



Supplementary Regulatory Capital Disclosures

Q2 2022

For the period ended: April 30, 2022

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Supplementary Regulatory Capital Disclosures

For the period ended: April 30, 2022

Section/Tab	Description	Frequency	Page #
Overview	Overview	Quarterly	3
Highlights	Regulatory Capital - Highlights	Quarterly	4
EAD_RWA	Exposure at Default and Risk-weighted Assets for Credit Risk Portfolios	Quarterly	5
Pillar III report			
KM2	Key metrics – TLAC requirements (at resolution group level)	Quarterly	6
Qualitative	Summary of Qualitative Requirements - Pillar III (Cross Referenced)	Annual	7-12
OV1	Overview of RWA	Quarterly	13-14
LI1	Differences between accounting and regulatory scopes of consolidation and mapping of financial statements	Quarterly	15-16
LI2	Main sources of differences between regulatory exposure amounts and carrying values in financial statements	Quarterly	17
CC1	Composition of regulatory capital	Quarterly	18-21
CC2	Reconciliation of regulatory capital to balance sheet	Quarterly	22-25
TLAC1	TLAC composition for G-SIBs (at resolution group level)	Quarterly	26
TLAC3	Resolution entity – creditor ranking at legal entity level	Quarterly	27-28
LR1	Summary comparison of accounting assets vs leverage ratio exposure measure	Quarterly	29
LR2	Leverage ratio common disclosure template	Quarterly	30
CR1	Credit quality of assets	Quarterly	31
CR2	Changes in stock of defaulted loans and debt securities	Quarterly	32
CR3	Credit risk mitigation techniques – overview	Quarterly	33
CR4	Standardized approach – credit risk exposures and credit risk mitigation (CRM) effects	Quarterly	34
CR5	Standardized approach – exposures by asset classes and risk weights	Quarterly	35
CR6 (Retail)	IRB – Retail credit risk exposures by portfolio and probability of default (PD) range	Quarterly	36-41
CR6 (Non-Retail)	IRB – Non-Retail credit risk exposures by portfolio and probability of default (PD) range	Quarterly	42-47
CR7	IRB – effect on RWA of credit derivatives used as CRM techniques	Quarterly	48
CR8	RWA flow statements of credit risk exposures under IRB	Quarterly	49
CR10	IRB (specialized lending and equities under the simple risk weight method)	Quarterly	50-51

Supplementary Regulatory Capital Disclosures

For the period ended: April 30, 2022

Section/Tab	Description	Frequency	Page #
CCR1	Analysis of counterparty credit risk (CCR) exposure by approach	Quarterly	52
CCR2	Credit valuation adjustment (CVA) capital charge	Quarterly	53
CCR3	Standardized approach of CCR exposures by regulatory portfolio and risk weights	Quarterly	54
CCR4	IRB – CCR exposures by portfolio and PD scale	Quarterly	55-57
CCR5	Composition of collateral for CCR exposure	Quarterly	58
CCR6	Credit derivatives exposures	Quarterly	59
CCR7	RWA flow statements of CCR exposures under the Internal Model Method (IMM)	Quarterly	60
CCR8	Exposures to central counterparties	Quarterly	61
SEC1	Securitization exposures in the banking book	Quarterly	62-63
SEC2	Securitization exposures in the trading book	Quarterly	64-65
SEC3	Securitization exposures in the banking book and associated regulatory capital requirements – bank acting as originator or as sponsor	Quarterly	66-67
SEC4	Securitization exposures in the banking book and associated capital requirements – bank acting as investor	Quarterly	68-69

Disclosures provided to address Enhanced Disclosure Task Force (EDTF) recommendations

Capital_Flow	Flow Statement for Regulatory Capital	Quarterly	70
RWA_Summary	Risk-weighted Assets and Capital Ratios	Quarterly	71
RWA_Flow	Movement of Risk-weighted Assets by Risk Type	Quarterly	72
RWA_by_Business	Risk-weighted Assets Arising from the Activities of the Bank's Businesses	Quarterly	73
Geography	Credit Risk Exposures by Geography	Quarterly	74
Maturity	AIRB Credit Risk Exposures by Maturity	Quarterly	75
AIRB_Losses	AIRB Credit Losses	Quarterly	76
BackTest	Estimated and Actual Loss Parameters - Non-Retail and Retail AIRB Portfolios	Quarterly	77
Derivatives	Derivatives - Counterparty Credit Risk	Quarterly	78
Mkt_Risk	Total Market Risk-weighted Assets	Quarterly	79
Glossary	Glossary	Quarterly	80

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This Appendix disclosure is based on OSFI's Pillar 3 disclosure requirements (April 2017), including subsequently issued Total Loss Absorbing Capital (May 2018), and OSFI Capital Adequacy Requirements Guidelines (November 2018), and Leverage Ratio Guidelines (November 2018) and disclosure requirements (November 2018), which are primarily sourced from the BCBS' Revised Pillar 3 disclosure requirements - Phase 1 (2015) and its Technical Amendment to Regulatory Treatment of Accounting Provisions (August 2018). This document is not audited and should be read in conjunction with our 2021 Annual Report.

Effective November 1, 2012, Canadian banks are subject to the revised capital adequacy requirements as published by the Basel Committee on Banking Supervision (BCBS) and commonly referred to as Basel III, as per OSFI's Capital Adequacy Requirements Guideline (CAR). Basel III builds on the "International Convergence of Capital Measurement and Capital Standards: A Revised Framework" (Basel II).

The Basel III Framework is comprised of three Pillars:

- Pillar 1 – methodologies that must be applied to calculate the minimum capital requirements.
- Pillar 2 – the requirement that banks have internal processes to assess their capital adequacy in relation to their strategies, risk appetite and actual risk profile. Regulators are expected to review these internal capital adequacy assessments.
- Pillar 3 – reflects the market disclosures required by banks to assist users of the information to better understand the risk profile.

Basel III classifies risk into three broad categories: credit risk, market risk and operational risk. Under Pillar 1 of the Basel III Framework, minimum capital for these three risks is calculated using one of the following approaches:

- Credit risk capital – Internal Ratings Based Approach (Advanced or Foundation) or Standardized Approach.
- Operational risk capital – Advanced Measurement Approach (AMA), Standardized Approach or Basic Indicator Approach.
- Market risk capital - Internal models or Standardized Approach.

Credit Risk

The credit risk component consists of on- and off- balance sheet claims. The Basel III rules are not applied to traditional balance sheet categories but to categories of on- and off- balance sheet exposures which represent general classes of assets/exposures (Corporate, Sovereign, Bank, Retail and Equity) based on their different underlying risk characteristics.

Generally, while calculating capital requirements, exposure types such as Corporate, Sovereign, Bank, Retail and Equity are analyzed by the following credit risk exposure sub-types: Drawn, Undrawn, Repo-style Transactions, Over-the-counter (OTC) Derivatives, Exchange Traded Derivatives and Other Off-balance Sheet claims.

OSFI approved the Bank's use of the Advanced Internal Ratings Based (AIRB) approach for credit risk in its material Canadian, US and European portfolios and for a significant portion of international corporate and commercial portfolios and Canadian retail portfolios. The Bank uses internal estimates, based on historical experience, for probability of default (PD), loss given default (LGD) and exposure at default (EAD). As described in CR2 of this Supplementary Regulatory Capital Disclosure, the definition of regulatory capital default is consistent with the accounting definitions described in the Bank's annual report, except that all products, including credit cards, may be defaulted when a contractual payment is 90 days in arrears.

