—	—	—	—	—
0.75 to <2.50	60	171	26	105	1.17	15,296	67.6	—	33	30.5	0.8	0.9
2.50 to <10.00	44	50	36	62	4.17	5,979	71.9	—	50	80.6	1.8	3.8
10.00 to <100.00	5	8	27	7	24.87	837	68.2	—	13	185.7	1.1	1.2
100.00 (Default)	1	3	—	1	100.00	271	69.5	—	11	1,100.0	—	0.8
Sub-total	154	921	21	—	2.07	63,176	61.3	—	122	34.7	4.3	7.1
Retail SME												
0.00 to <0.15	—	—	—	—	—	—	—	—	—	—	—	—
0.15 to <0.25	—	—	—	—	—	—	—	—	—	—	—	—
0.25 to <0.50	—	—	—	—	—	—	—	—	—	—	—	—
0.50 to <0.75	128	134	100	261	0.64	1,707	52.9	—	117	44.8	0.8	3.8
0.75 to <2.50	69	25	99	94	2.21	639	53.6	—	70	74.5	1.1	2.4
2.50 to <10.00	10	11	98	21	7.58	737	41.0	—	14	66.7	0.6	0.2
10.00 to <100.00	6	1	99	7	21.72	360	56.5	—	9	128.6	0.8	0.1
100.00 (Default)	2	—	—	2	100.00	132	63.8	—	21	1,050.0	—	1.9
Sub-total	215	171	99	385	2.43	3,575	52.5	—	231	60.0	3.3	8.4
Retail Other												
0.00 to <0.15	51	—	—	51	0.12	369	61.0	—	9	17.6	—	0.1
0.15 to <0.25	—	—	—	—	—	—	—	—	—	—	—	—
0.25 to <0.50	141	444	24	249	0.26	10,444	26.4	—	34	13.7	0.2	0.1
0.50 to <0.75	443	122	34	483	0.53	7,047	50.1	—	189	38.8	1.2	1.8
0.75 to <2.50	36	53	31	53	1.49	1,181	24.2	—	17	30.2	0.2	0.2
2.50 to <10.00	31	9	58	37	3.63	788	22.1	—	12	32.4	0.3	0.2
10.00 to <100.00	14	6	87	19	20.13	6,857	33.1	—	13	68.4	1.2	2.4
100.00 (Default)	1	—	—	1	100.00	1,664	28.5	—	3	300.0	0.2	0.4
Sub-total	717	634	28	893	1.13	28,350	41.0	—	277	31.0	3.3	5.2
Total Retail at 31 Dec 2021	35,569	5,795	29	37,224	0.59	189,643	19.3	—	3,768	10.1	36.1	67.8

Table 13 : RWA flow statements of credit risk exposures under the IRB approach (CR8)

		RWA[2]	Capital requirements[3]
		$m	$m
1	RWA at the beginning of the period - 1 Oct 2022	**34,063**	**2,725**
2	Asset size[1]	**(356)**	**(28)**
3	Asset quality	**128**	**10**
4	Model updates	—	—
5	Methodology and policy	—	—
6	Acquisitions and disposals	—	—
7	Foreign exchange movements	—	—
8	Other[4]	**290**	**23**
9	RWA at the end of the period - 31 Dec 2022	**34,125**	**2,730**

1. *Foreign exchange movements are embedded in the asset size*
2. *RWA includes 6% adjustment to IRB risk-weighted assets for scaling factor*
3. *'Capital requirement' represents the minimum total capital charge set at 8% of RWAs under the OSFI CAR guidelines*
4. *Firm-size adjustment for corporate SMEs is removed*

Table 14: Specialized lending on slotting approach and Equities under simple risk-weight method (CR10)

		Specialized Lending - Other than HVCRE[2]									
		On-balance sheet amount	Off-balance sheet amount	Risk weight	Exposure amount						Expected loss
					PF[2]	OF	CF	IPRE	Total	RWA[3]	
Regulatory categories[1]	Regulatory maturity	$m	$m	%	$m	$m	$m	$m	$m	$m	$m
Strong	Less than 2.5 years	**—**	**—**	**50**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
	Equal to or more than 2.5 years	**375**	**98**	**70**	**415**	**—**	**—**	**—**	**415**	**291**	**2**
Good	Less than 2.5 years	**—**	**—**	**70**	**—**	**—**	**—**		**—**	**—**	**—**
	Equal to or more than 2.5 years	**1**	**—**	**90**	**—**	**—**	**—**	**1**	**1**	**1**	**—**
Satisfactory		**4**	**—**	**115**	**—**	**—**	**—**	**4**	**4**	**5**	**—**
Weak		**—**	**—**	**250**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Default		**—**	**—**	**0**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
	Total at 31 Dec 2022	**380**	**98**		**415**	**—**	**—**	**5**	**420**	**297**	**2**
Strong	Less than 2.5 years	—	—	50	—	—	—	—	—	—	—
	Equal to or more than 2.5 years	77	98	70	117	—	—	—	117	82	—
Good	Less than 2.5 years	—	—	70	—	—	—	—	—	—	—
	Equal to or more than 2.5 years	1	—	90	—	—	—	1	1	1	—
Satisfactory		124	67	115	148	—	—	4	152	175	5
Weak		—	—	250	—	—	—	—	—	—	—
Default		—	—	0	—	—	—	—	—	—	5
	Total at 31 Dec 2021	202	165		265	—	—	5	270	258	5

1. *Regulatory categories are defined under paragraph 88 of OSFI CAR guidelines*
2. *HVCRE: High-volatility commercial real estate,PF: Project finance, OF: Object finance, CF: Commodities finance & IPRE: Income producing real estate*
3. *RWAs are pre 6% adjustment to IRB risk-weighted assets for scaling factor*

Counterparty Credit Risk (CCR)

Counterparty credit risk ('CCR') arises for derivatives and SFTs. It is calculated in both 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.

Table 15: Analysis of counterparty credit risk exposure by approach (excluding CVA Charge & centrally cleared exposures)- CCR1

		Replacement cost	Potential future exposure	Effective expected positive exposure (EEPE)	Alpha used for computing regulatory EAD (Multiplier)	EAD post CRM	post-CRM RWAs
		$m	$m	$m		$m	$m
1	SA-CCR (for derivatives)	**396**	**1,246**	**—**	**1.4**	**2,299**	**580**
2	Internal Model Method (for derivatives and SFTs)	**—**	**—**	**—**	**—**	**—**	**—**
3	Simple Approach for credit risk mitigation (for SFTs)	**—**	**—**	**—**	**—**	**—**	**—**
4	Comprehensive Approach for credit risk mitigation (for SFTs)	**—**	**—**	**—**	**—**	**240**	**33**
5	VaR for SFTs	**—**	**—**	**—**	**—**	**—**	**—**
6	**Total at 31 Dec 2022**	**396**	**1,246**	**—**	**1.4**	**2,539**	**613**
1	SA-CCR (for derivatives)	419	990	—	1.4	1,972	686
2	Internal Model Method (for derivatives and SFTs)	—	—	—	—	—	—
3	Simple Approach for credit risk mitigation (for SFTs)	—	—	—	—	—	—
4	Comprehensive Approach for credit risk mitigation (for SFTs)	—	—	—	—	218	44
5	VaR for SFTs	—	—	—	—	—	—
6	Total at 31 Dec 2021	419	990	—	1.4	2,190	730

Table 16: Credit valuation adjustment (CVA) capital charge (CCR2)

		At 31 Dec 2022		At 31 Dec 2021	
		EAD post-CRM	**RWA**	EAD post-CRM	RWA
		$m	**$m**	$m	$m
1	Total portfolios subject to the Advanced CVA capital charge	**—**	**—**	—	—
2	– VaR component (including the 3 × multiplier)	**—**	**—**	—	—
3	– Stressed VaR component (including the 3 × multiplier)	**—**	**—**	—	—
4	All portfolios subject to the Standardized CVA capital charge	**1,609**	**291**	1,381	279
5	**Total subject to the CVA capital charge**	**1,609**	**291**	1,381	279

1. OSFI has allowed a 0.7 scalar to be applied to the exposure amount determined under SA-CCR for the purpose of calculating CVA.