- Under the AIRB approach, credit risk risk-weighted assets (RWA) are calculated by multiplying the capital requirement (K) by EAD times 12.5, where K is a function of the PD, LGD, maturity and prescribed correlation factors. This results in the capital calculations being more sensitive to

- A multiplier of 1.25 is applied to the correlation parameter of all exposures to all unregulated Financial Institutions, and regulated Financial Institutions with assets of at least US\$100 billion.
- Exchange-traded derivatives and other exposures to CCPs which previously were excluded from the capital calculation under Basel II are risk-weighted under Basel III.
- An overall scaling factor of 6% is added to the credit risk RWA for all AIRB portfolios. For the remaining portfolios, the Standardized Approach is used to compute credit risk.
- The Standardized Approach applies regulator prescribed risk weight factors to credit exposures based on the external credit assessments (public ratings), where available, and also considers other additional factors (e.g. loan-to-value for retail, eligible collateral, allowances, etc.)
- Risk weights for exposures falling under the Securitization Framework are mainly computed under the following approaches: the Internal Ratings Based Approach (IRBA), External Ratings-Based Approach (ERBA), or the OSFI approved Internal Assessments Approach (IAA).
- IRBA risk weights are only applicable to retained exposures to securitizations of Bank originated receivables utilizing the Bank's existing OSFI approved AIRB model parameters.
- ERBA risk weights for other banking book exposures depend on the external ratings provided by the external credit assessment institutions (ECAI): S&P, Moody's and DBRS and are risk-weighted based on prescribed percentages incorporating effective maturity and STC (Simple, Transparent, Comparable) criteria, a mapping process consistent with OSFI's CAR.
- IAA risk weights for exposures to our asset-backed commercial paper conduits are based on a rating methodology similar to the criteria that are published by ECAs and therefore are similar to the methodologies used by these institutions. Our ratings process includes a comparison of the available credit enhancement in a securitization structure to a stressed level of projected losses. The stress level used is determined by the desired risk profile of the transaction. As a result, we stress the cash flows of a given transaction at a higher level in order to achieve a higher rating. Conversely, transactions that only pass lower stress levels achieve lower ratings. We periodically compare our own ratings to ECAs ratings to ensure that the ratings provided by ECAs are reasonable. We have developed asset class specific criteria guidelines which provide the rating methodologies for different asset classes. The guidelines are reviewed periodically and are subject to a model validation process, for compliance with Basel rules. The Bank's Global Risk Management (GRM) is responsible for providing risk assessments for capital purposes. GRM is independent of the business originating the securitization exposures and performs its own analysis, sometimes in conjunction with but always independent of the applicable business.

Operational Risk

In January 2020, OSFI revised its capital requirements for operational risk in consideration of the final Basel III revisions published by the BCBS in December 2017. Upon future implementation of the revised Basel III requirements, institutions will be required to use the revised Basel III Standardized Approach for operational risk. In the interim, institutions previously approved for the Basel II Advanced Measurement Approach (AMA) for operational risk capital are to report using the existing Basel II Standardized Approach (TSA).

Market Risk

The Bank uses both internal models and standardized approaches to calculate market risk capital. Commencing Q1 2012, the Bank implemented additional market risk measures in accordance with Basel's Revisions of the Basel II market risk framework (July 2009). Additional measures include stressed Value-at-Risk and incremental risk charge.

Total Loss Absorbing Capacity (TLAC)

Effective November 1, 2021, D-SIBs are required to maintain a minimum risk-based TLAC ratio and a minimum TLAC leverage ratio. TLAC is defined as the aggregate of Tier 1 capital, Tier 2 capital, and other TLAC instruments that are subject to conversion in whole or in part into common shares under the CDIC Act and meet all of the eligibility criteria under the guidelines. The Bank's minimum TLAC ratio requirements consist of 21.5% of risk-weighted assets (plus a Domestic Stability Buffer requirement) and 6.75% of leverage ratio exposures. OSFI may subsequently vary the minimum TLAC requirements for individual D-SIBs or groups of D-SIBs.

This "Supplementary Regulatory Capital Disclosure" including the main features template that sets out a summary of information on the terms and conditions of the main features of all capital instruments is posted on the Bank's website as follows: <http://www.scotiabank.com/ca/en/0,,3066,00.htm>

Regulatory Capital Highlights

(in \$ millions)	Q2 2022	Q1 2022	Q4 2021	Q3 2021	Q2 2021
Common Equity Tier 1 capital⁽¹⁾	51,547	52,150	51,010	50,465	49,697
Tier 1 capital⁽¹⁾	57,201	57,911	57,915	56,630	55,152
Total capital⁽¹⁾	66,628	65,527	66,101	65,101	63,686
Total loss absorbing capacity (TLAC)⁽²⁾	133,841	122,613	115,681	104,759	97,870
Risk-weighted Assets⁽¹⁾					
Capital Risk-weighted Assets	445,273	433,682	416,105	414,169	404,727
Capital Ratios (%)⁽¹⁾					
Common Equity Tier 1 (as a percentage of risk-weighted assets)	11.6	12.0	12.3	12.2	12.3
Tier 1 (as a percentage of risk-weighted assets)	12.8	13.4	13.9	13.7	13.6
Total capital (as a percentage of risk-weighted assets)	15.0	15.1	15.9	15.7	15.7
Total loss absorbing capacity (as a percentage of risk-weighted assets) ⁽²⁾	30.1	28.3	27.8	25.3	24.2
Leverage⁽³⁾:					
Leverage Exposures	1,360,184	1,308,247	1,201,766	1,191,993	1,180,223
Leverage Ratio (%)	4.2	4.4	4.8	4.8	4.7
TLAC Leverage Ratio (%) ⁽²⁾	9.8	9.4	9.6	8.8	8.3
OSFI Pillar 1 Target (%)					
Common Equity Tier 1 minimum ratio	8.0	8.0	8.0	8.0	8.0
Tier 1 capital minimum ratio	9.5	9.5	9.5	9.5	9.5
Total capital minimum ratio	11.5	11.5	11.5	11.5	11.5
Leverage minimum ratio	3.0	3.0	3.0	3.0	3.0
Total loss absorbing capacity minimum ratio	21.5	21.5	N/A	N/A	N/A
TLAC Leverage minimum ratio	6.75	6.75	N/A	N/A	N/A
Capital instruments subject to phase-out arrangements					
Current cap on Additional Tier 1 (AT1) instruments subject to phase-out arrangements (%)	-	-	10	10	10
Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	750	750	97	97	97
Current cap on Tier 2 (T2) instruments subject to phase-out arrangements (%)	-	-	10	10	10
Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	250	250	-	-	-

(1) This measure has been disclosed in this document in accordance with OSFI Guideline - Capital Adequacy Requirements (November 2018).

(2) This measure has been disclosed in this document in accordance with OSFI Guideline - Total Loss Absorbing Capacity (September 2018).

(3) This measure has been disclosed in this document in accordance with OSFI Guideline - Leverage Requirements (November 2018).