Table 17: CCR exposures by portfolio and PD scale (CCR4)

PD scale	EAD post-CRM	Average PD	Number of obligors	Average LGD	Average maturity	RWA	RWA density
	$m	%		%	years	$m	%
Sovereign							
0.00 to <0.15	**380**	**0.02**	**59**	**10.0**	**0.47**	**3**	**0.7**
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	**380**	**0.02**	**59**	**10.0**	**0.47**	**3**	**0.7**
Banks							
0.00 to <0.15	**933**	**0.04**	**37**	**27.89**	**0.66**	**59**	**6.3**
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	**933**	**0.04**	**37**	**27.9**	**0.66**	**59**	**6.3**
Corporate – SME							
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	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Corporate – Other							
0.00 to <0.15	**725**	**0.07**	**245**	**52.0**	**1.10**	**143**	**19.8**
0.15 to <0.25	**139**	**0.22**	**102**	**52.0**	**1.21**	**60**	**43.1**
0.25 to <0.50	**84**	**0.37**	**71**	**52.0**	**1.27**	**48**	**57.5**
0.50 to <0.75	**68**	**0.63**	**83**	**52.0**	**1.21**	**52**	**75.3**
0.75 to <2.50	**200**	**1.58**	**294**	**52.0**	**1.44**	**229**	**115.0**
2.50 to <10.00	**7**	**5.62**	**16**	**52.0**	**1.31**	**12**	**173.3**
10.00 to <100.00	**3**	**11.11**	**12**	**52.0**	**1.00**	**7**	**222.7**
100.00 (Default)	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Sub-total	**1,226**	**0.44**	**823**	**52.0**	**1.18**	**551**	**45.0**
Grand-total at 31 Dec 2022	**2,539**	**0.23**	**919**	**36.8**	**0.89**	**613**	**24.1**
Sovereign							
0.00 to <0.15	245	0.02	58	10.0	0.38	2	1.0
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	245	0.02	58	10.0	0.38	2	0.8
Banks							
0.00 to <0.15	605	0.04	40	28.2	0.56	37	6.0
0.15 to <0.25	—	0.22	3	36.7	1.00	—	20.0
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	605	0.04	43	28.2	0.56	37	6.0
Corporate – SME							
0.00 to <0.15	4	0.13	13	52.0	2.02	2	38.0
0.15 to <0.25	6	0.22	25	52.0	1.39	3	44.0
0.25 to <0.50	6	0.37	34	52.0	3.30	5	86.0
0.50 to <0.75	5	0.63	21	52.0	2.25	5	91.0
0.75 to <2.50	15	1.44	52	52.0	2.06	17	118.0
2.50 to <10.00	5	4.69	17	52.0	2.51	9	179.0
10.00 to <100.00	1	13.25	5	52.0	1.00	1	239.0
100.00 (Default)	—	100	1	52.0	1.00	1	689.0
Sub-total	42	1.73	168.0	52.0	2.20	43	102.0
Corporate – Others							
0.00 to <0.15	662	0.07	230	52.00	1.18	130	19.6
0.15 to <0.25	183	0.22	114	52.00	1.09	79	43.0

0.25 to <0.50	147	0.37	71	52.00	2.07	100	68.0
0.50 to <0.75	86	0.63	55	52.00	1.61	71	82.0
0.75 to <2.50	187	1.62	227	52.00	1.48	216	116.0
2.50 to <10.00	32	4.22	10	52.00	0.96	48	151.0
10.00 to <100.00	1	16.85	3	52.00	1.48	3	265.0
100.00 (Default)	—	100.00	1	52.00	1.00	1	689.0
Sub-total	1,298	0.51	711	52.00	1.34	648	50.0
Grand-total at 31 Dec 2021	2,190	0.36	980	42.10	1.03	730	33.3

Table 15: Composition of collateral for CCR exposure (CCR5)

		Collateral used in derivative transactions				Collateral used in SFTs	
		Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
		Segregated	Unsegregated	Segregated	Unsegregated		
		$m	$m	$m	$m	$m	$m
1	Cash – domestic currency	**—**	**219**	**—**	**591**	**—**	**—**
2	Cash – other currencies	**—**	**61**	**—**	**406**	**—**	**—**
3	Domestic sovereign debt	**—**	**210**	**21**	**—**	**—**	**101**
4	Other sovereign debt	**—**	**—**	**—**	**—**	**—**	**—**
5	Government agency debt	**—**	**—**	**—**	**—**	**—**	**—**
6	Corporate bonds	**—**	**—**	**—**	**—**	**—**	**—**
7	Equity securities	**—**	**—**	**—**	**—**	**—**	**—**
8	Other collateral	**—**	**—**	**—**	**—**	**—**	**—**
9	**Total at 31 Dec 2022**	**—**	**490**	**21**	**997**	**—**	**101**
1	Cash – domestic currency	—	25	—	299	—	—
2	Cash – other currencies	—	42	—	114	—	—
3	Domestic sovereign debt	—	75	7	26	—	62
4	Other sovereign debt	—	—	—	—	—	—
5	Government agency debt	—	—	—	—	—	—
6	Corporate bonds	—	—	—	—	—	—
7	Equity securities	—	—	—	—	—	—
8	Other collateral	—	—	—	—	—	—
9	Total at 31 Dec 2021	—	142	7	439	—	62

Table 18: Exposures to central counterparties (CCPs) - CCR8

		At 31 Dec 2022		At 31 Dec 2021	
		EAD post-CRM	RWA	EAD post-CRM	RWA
		$m	$m	$m	$m
1	**Exposures to QCCPs (total)**	**440**	**13**	297	10
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	**320**	**7**	224	5
3	– OTC derivatives	**239**	**5**	138	3
4	– exchange-traded derivatives	**—**	**—**	8	—
5	– securities financing transactions	**81**	**2**	78	2
6	– netting setts where cross-products netting has been approved	**—**	**—**	—	—
7	Segregated initial margin	**101**	**1**	62	1
8	Non-segregated initial margin	**—**	**—**	—	—
9	Pre-funded default fund contributions	**19**	**5**	11	4
10	Unfunded default fund contributions	—	—	—	—
11	**Exposures to non- QCCPs (total)**	—	—	—	—
12	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	—	—	—	—
13	– OTC derivatives	—	—	—	—
14	– exchange-traded derivatives	—	—	—	—
15	– securities financing transactions	—	—	—	—
16	– netting setts where cross-products netting has been approved	—	—	—	—
17	Segregated initial margin	—	—	—	—
18	Non-segregated initial margin	—	—	—	—
19	Pre-funded default fund contributions	—	—	—	—
20	Unfunded default fund contributions	—	—	—	—

1. *QCCP - Qualifying Central Counterparty*

Market Risk

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

Market Risk Governance (MRA)

HSBC Bank Canada's strategic objectives in undertaking trading activities are to solidify the Bank's position as the leading international bank in Canada through finance-focused and emerging markets-led strategy. The Bank delivers global products and solutions to domestic clients, and provides global clients access to local products and services.

Market Risk is the independent oversight unit within HSBC Bank Canada and has a mandate to ensure that market risks are within the risk appetite of the Bank. Market Risk is responsible for the daily calculation of market risk measures and backtesting reports, setting of limits and monitoring exposures against limits, and calculation and reporting of capital charges. The Global Risk Analytics team, which is responsible for development and monitoring the performance of model methodology, as well as liaison with external regulators, works closely with the core Market Risk team.

The Audit, Risk and Conduct Review Committee (ARC), a committee of the Board of Directors, has non-executive responsibility for oversight and advice to the Board on matters related to financial reporting and high-level risk related matters and governance. The Risk Management Meeting (RMM) has a mission to provide strategic enterprise-wide risk management. A subcommittee of the RMM is the Risk Markets Model Oversight Committee, which is primarily responsible for oversight (including approval, monitoring, vetting, ensuring fitness of purpose, etc.) of models, which are used primarily for regulatory capital charges.