N/A - not applicable

Exposure at Default and Risk-Weighted Assets for Credit Risk Portfolios

(in \$ millions)		Sub-type		Q2 2022								Q1 2022	
		AIRB		Standardized		Total		% AIRB		Total			
Exposure Type		EAD ⁽¹⁾	RWA ⁽²⁾	EAD ⁽¹⁾	RWA ⁽²⁾	EAD ⁽¹⁾	RWA ⁽²⁾	EAD ⁽¹⁾	RWA ⁽²⁾	EAD ⁽¹⁾	RWA ⁽²⁾		
Non-Retail													
Corporate	Drawn	199,466	89,298	53,988	50,627	253,454	139,925	79%	64%	240,659	134,883		
	Undrawn	110,516	39,337	3,765	3,676	114,281	43,013	97%	91%	113,206	42,955		
	Other ⁽³⁾	57,641	12,320	2,291	2,278	59,932	14,598	96%	84%	64,061	15,175		
	Total	367,623	140,955	60,044	56,581	427,667	197,536	86%	71%	417,926	193,013		
Bank	Drawn	16,881	3,348	4,240	2,994	21,121	6,342	80%	53%	19,173	5,612		
	Undrawn	4,946	1,054	41	40	4,987	1,094	99%	96%	4,863	1,071		
	Other ⁽³⁾	6,582	670	5	4	6,587	674	100%	99%	8,115	795		
	Total	28,409	5,072	4,286	3,038	32,695	8,110	87%	63%	32,151	7,478		
Sovereign	Drawn	158,815	4,092	8,520	534	167,335	4,626	95%	88%	161,225	4,690		
	Undrawn	1,433	63	-	-	1,433	63	100%	100%	901	86		
	Other ⁽³⁾	1,821	40	15	16	1,836	56	99%	71%	2,160	26		
	Total	162,069	4,195	8,535	550	170,604	4,745	95%	88%	164,286	4,802		
Total Non-Retail	Drawn	375,162	96,738	66,748	54,155	441,910	150,893			421,057	145,185		
	Undrawn	116,895	40,454	3,806	3,716	120,701	44,170			118,970	44,112		
	Other ⁽³⁾	66,044	13,030	2,311	2,298	68,355	15,328			74,336	15,996		
	Total	558,101	150,222	72,865	60,169	630,966	210,391			614,363	205,293		
Retail													
Residential Mortgages ⁽¹⁾	Drawn	274,069	22,617	60,314	24,196	334,383	46,813	82%	48%	327,816	43,034		
	Undrawn	-	-	-	-	-	-			-	-		
	Total	274,069	22,617	60,314	24,196	334,383	46,813	82%	48%	327,816	43,034		
Secured Lines Of Credit	Drawn	20,985	3,184	-	-	20,985	3,184	100%	100%	20,363	3,078		
	Undrawn	21,458	1,056	-	-	21,458	1,056	100%	100%	20,809	981		
	Total	42,443	4,240	-	-	42,443	4,240	100%	100%	41,172	4,059		
Qualifying Revolving Retail Exposures (QRRE)	Drawn	15,165	8,472	-	-	15,165	8,472	100%	100%	14,863	8,650		
	Undrawn	29,156	3,334	-	-	29,156	3,334	100%	100%	28,507	3,274		
	Total	44,321	11,806	-	-	44,321	11,806	100%	100%	43,370	11,924		
Other Retail	Drawn	32,445	18,239	39,107	28,880	71,552	47,119	45%	39%	70,238	46,123		
	Undrawn	3,707	1,708	-	-	3,707	1,708	100%	100%	3,678	1,700		
	Total	36,152	19,947	39,107	28,880	75,259	48,827	48%	41%	73,916	47,823		
Total Retail	Drawn	342,664	52,512	99,421	53,076	442,085	105,588			433,280	100,885		
	Undrawn	54,321	6,098	-	-	54,321	6,098			52,994	5,955		
	Total	396,985	58,610	99,421	53,076	496,406	111,686			486,274	106,840		
Securitizations		17,205	3,317	4,020	1,309	21,225	4,626	81%	72%	21,683	4,629		
Trading Derivatives		27,262	5,552	1,440	1,424	28,702	6,976	95%	80%	25,312	6,565		
Derivatives - credit valuation adjustment (CVA)		-	5,919	-	-	-	5,919			-	4,312		
Total Credit Risk (Excluding Equities & Other Assets)		999,553	223,620	177,746	115,978	1,177,299	339,598			1,147,632	327,639		
Equities		5,552	5,495	-	-	5,552	5,495	100%	100%	5,014	4,941		
Other Assets ⁽⁴⁾		-	-	70,348	28,778	70,348	28,778			63,116	29,357		
Total Credit Risk (Before Scaling Factor)		1,005,105	229,115	248,094	144,756	1,253,199	373,871			1,215,762	361,937		
Add-on for 6% Scaling Factor ⁽⁵⁾			13,193				13,193				12,649		
Total Credit Risk		1,005,105	242,308	248,094	144,756	1,253,199	387,064			1,215,762	374,586		

(1) AIRB Exposure at default is post credit risk mitigation. Standardized Exposure at default is after related IFRS 9 (ECL Stage 3) allowances for credit losses, and the collateral impact under Comprehensive Approach. Residential Mortgages include insured mortgages.

(2) Risk-weighted Assets used for calculation of CET1, Tier 1, and Total Capital ratios.

(3) Includes lending instruments such as letters of credit and letters of guarantee, banking book derivatives and repo-style exposures, net of related collateral.

(4) Other Assets include amounts related to central counterparties (CCPs).

(5) The Basel Framework requires an additional 6% scaling factor to AIRB credit risk portfolios (excluding CVA and Securitizations).

KM2: Key metrics – TLAC requirements (at resolution group level)

(in \$ millions)		a	a ₂	a ₃	a ₄
		Q2 2022	Q1 2022	Q4 2021	Q3 2021
Resolution group					
1	Total loss absorbing capacity (TLAC) available	133,841	122,613	115,681	104,759
1a	Total loss-absorbing capacity (TLAC) available with transitional arrangements for ECL provisioning not applied	133,841	122,613	115,681	104,759
2	Total RWA at the level of the resolution group	445,273	433,682	416,105	414,169
3	TLAC as a percentage of RWA (row 1 / row 2) (%)	30.1%	28.3%	27.8%	25.3%
3a	TLAC ratio: TLAC as a percentage of RWA (row 1a / row 2) (%) available with transitional arrangements for ECL provisioning not applied	30.1%	28.3%	27.8%	25.3%
4	Leverage exposure measure at the level of the resolution group	1,360,184	1,308,247	1,201,766	1,191,993
5	TLAC as a percentage of leverage exposure measure (row 1 / row 4) (%)	9.8%	9.4%	9.6%	8.8%
5a	TLAC Leverage Ratio: TLAC as a percentage of leverage ratio exposure measure with transitional arrangements for ECL provisioning not applied (row 1a / row 4) (%)	9.8%	9.4%	9.6%	8.8%
6a	Does the subordination exemption in the antepenultimate paragraph of Section 11 of the FSB TLAC Term Sheet apply?	Yes	Yes	Yes	Yes
6b	Does the subordination exemption in the penultimate paragraph of Section 11 of the FSB TLAC Term Sheet apply?	No	No	No	No
6c	If the capped subordination exemption applies, the amount of funding issued that ranks pari passu with Excluded Liabilities and that is recognized as external TLAC, divided by funding issued that ranks pari passu with Excluded Liabilities and that would be recognized as external TLAC if no cap was applied (%)	N/A	N/A	N/A	N/A

Summary of Qualitative Requirements - Pillar III (Cross Referenced)

Item #	Pillar III - Requirements - Qualitative	Frequency	2021 Annual Report: MD&A	2021 Annual Report: Financial Statements	Regulatory Capital Supplementary Package	Financial Reporting Supplementary Package	Page Reference
Part 2 - OVA – Bank risk management approach		Annual					
Banks must describe their risk management objectives and policies, in particular:		Annual					
(a)	How the business model determines and interacts with the overall risk profile (eg the key risks related to the business model and how each of these risks is reflected and described in the risk disclosures) and how the risk profile of the bank interacts with the risk tolerance approved by the board.	Annual	79-117				
(b)	The risk governance structure: responsibilities attributed throughout the bank (eg oversight and delegation of authority; breakdown of responsibilities by type of risk, business unit etc); relationships between the structures involved in risk management processes (eg board of directors, executive management, separate risk committee, risk management structure, compliance function, internal audit function).	Annual	79-85				
(c)	Channels to communicate, decline and enforce the risk culture within the bank (eg code of conduct; manuals containing operating limits or procedures to treat violations or breaches of risk thresholds; procedures to raise and share risk issues between business lines and risk functions).	Annual	79-85				
(d)	The scope and main features of risk measurement systems.	Annual	80-84, 89-94, 99-101, 117				
(e)	Description of the process of risk information reporting provided to the board and senior management, in particular the scope and main content of reporting on risk exposure.	Annual	79-83, 99				
(f)	Qualitative information on stress testing (eg portfolios subject to stress testing, scenarios adopted and methodologies used, and use of stress testing in risk management).	Annual	82-83, 99-101, 104	234, 239			
(g)	The strategies and processes to manage, hedge and mitigate risks that arise from the bank’s business model and the processes for monitoring the continuing effectiveness of hedges and mitigants.	Annual	79-83, 89, 87-91, 99-101	160-162, 181-185			
Part 3 - LIA – Explanations of differences between accounting and regulatory exposures amounts		Annual					
Banks must explain the origins of the differences between accounting amounts, as reported in financial statements amounts and regulatory exposure amounts, as displayed in templates LI1 and LI2.		Annual					
(a)	Banks must explain the origins of any significant differences between the amounts in columns (a) and (b) in LI1.	Annual				LI1	
(b)	Banks must explain the origins of differences between carrying values and amounts considered for regulatory purposes shown in LI2.	Annual				LI2	
(c)	In accordance with the implementation of the guidance on prudent valuation, banks must describe systems and controls to ensure that the valuation estimates are prudent and reliable. Disclosure must include:	Annual					
	• Valuation methodologies, including an explanation of how far mark-to-market and mark-to-model methodologies are used.	Annual	89-90, 119-120	175-180, 234			
	• Description of the independent price verification process.	Annual	119-120	175-176			