Internal Model Approach (IMA)

HSBC Bank Canada has permission to use the internal model approach to calculate general market risk based on the VaR and Stressed VaR components and relies on the standard charge approach to measure the interest rate specific risk. The 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. The Stressed VaR is calibrated to a one-year period of stress observed in history. For risk management purposes 1-day VaR and 10-day Stressed VaR are computed. For regulatory purposes, 10-day VaR and 10-day Stressed VaR are computed. The standard charge is aggregated with the VaR and Stressed VaR contributions when computing the market risk capital charge.

Monitoring and limiting market risk exposures

Our objective is to manage and control market risk exposures while maintaining a market profile consistent with our risk appetite.
We use a range of tools to monitor and limit market risk exposures including sensitivity analysis, VaR and stress testing.

Sensitivity analysis

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

Value at risk

Value at risk ('VaR') is a technique that estimates the potential losses on risk positions in the trading portfolio as a result of movements in market rates and prices over a specified time horizon and to a given level of confidence. The use of VaR is integrated into market risk management and is calculated for all trading positions regardless of how we capitalize those exposures. VaR is calculated at a 99% confidence level for a one-day holding period. Our VaR models derive plausible future scenarios from past series of recorded market rates and prices, taking into account interrelationships between different markets and rates such as interest rates and foreign exchange rates. Relative returns are used for credit spreads and exchange rates and absolute returns are used for interest rates.

We use the past two years as the data set in our VaR models, which is updated on a fortnightly basis, and these scenarios are then applied to the market baselines and trading positions on a daily basis. The models also incorporate the effect of option features on the underlying exposures. The valuation approach used in our models values linear instruments, such as bonds and swaps, using 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 should always be viewed in the context of its limitations. For example:
- Use of historical data as a proxy for estimating future events may not encompass all potential events, particularly extreme ones.

- The use of a holding period assumes that all positions can be liquidated or the risks offset during that period, which may not fully reflect the market risk arising at times of severe illiquidity, when the holding period may be insufficient to liquidate or hedge all positions fully.
- The use of a 99% confidence level does not take into account losses that might occur beyond this level of confidence.
- 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 framework

The risks not in VaR ('RNIV') framework captures and capitalizes material market risks that are not adequately covered in the VaR model. Risk factors are reviewed on a regular basis and are either incorporated directly in the VaR models, where possible, or quantified through a stress test approach within the RNIV framework. Stress RNIVs are estimated on the basis of stress scenarios whose severity is calibrated to be in line with the capital adequacy requirements.

Back-testing

We routinely validate the accuracy of our VaR models by back testing them against hypothetical profit and loss. Hypothetical profit and loss excludes non-modelled items such as fees, commissions and revenues of intra-day transactions. This is done at various levels, including total trading book, lines of business, and at the risk factor level.

Stress testing

Stress testing is an important procedure that is integrated into our market risk management framework 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. The market risk stress testing incorporates the historical and hypothetical events either globally or locally-defined. The locally-defined scenarios are chosen based on the HSBC Bank Canada portfolio and relevant risk factors. Stressed profit and loss figures are compared against referral limits and breaches are reported to senior management. Market risk reverse stress tests are undertaken on the premise that there is a fixed loss. The stress testing process identifies which scenarios lead to this loss. The rationale behind the reverse stress test is to understand scenarios that are beyond normal business settings and could have contagion and systemic implications.

Table 19: Market risk under standardised approach (MR1)

		At		
		31 Dec 2022	31 Dec 2021	**31 Dec 2022**
		RWA	RWA	**Capital requirements**
		$m	$m	**$m**
	Outright products			
1	Interest rate risk (general and specific)	**136**	51	**11**
2	Equity risk (general and specific)	**—**	—	**—**
3	Foreign exchange risk	**—**	—	**—**
4	Commodity risk	**—**	—	**—**
	Options			
6	Delta-plus method	**—**	—	**—**
7	Scenario approach	**—**	—	**—**
8	Securitisation	**—**	—	**—**
9	**Total**	**136**	51	**11**

Table 20 : RWA flow statement of market risk exposures under Internal Model Approach (MR2)

		VaR	Stressed VaR	Other	Total RWA
		$m	$m	$m	$m
1	**RWA at the beginning of the period - 1 Oct 2022**	**199**	**199**	**79**	**477**
2	Movement in risk levels[1]	**18**	**18**	**132**	**168**
3	Model updates/changes	**—**	**—**	**—**	**—**
4	Methodology and policy[2]	**—**	**—**	**—**	**—**
8	**RWA at the end of the period - 31 Dec 2022**	**217**	**217**	**211**	**645**

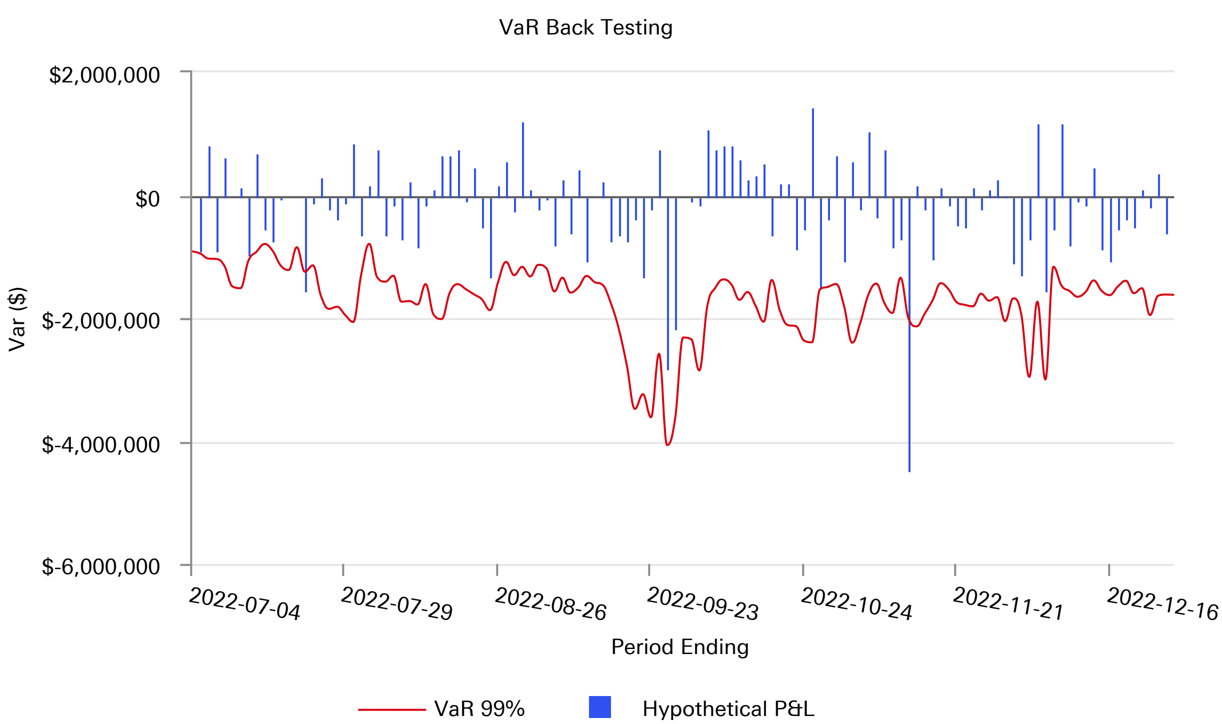
1. *Movement due to position changes; foreign exchange movements are embedded in the movement in risk levels*
2. *Other included Risks not in VaR (RNIV), OSFI updated the RNIV measure with a similar methodology as applied for Stressed VaR, including a multiplier of 3*

Table 21: IMA values for trading portfolios[1] (MR3)