Summary of Qualitative Requirements - Pillar III (Cross Referenced)

Item #	Pillar III - Requirements - Qualitative	Frequency	2021 Annual Report: MD&A	2021 Annual Report: Financial Statements	Regulatory Capital Supplementary Package	Financial Reporting Supplementary Package
			Page Reference			
	• Procedures for valuation adjustments or reserves (including a description of the process and the methodology for valuing trading positions by type of instrument).	Annual	119-120	161-162 181-182		
	Part 4 - CRA – General qualitative information about credit risk	Annual				
	Banks must describe their risk management objectives and policies for credit risk, focusing in particular on:	Annual				
(a)	How the business model translates into the components of the bank's credit risk profile	Annual	79, 83-85, 87-92			
(b)	Criteria and approach used for defining credit risk management policy and for setting credit risk limits	Annual	82-85, 87, 96-97			
(c)	Structure and organization of the credit risk management and control function	Annual	79-80, 90-92			
(d)	Relationships between the credit risk management, risk control, compliance and internal audit functions	Annual	79-81			
(e)	Scope and main content of the reporting on credit risk exposure and on the credit risk management function to the executive management and to the board of directors	Annual	79-83, 90-92			
	Part 4 - CRB – Additional disclosure related to the credit quality of assets	Annual				
	Banks must provide the following disclosures:					
	Qualitative disclosures	Annual				
(a)	The scope and definitions of "past due" and "impaired" exposures used for accounting purposes and the differences, if any, between the definition of past due and default for accounting and regulatory purposes.	Annual		163-165	Overview	
(b)	The extent of past-due exposures (more than 90 days) that are not considered to be impaired and the reasons for this.	Annual		163-165, 204		
(c)	Description of methods used for determining accounting provisions for credit losses. In addition, banks that have adopted an ECL accounting model must provide information on the rationale for categorization of ECL accounting provisions in general and specific categories for standardized approach exposures.	Annual		163-165	CR1	
(d)	The bank's own definition of a restructured exposure. (i.e. modified loans not derecognized)	Annual		163-165		
	Quantitative disclosures	Annual				
(e)	Breakdown of exposures by geographical areas, industry and residual maturity;	Annual				

Summary of Qualitative Requirements - Pillar III (Cross Referenced)

Item #	Pillar III - Requirements - Qualitative	Frequency	2021 Annual Report: MD&A	2021 Annual Report: Financial Statements	Regulatory Capital Supplementary Package	Financial Reporting Supplementary Package
			Page Reference			
	(i) Geography	Annual	125, 130	226		
	(ii) Industry	Annual	127	227		
	(iii) Residual Maturity	Annual	111, 130	196		
(f)	Amounts of impaired exposures (according to the definition used by the bank for accounting purposes) and related allowances and write-offs, broken down by geographical areas and industry;	Annual				
	(i) Geography	Annual			Q4, 2021 - Impaired by Region	
	(ii) Industry	Annual			Q4, 2021 - Impaired by Industry	
(g)	Ageing analysis of accounting past-due exposures;	Annual		204		
(h)	Breakdown of restructured exposures between impaired and not impaired	Annual		201		
Part 4 - Table CRC: Qualitative disclosure requirements related to credit risk mitigation techniques		Annual				
Banks must disclose:		Annual				
(a)	Core features of policies and processes for, and an indication of the extent to which the bank makes use of, on- and off-balance sheet netting.	Annual	90-91	185, 191-192		
(b)	Core features of policies and processes for collateral evaluation and management.	Annual	90-91	185		
(c)	Information about market or credit risk concentrations under the credit risk mitigation instruments used (ie by guarantor type, collateral and credit derivative providers).	Annual	84, 90-91, 94-95	191-192, 234		
Part 4 - CRD: Qualitative disclosures on banks' use of external credit ratings under the standardized approach for credit risk		Annual				
A. For portfolios that are risk-weighted under the standardized approach for credit risk, banks must disclose the following information:		Annual				
(a)	Names of the external credit assessment institutions (ECAIs) and export credit agencies (ECAs) used by the bank, and the reasons for any changes over the reporting period;	Annual	69-70	237		
(b)	The asset classes for which each ECAI or ECA is used;	Annual	69-70	237	EAD RWA	
(c)	A description of the process used to transfer the issuer to issue credit ratings onto comparable assets in the banking book (see paragraphs 99–101 of the Basel framework); and	Annual	69-70	237		
(d)	The alignment of the alphanumerical scale of each agency used with risk buckets (except where the relevant supervisor publishes a standard mapping with which the bank has to comply).	Annual	69-70	237		
Part 4 - CRE: Qualitative disclosures related to IRB models		Annual				
Banks must provide the following information on their use of IRB models:		Annual				
(a)	Internal model development, controls and changes: role of the functions involved in the development, approval and subsequent changes of the credit risk models.	Annual	69-72, 85, 89			

Summary of Qualitative Requirements - Pillar III (Cross Referenced)

Item #	Pillar III - Requirements - Qualitative	Frequency	2021 Annual Report: MD&A	2021 Annual Report: Financial Statements	Regulatory Capital Supplementary Package	Financial Reporting Supplementary Package
			Page Reference			
(b)	Relationships between risk management function and internal audit function and procedure to ensure the independence of the function in charge of the review of the models from the functions responsible for the development of the models.	Annual	69-72			
(c)	Scope and main content of the reporting related to credit risk models.	Annual	69-72	234, 236-237	Overview	
(d)	Scope of the supervisor’s acceptance of approach.	Annual	69-72			
(e)	For each of the portfolios, the bank must indicate the part of EAD within the group (in percentage of total EAD) covered by standardized, FIRB and AIRB approach and the part of portfolios that are involved in a roll-out plan.	Annual	69-72		Overview	EAD_RWA
(f)	The number of key models used with respect to each portfolio, with a brief discussion of the main differences among the models within the same portfolios.	Annual	69-72	234, 236-237		
(g)	Description of the main characteristics of the approved models: (i) definitions, methods and data for estimation and validation of PD (eg how PDs are estimated for low default portfolios; if there are regulatory floors; the drivers for differences observed between PD and actual default rates at least for the last three periods); and where applicable: (ii) LGD (eg methods to calculate downturn LGD; how LGDs are estimated for low default portfolio; the time lapse between the default event and the closure of the exposure); (iii) credit conversion factors, including assumptions employed in the derivation of these variables;	Annual	69-72	234, 236-237		
Part 5 - CCRA: Qualitative disclosure related to counterparty credit risk		Annual				
Banks must provide:		Annual				
(a)	Risk management objectives and policies related to counterparty credit risk, including:	Annual				
(b)	The method used to assign the operating limits defined in terms of internal capital for counterparty credit exposures and for CCP exposures;	Annual	80-81, 90-91	184-185		
(c)	Policies relating to guarantees and other risk mitigants and assessments concerning counterparty risk, including exposures towards CCPs;	Annual	82-83, 90-91	184-185		
(d)	Policies with respect to wrong-way risk exposures;	Annual	91			
(e)	The impact in terms of the amount of collateral that the bank would be required to provide given a credit rating downgrade.	Annual	106			

Summary of Qualitative Requirements - Pillar III (Cross Referenced)

Item #	Pillar III - Requirements - Qualitative	Frequency	2021 Annual Report: MD&A	2021 Annual Report: Financial Statements	Regulatory Capital Supplementary Package	Financial Reporting Supplementary Package
			Page Reference			
Part 6 - SECA: Qualitative disclosure requirements related to securitization exposures		Annual				
Qualitative disclosures		Annual				
Banks must describe their risk management objectives and policies for securitization activities and main features of these activities according to the framework below. If a bank holds securitization positions reflected both in the regulatory banking book and in the regulatory trading book, the bank must describe each of the following points by distinguishing activities in each of the regulatory books.		Annual				
(a) The bank's objectives in relation to securitization and re-securitization activity, including the extent to which these activities transfer credit risk of the underlying securitized exposures away from the bank to other entities, the type of risks assumed and the types of risks retained.		Annual	74-75, 120	205-207		
(b) The bank must provide a list of:		Annual				
• special purpose entities (SPEs) where the bank acts as sponsor (but not as an originator such as an Asset Backed Commercial Paper (ABCP) conduit), indicating whether the bank consolidates the SPEs into its scope of regulatory consolidation;		Annual	74-75	205-207		
• affiliated entities (i) that the bank manages or advises and (ii) that invest either in the securitization exposures that the bank has securitized or in SPEs that the bank sponsors; and		Annual	74-75	205-207		
• a list of entities to which the bank provides implicit support and the associated capital impact for each of them (as required in paragraphs 551 and 564 of the securitization framework).		Annual	n/a			
(c) Summary of the bank's accounting policies for securitization activities.		Annual	120	205-207		
(d) If applicable, the names of external credit assessment institution (ECAIs) used for securitizations and the types of securitization exposure for which each agency is used.		Annual				Overview
(e) If applicable, describe the process for implementing the Basel internal assessment approach (IAA). The description should include:		Annual				Overview
• structure of the internal assessment process and relation between internal assessment and external ratings, including information on ECAIs as referenced in item (d) of this table;		Annual				Overview
• control mechanisms for the internal assessment process including discussion of independence, accountability, and internal assessment process review; and		Annual				Overview
• the exposure type to which the internal assessment process is applied; and stress factors used for determining credit enhancement levels, by exposure type.		Annual				Overview
(f) Banks must describe the use of internal assessment other than for IAA capital purposes.		Annual	n/a			

Summary of Qualitative Requirements - Pillar III (Cross Referenced)

Item #	Pillar III - Requirements - Qualitative	Frequency	2021 Annual Report: MD&A	2021 Annual Report: Financial Statements	Regulatory Capital Supplementary Package	Financial Reporting Supplementary Package	Page Reference
	Part 7 - Market risk						
	OSFI revised Pillar 3 Market Risk disclosure requirements allow for a continuation of the existing Basel 2.5 Market Risk disclosures until the implementation of the next phase of Pillar 3 disclosures in Canada. As a result, the Bank's Market Risk disclosures continue to be based on Basel 2.5 disclosure requirements.		n/a				
	OSFI's requirements for Pillar 3 Requirements may be found in (http://www.osfi-bsif.gc.ca/Eng/fi-if/rg-ro/gdn-ort/gli-ld/Pages/plr3.aspx).						
	Part 8 - Operational risk	Annual					
	(a) In addition to the general qualitative disclosure requirement (paragraph 824), the approach(es) for operational risk capital assessment for which the bank qualifies.	Annual	73, 113				
	(b) Description of the advanced measurement approaches for operational risk (AMA), if used by the bank, including a discussion of relevant internal and external factors considered in the bank's measurement approach. In the case of partial use, the scope and coverage of the different approaches used/applied in regulatory capital.		n/a	n/a		n/a	
	(c) For banks using the AMA, a description of the use of insurance for the purpose of mitigating operational risk.		n/a				
	Part 9 - Interest rate risk in the banking book (IRRBB)	Annual					
	(a) The general qualitative disclosure requirement (paragraph 824), including the nature of IRRBB and key assumptions, including assumptions regarding loan prepayments and behaviour of non-maturity deposits, and frequency of IRRBB measurement.	Annual	99-101	239			

OV1: Overview of RWA

(in \$ millions)	a	b	b ₂	b ₃	c
	RWA ⁽¹⁾				Minimum capital requirements ⁽²⁾
	Q2 2022	Q1 2022	Q4 2021	Q3 2021	Q2 2022
1 Credit risk (excluding counterparty credit risk)	348,877	336,834	322,329	319,301	27,910
2 Of which: standardized approach (SA) ⁽³⁾	132,449	129,729	123,728	123,407	10,596
3 Of which: foundation internal ratings-based (F-IRB) approach	-	-	-	-	-
4 Of which: supervisory slotting approach	-	-	-	-	-
5 Of which: advanced internal ratings-based (A-IRB) approach	216,428	207,105	198,601	195,894	17,314
6 Counterparty credit risk (CCR)	13,458	14,061	14,089	15,112	1,076
7 Of which: standardized approach for counterparty credit risk (SA-CCR)	2,031	1,865	1,150	1,446	162
8 Of which: Internal Model Method (IMM)	5,631	5,303	6,220	6,874	450
9 Of which: other CCR ⁽⁴⁾	5,796	6,893	6,719	6,792	464
10 Credit valuation adjustment (CVA)	5,919	4,312	3,957	4,835	474
11 Equity positions under the simple risk weight approach	-	-	-	-	-
12 Equity investments in funds – look-through approach	1,244	1,127	997	807	100
13 Equity investments in funds – mandate-based approach	192	219	152	178	15
14 Equity investments in funds – fall-back approach	148	132	109	117	12
15 Settlement risk	-	-	-	-	-

OV1: Overview of RWA

(in \$ millions)	a	b	b ₂	b ₃	c
	RWA ⁽¹⁾				Minimum capital requirements ⁽²⁾
	Q2 2022	Q1 2022	Q4 2021	Q3 2021	Q2 2022
16 Securitization exposures in banking book	4,626	4,629	4,353	4,328	371
17 Of which: securitization internal ratings-based approach (SEC-IRBA)	84	91	100	110	7
18 Of which: securitization external ratings-based approach (SEC-ERBA), including internal assessment approach (IAA)	4,264	4,248	3,973	3,915	341
19 Of which: securitization standardized approach (SEC-SA)	278	290	280	303	23
20 Market risk	8,181	9,423	8,112	7,968	654
21 Of which: standardized approach (SA)	879	865	661	689	70
22 Of which: internal model approaches (IMA)	7,302	8,558	7,451	7,279	584
23 Capital charge for switch between trading book and banking book	-	-	-	-	-
24 Operational risk	50,027	49,673	49,210	48,958	4,002
25 Amounts below the thresholds for deduction (subject to 250% risk weight)	12,601	13,272	12,797	12,565	1,008
26 Floor adjustment	-	-	-	-	-
27 Total (1 + 6 + 10 + 11 + 12 + 13 + 14 + 15 + 16 + 20 + 23 + 24 + 25 + 26)	445,273	433,682	416,105	414,169	35,622

(1) RWA: risk-weighted assets according to the Basel framework, including the 6% AIRB scalar applied to AIRB credit risk portfolios (excluding CVA and Securitizations).

(2) Minimum capital requirement: Pillar 1 capital requirements are RWA * 8%.

(3) Includes equities under the AIRB Materiality Threshold which are risk weighted at 100% plus the 6% AIRB scalar requirement.

(4) Includes SFT and CCP Default Fund.