		At	
		31 Dec 2022	31 Dec 2021
		$'000	$'000
VaR			
1	Maximum value	**9,483**	11,287
2	Average value	**5,785**	5,449
3	Minimum value	**3,685**	2,695
4	Period end	**4,468**	4,678
Stressed VaR			
5	Maximum value	**10,204**	8,648
6	Average value	**5,194**	6,159
7	Minimum value	**3,901**	3,394
8	Period end	**4,018**	7,595
Incremental Risk Charge			
9	Maximum value	**–**	–
10	Average value	**–**	–
11	Minimum value	**–**	–
12	Period end	**–**	–
Comprehensive Risk capital charge			
13	Maximum value	**–**	–
14	Average value	**–**	–
15	Minimum value	**–**	–
16	Period end	**–**	–
17	Floor (standardized measurement method)	**–**	–

1. These are the maximum, average and minimum values in the second quarter of the year.

Table 22: Comparison of VaR estimates with gains/losses (MR4)



The two breaches observed are attributable to heightened market volatility in CAD interest rates following economic data releases pointing towards a contraction in economy and cooling of inflation, resulting in aggressive downward moves in yields"

Leverage

Table 23: Summary comparison of accounting assets vs. leverage ratio exposure measure (LR1)

		At	
		31 Dec 2022	30 Sep 2022
		$m	$m
1	Total consolidated assets as per published financial statements	128,302	134,047
2	Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation	—	—
3	Adjustment for securitised exposures that meet the operational requirements for the recognition of risk transference	—	—
4	Adjustment for fiduciary assets recognised on the balance sheet pursuant to the operative accounting framework but excluded from the leverage ratio exposure measure	—	—
5	Adjustments for derivative financial instruments	(4,680)	(4,421)
6	Adjustment for securities financing transactions (i.e. repurchase agreements and similar secured lending)	116	15
7	Adjustment for off-balance sheet items (i.e. conversion to credit equivalent amounts of off-balance sheet exposures)	14,936	14,850
8	Other adjustments[1]	(5,912)	(3,770)
9	Leverage ratio exposure measure	132,762	140,721

1. *Effective Q12020, OSFI temporarily allows the exclusion of central bank reserves and sovereign-issued securities that qualify as High Quality Liquid assets (HQLA) from the leverage ratio exposure measure. Starting Q12022, banks will be required to include the aforementioned HQLA securities in their leverage ratio exposure measures, and central bank reserve will be required to include starting Q2 2023. Asset amounts deducted in determining Basel III Tier 1 capital are also included as a deduction.*

Table 24: Leverage Ratio Common Disclosure Template (LR2)

		At	
		31 Dec 2022	30 Sep 2022
		$m	$m
	On-balance sheet exposures		
1	On-balance sheet items (excluding derivatives, SFTs and grandfathered securitization exposures but including collateral)[1]	109,803	114,924
2	Gross up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the operative accounting framework (IFRS)	—	—
3	(Deductions of receivables assets for cash variation margin provided in derivative transactions)	(997)	(882)
4	(Asset amounts deducted in determining Basel III Tier 1 capital)	364	272
5	Total on-balance sheet exposures (excluding derivatives and SFTs) (Sum of lines 1 to 4)	109,170	114,314
	Derivative exposures		
6	Replacement cost associated with all derivative transactions (i.e. net of eligible cash variation margin)	726	1,388
7	Add-on amounts for PFE associated with all derivative transactions	1,811	1,823
8	(Exempted CCP-leg of client cleared trade exposures)	—	—
9	Adjusted effective notional amount of written credit derivatives	—	—
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	—	—
11	Total derivative exposures (sum of lines 6 to 10)	2,537	3,211
	Securities financing transaction exposures		
12	Gross SFT assets recognized for accounting purposes (with no recognition of netting), after adjusting for sale accounting transactions	7,935	10,180
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	(1,932)	(1,849)
14	Counterparty credit risk (CCR) exposure for SFTs	116	15
15	Agent transaction exposures	—	—
16	Total securities financing transaction exposures (sum of lines 12 to 15)	6,119	8,346
	Other off-balance sheet exposures		
17	Off-balance sheet exposure at gross notional amount	52,829	52,137
18	(Adjustments for conversion to credit equivalent amounts)	(37,893)	(37,287)
19	Off-balance sheet items (sum of lines 17 and 18)	14,936	14,850
	Capital and Total Exposures		
20	Tier 1 capital	6,298	6,019
21	Total Exposures (sum of lines 5, 11, 16 and 19)	132,762	140,721
	Leverage Ratios (%)		
22	Leverage ratio	4.7	4.3
22a	Leverage ratio with transitional arrangements for ECL provisioning not applied	4.7	4.3