LI1: Differences between accounting and regulatory scopes of consolidation and mapping of financial statement categories with regulatory risk categories ⁽¹⁾

Q2 2022 (in \$ millions)	a	b	c	d	e	f	g
	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Carrying values of items: ⁽²⁾				
			Subject to credit risk framework	Subject to counterparty credit risk framework	Subject to the securitization framework	Subject to the market risk framework	Not subject to capital requirements or subject to deduction from capital ⁽³⁾
Assets							
Cash and deposits with financial institutions	85,910	85,830	85,830	-	-	-	-
Precious metals	1,056	1,056	1,056	-	-	1,056	-
Trading assets							
Securities	123,413	123,401	-	-	-	123,401	-
Loans	8,483	8,483	502	-	-	8,408	-
Other	1,748	1,748	-	-	-	1,748	-
Financial instruments designated at fair value through profit or loss	-	-	-	-	-	-	-
Securities purchased under resale agreements and securities borrowed	148,706	148,706	-	148,706	-	-	-
Derivative financial instruments	54,608	54,608	-	54,608	-	45,935	-
Investment securities	100,487	99,603	99,603	-	-	-	-
Loans							
Residential mortgages ⁽⁴⁾	337,714	337,644	337,644	-	-	-	-
Personal loans	94,437	94,430	92,181	-	2,249	-	-
Credit cards	13,622	13,622	12,338	-	248	-	1,036
Business and government	249,223	249,219	243,169	-	5,998	-	52
Allowance for credit loss	(5,294)	(5,293)	(5,232)	-	-	-	(61)
Customers' liability under acceptances, net of allowance	19,043	19,043	19,043	-	-	-	-
Property and equipment	5,571	5,570	5,570	-	-	-	-
Investments in associates	2,760	3,030	3,030	-	-	-	-
Goodwill and other intangible assets	16,712	17,038	1,698	-	-	-	15,340
Deferred tax assets	1,137	1,134	1,057	-	-	-	77
Other assets	29,170	26,568	15,151	10,405	-	-	1,012
Total assets	1,288,506	1,285,440	912,640	213,719	8,495	180,548	17,456

LI1: Differences between accounting and regulatory scopes of consolidation and mapping of financial statement categories with regulatory risk categories ⁽¹⁾

Q2 2022 (in \$ millions)	a	b	c	d	e	f	g
	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Carrying values of items: ⁽²⁾				
			Subject to credit risk framework	Subject to counterparty credit risk framework	Subject to the securitization framework	Subject to the market risk framework	Not subject to capital requirements or subject to deduction from capital ⁽³⁾
Liabilities							
Deposits							
Personal	252,847	252,847	-	-	-	-	252,847
Business and government	569,268	569,268	-	-	-	-	569,268
Financial institutions	54,439	54,439	-	-	-	-	54,439
Financial instruments designated at fair value through profit or loss	21,927	21,927	-	-	-	-	21,927
Acceptances	19,070	19,070	-	-	-	-	19,070
Obligations related to securities sold short	44,620	44,620	-	-	-	44,620	-
Derivative financial instruments	57,123	57,123	-	57,123	-	41,105	-
Obligations related to securities sold under repurchase agreements and securities lent	131,978	131,978	-	131,978	-	-	-
Subordinated debentures	8,447	8,444	-	-	-	-	8,444
Other liabilities	56,820	53,757	-	-	-	433	53,324
Total liabilities	1,216,539	1,213,473	-	189,101	-	86,158	979,319

(1) Based on the Consolidated Statement of Financial Position as reported in the Bank's Q2 2022 Quarterly Report. Effective Q1 2018, the Bank fully adopted IFRS 9 (Financial Instruments).

(2) A single item may attract capital charges according to more than one risk category framework.

(3) Includes capital deductions net of associated deferred tax liabilities, and securitized credit card exposures not subject to capital requirements for assets.

(4) Includes \$74.2 billion in mortgages guaranteed by Canada Mortgage Housing Corporation (CMHC), including 90% of privately insured mortgages.

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

Q2 2022 (in \$ millions)		a	b	c	d	e
		Total	Items subject to: ⁽¹⁾			
			Credit risk framework	Securitization framework	Counterparty credit risk framework	Market risk framework
1	Asset carrying value amount under scope of regulatory consolidation (as per template LI1)	1,267,984	912,640	8,495	213,719	180,548
2	Liabilities carrying value amount under regulatory scope of consolidation (as per template LI1)	275,259	-	-	189,101	86,158
3	Total net amount under regulatory scope of consolidation	992,725	912,640	8,495	24,618	94,390
4	Off-balance sheet amounts ⁽²⁾	219,073	204,393	12,730	1,950	-
5	Differences in valuations ⁽³⁾	3,072	3,072	-	-	-
6	Differences due to different netting rules, other than those already included in row 2	141,985	1,264	-	140,721	-
7	Differences due to considerations of provisions ⁽⁴⁾	3,831	4,112	-	(281)	-
8	Collateral offsetting ⁽⁵⁾	(136,969)	(3,062)	-	(133,907)	-
9	Differences due to Potential Future Exposures and Collateral Haircut	59,495	-	-	59,495	-
10	Differences due to deconsolidated subsidiaries	522	522	-	-	-
11	Other differences not classified above	7	7	-	-	-
12	Exposure amounts considered for regulatory purposes ⁽⁶⁾	1,283,741	1,122,948	21,225	92,596	94,390

(1) A single item can attract capital charges according to more than one risk category framework.

(2) Includes undrawn commitments and letters of credit/guarantee after application of the credit conversion factors, unfunded securitization exposures, and unfunded default fund contributions.

(3) Includes fair value adjustments for credit risk items (loans, bonds).

(4) Amounts for AIRB exposures are reported gross of partial write-offs and IFRS 9 specific allowances, and amounts for Standardized exposures are reported net of partial write-offs and IFRS 9 specific allowances.

(5) Includes adjustments for credit risk mitigation based on the application of the Comprehensive Approach for collateral under the credit risk framework.

(6) The aggregate amount considered as a starting point of the RWA calculation.

CC1: Composition of regulatory capital

(in \$ millions)	a	a ₂	a ₃	a ₄	b
	Q2 2022	Q1 2022	Q4 2021	Q3 2021	Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation ⁽¹⁾
Common Equity Tier 1 capital: instruments and reserves					
1 Directly issued qualifying common share capital (and equivalent for non-joint stock companies) plus related stock surplus	18,658	18,504	18,585	18,518	u+y
2 Retained earnings	52,209	51,848	51,354	50,044	v
3 Accumulated other comprehensive income (and other reserves)	(6,034)	(4,324)	(5,333)	(3,986)	w
4 <i>Directly issued capital subject to phase-out from CET1 (only applicable to non-joint stock companies)</i>	-	-	-	-	
5 Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)	760	1,327	1,322	1,330	aa
6 Common Equity Tier 1 capital before regulatory adjustments	65,593	67,355	65,928	65,906	
Common Equity Tier 1 capital: regulatory adjustments					
7 Prudential valuation adjustments	-	-	-	-	
8 Goodwill (net of related tax liability)	(9,232)	(9,294)	(9,175)	(9,321)	g
9 Other intangibles other than mortgage servicing rights (net of related tax liability)	(6,108)	(6,028)	(5,981)	(5,943)	h-q+i-r
10 Deferred tax assets excluding those arising from temporary differences (net of related tax liability)	(77)	(184)	(174)	(195)	k
11 Cash flow hedge reserve	2,804	454	214	(466)	x
12 Shortfall of provisions to expected losses	-	-	-	-	dd
13 Securitization gain on sale	-	-	-	-	
14 Gains and losses due to changes in own credit risk on fair valued liabilities	(458)	188	381	358	p
15 Defined benefit pension fund net assets (net of related tax liability)	(1,012)	(391)	(316)	(184)	l-s
16 Investments in own shares (if not already netted off paid-in capital on reported balance sheet)	(14)	(34)	(99)	(70)	a
17 Reciprocal cross holdings in common equity	-	-	-	-	
18 Non-significant investments in the capital of banking, financial and insurance entities, net of eligible short positions (amount above 10% threshold)	-	-	-	-	
19 Significant investments in the common stock of banking, financial and insurance entities that are outside the scope of regulatory consolidation, net of eligible short positions (amount above 10% threshold)	-	-	-	-	e
20 Mortgage servicing rights (amount above 10% threshold)	-	-	-	-	
21 Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability)	-	-	-	-	
22 Amount exceeding the 15% threshold	-	-	-	-	
23 of which: significant investments in the common stock of financials	-	-	-	-	f
24 of which: mortgage servicing rights	-	-	-	-	
25 of which: deferred tax assets arising from temporary differences	-	-	-	-	j
26 Other deductions or regulatory adjustments to CET1 as determined by OSFI	51	84	232	380	ff-o
27 Regulatory adjustments applied to Common Equity Tier 1 due to insufficient Additional Tier 1 and Tier 2 to cover deductions	-	-	-	-	
28 Total regulatory adjustments to Common Equity Tier 1	(14,046)	(15,205)	(14,918)	(15,441)	
29 Common Equity Tier 1 capital (CET1)	51,547	52,150	51,010	50,465	
29a Common Equity Tier 1 capital (CET1) with transitional arrangements for ECL provisioning not applied	51,493	52,062	50,775	50,083	

CC1: Composition of regulatory capital

(in \$ millions)	a	a ₂	a ₃	a ₄	b
	Q2 2022	Q1 2022	Q4 2021	Q3 2021	Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation ⁽¹⁾
Additional Tier 1 capital: instruments					
30 Directly issued qualifying Additional Tier 1 instruments plus related stock surplus	5,552	5,552	6,052	5,299	z
31 of which: classified as equity under applicable accounting standards	5,552	5,552	6,052	5,299	
32 of which: classified as liabilities under applicable accounting standards	-	-	-	-	
33 <i>Directly issued capital instruments subject to phase out from additional Tier 1</i>	-	-	653	653	Footnote (2)
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)	102	209	200	213	bb
35 <i>of which: instruments issued by subsidiaries subject to phase out</i>	-	-	-	-	
36 Additional Tier 1 capital before regulatory adjustments	5,654	5,761	6,905	6,165	
Additional Tier 1 capital: regulatory adjustments					
37 Investments in own Additional Tier 1 instruments	-	-	-	-	
38 Reciprocal cross holdings in Additional Tier 1 instruments	-	-	-	-	
39 Non-significant investments in the capital of banking, financial and insurance entities, net of eligible short positions (amount above 10% threshold)	-	-	-	-	
40 Significant investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation, net of eligible short positions	-	-	-	-	b
41 Other deductions from Tier 1 capital as determined by OSFI	-	-	-	-	
41a of which: reverse mortgages	-	-	-	-	
42 Regulatory adjustments applied to Additional Tier 1 due to insufficient Tier 2 to cover deductions	-	-	-	-	
43 Total regulatory adjustments to Additional Tier 1 capital	-	-	-	-	
44 Additional Tier 1 capital (AT1)	5,654	5,761	6,905	6,165	
45 Tier 1 capital (T1 = CET1 + AT1)	57,201	57,911	57,915	56,630	
45a Tier 1 capital (T1 = CET1 + AT1) with transitional arrangements for ECL provisioning not applied	57,147	57,823	57,680	56,248	

CC1: Composition of regulatory capital

(in \$ millions)	a	a ₂	a ₃	a ₄	b
	Q2 2022	Q1 2022	Q4 2021	Q3 2021	Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation ⁽¹⁾
Tier 2 capital: instruments and provisions					
46 Directly issued qualifying Tier 2 instruments plus related stock surplus	7,451	5,351	5,675	5,756	m
47 <i>Directly issued capital instruments subject to phase out from Tier 2</i>	-	-	248	248	
48 Tier 2 instruments (and CET1 and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties (amount allowed in group Tier 2)	91	191	157	165	cc
49 <i>of which: instruments issued by subsidiaries subject to phase out</i>	-	-	-	-	
50 General allowances	1,885	2,074	2,106	2,302	c+d
51 Tier 2 capital before regulatory adjustments	9,427	7,616	8,186	8,471	
Tier 2 capital: regulatory adjustments					
52 Investments in own Tier 2 instruments	-	-	-	-	ee
53 Reciprocal cross holdings in Tier 2 instruments and Other TLAC-eligible instruments	-	-	-	-	
54 Non-significant investments in the capital of banking, financial and insurance entities and Other TLAC-eligible instruments issued by G-SIBs and Canadian D-SIBs that are outside the scope of regulatory consolidation, where the institution does not own more than 10% of the issued common share capital of the entity (amount above 10% threshold)	-	-	-	-	
54a Non-significant investments in the other TLAC-eligible instruments issued by G-SIBs and Canadian D-SIBs, where the institution does not own more than 10% of the issued common share capital of the entity: amount previously designated for the 5% threshold but that no longer meets the conditions.	-	-	-	-	
55 Significant investments in the capital of banking, financial and insurance entities and Other TLAC-eligible instruments issued by G-SIBs and Canadian D-SIBs that are outside the scope of regulatory consolidation.	-	-	-	-	
56 Other deductions from Tier 2 capital	-	-	-	-	
57 Total regulatory adjustments to Tier 2 capital	-	-	-	-	
58 Tier 2 capital (T2)	9,427	7,616	8,186	8,471	
59 Total capital (TC = T1 + T2)	66,628	65,527	66,101	65,101	
59a Total Capital with transitional arrangements for ECL provisioning not applied	66,628	65,526	66,101	65,101	
60 Total risk-weighted assets	445,273	433,682	416,105	414,169	
60a Common Equity Tier 1 (CET1) Capital RWA	445,273	433,682	416,105	414,169	
60b Tier 1 Capital RWA	445,273	433,682	416,105	414,169	
60c Total Capital RWA	445,273	433,682	416,105	414,169	

CC1: Composition of regulatory capital

(in \$ millions)	a	a ₂	a ₃	a ₄	b
	Q2 2022	Q1 2022	Q4 2021	Q3 2021	Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation ⁽¹⁾
Capital ratios					
61 Common Equity Tier 1 (as a percentage of risk-weighted assets)	11.6%	12.0%	12.3%	12.2%	
61a CET1 Ratio with transitional arrangements for ECL provisioning not applied	11.6%	12.0%	12.2%	12.1%	
62 Tier 1 (as a percentage of risk-weighted assets)	12.8%	13.4%	13.9%	13.7%	
62a Tier 1 Capital Ratio with transitional arrangements for ECL provisioning not applied	12.8%	13.3%	13.9%	13.6%	
63 Total capital (as a percentage of risk-weighted assets)	15.0%	15.1%	15.9%	15.7%	
63a Total Capital Ratio with transitional arrangements for ECL provisioning not applied	15.0%	15.1%	15.9%	15.7%	
64 Buffer (minimum CET1 requirement plus capital conservation buffer plus G-SIB buffer plus D-SIB buffer expressed as a percentage of risk-weighted assets)	8.0%	8.0%	8.0%	8.0%	
65 of which: capital conservation buffer	2.5%	2.5%	2.5%	2.5%	
66 of which: bank-specific countercyclical buffer	0.0%	0.0%	0.0%	0.0%	
67 of which: G-SIB buffer	0.0%	0.0%	0.0%	0.0%	
67a of which: D-SIB buffer	1.0%	1.0%	1.0%	1.0%	
68 Common Equity Tier 1 available to meet buffers (as percentage of risk-weighted assets)	11.6%	12.0%	12.3%	12.2%	
OSFI target (minimum + capital conservation buffer + D-SIB buffer (if applicable)) ⁽³⁾					
69 Common Equity Tier 1 target ratio	8.0%	8.0%	8.0%	8.0%	
70 Tier 1 capital target ratio	9.5%	9.5%	9.5%	9.5%	
71 Total capital target ratio	11.5%	11.5%	11.5%	11.5%	
Amounts below the thresholds for deduction (before risk weighting)					
72 Non-significant investments in the capital and other TLAC-eligible instruments of other financial entities	3,557	3,202	3,968	3,296	
73 Significant investments in the common stock of financial entities	2,861	2,838	2,631	2,534	
74 Mortgage servicing rights (net of related tax liability)	-	-	-	-	
75 Deferred tax assets arising from temporary differences (net of related tax liability)	2,179	2,471	2,488	2,492	
Applicable caps on the inclusion of allowances in Tier 2					
76 Allowances eligible for inclusion in Tier 2 in respect of exposures subject to standardized approach (prior to application of cap)	1,221	1,304	1,335	1,480	
77 Cap on inclusion of allowances in Tier 2 under standardized approach	1,592	1,568	1,488	1,497	
78 Allowances eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (prior to application of cap)	719	859	1,006	1,204	
79 Cap on inclusion of allowances in Tier 2 under internal ratings-based approach	1,558	1,495	1,438	1,425	
Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2013 and 1 Jan 2022)					
80 Current cap on CET1 instruments subject to phase out arrangements	0%	0%	10%	10%	
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	0%	0%	10%	10%	
83 Amounts excluded from AT1 due to cap (excess over cap after redemptions and maturities)	750	750	97	97	
84 Current cap on T2 instruments subject to phase out arrangements	0%	0%	10%	10%	
85 Amounts excluded from T2 due to cap (excess over cap after redemptions and maturities)	250	250	-	-	