1. *Effective Q12020, OSFI temporarily allows the exclusion of central bank reserves and sovereign-issued securities that qualify as High Quality Liquid assets (HQLA) from the leverage ratio exposure measure. Starting Q12022, banks are required to include the aforementioned HQLA securities in their leverage ratio exposure measures, and central bank reserves will be required to include starting Q22023.*

Glossary

- **OSFI** - Office of the Superintendent of Financial Institutions
- **$** - Canadian dollar
- **Gross carrying values**: The gross value is the accounting value before any any credit conversion factor (CCF), credit risk mitigation (CRM) techniques or allowance/impairments.
- **Probability of Default (PD)** - An estimate of the likelihood of a customer defaulting on any credit related obligation within a 1 year time horizon, expressed as a percentage.
- **Loss Given Default (LGD)** - An estimate of the economic loss, expressed as a percentage (0%-100%) of the exposure at default, that the Bank will incur in the event a borrower defaults
- **Exposure At Default (EAD)** - An estimate of the amount of exposure to a customer at the time of default.
- **Standardized Approach for credit risk** - Under this approach, banks use a standardized set of risk-weights as prescribed by OSFI to calculate credit risk capital requirements. The standardized risk-weights are based on external credit assessments, where available, and other risk-related factors, including exposure asset class, collateral, etc.
- **Advanced Internal Ratings Based (AIRB) approach for credit risk** - Under this approach, banks use their own internal historical experience of PD, LGD, EAD and other key risk assumptions to calculate credit risk capital requirements.
- **Home Equity Lines of Credit (HELOC)** - Revolving personal lines of credit secured by home equity.
- **SA-CCR** - The standardised approach (SA-CCR) for measuring exposure at default for counterparty credit risk.
- **Credit Value adjustment (CVA) -** Credit valuation adjustment ('CVA') risk is the risk of adverse moves in the CVAs taken for expected credit losses on derivative transactions.
- **VaR - Value at Risk -** Value at risk ('VaR') is a technique that estimates the potential losses on risk positions in the trading portfolio as a result of movements in market rates and prices over a specified time horizon and to a given level of confidence.
- **All-in regulatory capita**l assumes that all Basel III regulatory adjustments are applied effective January 1, 2013 and that the capital value of instruments which no longer qualify as regulatory capital under Basel III rules will be phased out at a rate of 10% per year from January 1, 2013 and continuing to January 1, 2022.
- **Transitional regulatory capital** assumes that all Basel III regulatory capital adjustments are phased in from January 1, 2014 to January 1, 2018 and that the capital value of instruments which no longer qualify as regulatory capital under Basel III rules will be phased out at a rate of 10% per year from January 1, 2013 and continuing to January 1, 2022.
- **Asset size**: organic changes in book size and composition (including origination of new businesses and maturing loans) but excluding changes in book size due to acquisitions and disposal of entities.
- **Asset quality**: changes in the assessed quality of the bank's assets due to changes in borrower risk, such as rating grade migration or similar effects.
- **Model updates**: changes due to model implementation, changes in model scope, or any changes intended to address model weaknesses.
- **Methodology and policy**: changes due to methodological changes in calculations driven by regulatory policy changes, including both revisions to existing regulations and new regulations.
- **Acquisitions and disposals**: changes in book sizes due to acquisitions and disposal of entities.
- **ECL**: expected credit loss