(1) Cross-referenced to the Consolidated Balance Sheet: Source of Definition of Capital Components on CC2 (refer to column: Under Regulatory Scope of Consolidation).

(2) Line 33 included \$750 million as at October 31, 2021 which is subject to the phase out requirements of capital instruments issued by trusts not consolidated under accounting standard IFRS 10, effective Q1 2014.

(3) Reflects Pillar 1 targets and does not include Pillar 2 domestic stability buffer of 2.5% effective October 31, 2021 (previously 1% commencing April 2020).

CC2: Reconciliation of regulatory capital to balance sheet

Condensed balance sheet (in \$ millions)	a	b	c
	Balance sheet as in published financial statements ⁽¹⁾	Under regulatory scope of consolidation ⁽²⁾	Cross-reference to Definition of Capital Components
	Q2 2022	Q2 2022	
Assets			
Cash and deposits with financial institutions	85,910	85,830	
Precious metals	1,056	1,056	
Trading assets			
Securities	123,413	123,401	
- Investment in own shares		14	a
- Other trading securities		123,387	
Loans	8,483	8,483	
Other	1,748	1,748	
	133,644	133,632	
Financial instruments designated at fair value through profit and loss	-	-	
Securities purchased under resale agreements and securities borrowed	148,706	148,706	
Derivative financial instruments	54,608	54,608	
Investment securities	100,487	99,603	
- Significant investments in Additional Tier 1 capital and other financial institutions reflected in regulatory capital		-	b
- Other securities		99,603	
Loans			
Residential mortgages	337,714	337,644	
Personal loans	94,437	94,430	
Credit cards	13,622	13,622	
Business and government	249,223	249,219	
	694,996	694,915	
Allowance for credit losses	5,294	5,293	
- General Allowance reflected in Tier 2 capital		1,209	c
- Shortfall of allowances to expected loss		-	dd
- Excess of allowances to expected loss		676	d
- ECL transitional adjustment		54	ff
- Allowances not reflected in regulatory capital		3,354	

CC2: Reconciliation of regulatory capital to balance sheet

Condensed balance sheet (in \$ millions)	a	b	c
	Balance sheet as in published financial statements ⁽¹⁾	Under regulatory scope of consolidation ⁽²⁾	Cross-reference to Definition of Capital Components
	Q2 2022	Q2 2022	
Other			
Customers' liability under acceptances, net of allowance	19,043	19,043	
Property and equipment	5,571	5,570	
Investments in associates	2,760	3,030	
- Significant Investments in other financial institutions including deconsolidated subsidiaries exceeding 10% regulatory thresholds		-	e
- Significant Investments in other financial institutions including deconsolidated subsidiaries exceeding 15% regulatory thresholds		-	f
- Significant Investments in other financial institutions including deconsolidated subsidiaries within regulatory thresholds		3,030	
Goodwill and other intangible assets	16,712	17,038	
- Goodwill		8,906	g
- Imputed goodwill for Significant Investments		326	g
- Intangibles (excl computer software)		5,132	h
- Computer software intangibles		2,674	i
Deferred tax assets	1,137	1,134	
- Deferred tax assets arising from temporary differences exceeding the regulatory threshold		-	j
- Deferred tax assets that rely on future profitability		77	k
- Deferred tax assets not deducted from regulatory capital		1,057	
Other Assets	29,170	26,568	
- Defined pension fund assets		1,405	l
- Other assets		25,163	
Total other	74,393	72,383	
Total assets	1,288,506	1,285,440	

CC2: Reconciliation of regulatory capital to balance sheet

Condensed balance sheet (in \$ millions)	a	b	c
	Balance sheet as in published financial statements ⁽¹⁾	Under regulatory scope of consolidation ⁽²⁾	Cross-reference to Definition of Capital Components
	Q2 2022	Q2 2022	
Liabilities			
Deposits			
Personal	252,847	252,847	
Business and government	569,268	569,268	
- Investment in own Tier 2 instruments		-	ee
- Other deposits from Business and government		569,268	
Financial institutions	54,439	54,439	
	876,554	876,554	
Financial instruments designated at fair value through profit and loss	21,927	21,927	
Other			
Acceptances	19,070	19,070	
Obligations related to securities sold short	44,620	44,620	
Derivative financial instruments	57,123	57,123	
Obligations related to securities sold under repurchase agreements and securities lent	131,978	131,978	
Subordinated debentures	8,447	8,444	
- Regulatory capital amortization of maturing debentures		743	
- Subordinated debentures used for regulatory capital		7,701	
- of which: are included in Tier 2 capital		7,451	m
- of which: are subject to phase out not included in Tier 2 capital		250	
Other liabilities	56,820	53,757	
- Liquidity reserves		3	o
- Gains/losses due to changes in own credit risk including DVA on derivatives		458	p
- Deferred tax liabilities		1,154	
- Intangible assets (excl. computer software and mortgage servicing rights)		1,425	q
- Intangible assets - computer software		273	r
- Defined benefit pension fund assets		393	s
- Other deferred tax liabilities		(937)	
- Other liabilities		52,142	
Total other	318,058	314,992	
Total liabilities	1,216,539	1,213,473	

CC2: Reconciliation of regulatory capital to balance sheet

Condensed balance sheet (in \$ millions)	a	b	c
	Balance sheet as in published financial statements ⁽¹⁾	Under regulatory scope of consolidation ⁽²⁾	Cross-reference to Definition of Capital Components
	Q2 2022	Q2 2022	
Equity			
Common equity			
Common shares	18,799	18,799	u
- of which: amount eligible for CET1		18,799	
- of which: amount eligible for AT1		-	
Retained earnings	52,209	52,209	v
Accumulated other comprehensive income	(6,034)	(6,034)	w
- Cash flow hedging reserve		(2,804)	x
- Other		(3,230)	
Other reserves	(141)	(141)	
- portion allowed for inclusion into CET1		(141)	y
- portion not allowed for regulatory capital		-	
Total common equity	64,833	64,833	
Preferred shares and other equity instruments	5,552	5,552	
- of which: are qualifying Tier 1 capital		5,552	z
Total equity attributable to equity holders of the Bank	70,385	70,385	
Non-controlling interests in subsidiaries	1,582	1,582	
- portion allowed for inclusion into CET1		760	aa
- portion allowed for inclusion into Tier 1 capital		102	bb
- portion allowed for inclusion into Tier 2 capital		91	cc
- portion not allowed for regulatory capital		629	
Total equity	71,967	71,967	
Total liabilities and equity	1,288,506	1,285,440	

(1) Consolidated Statement of Financial Position as reported in the Second Quarter 2022 Quarterly Report.

(2) Legal Entities that are within the accounting scope of consolidation but excluded from the regulatory scope of consolidation represent the Bank's insurance subsidiaries whose principle activities include insurance, reinsurance, property and casualty insurance. Key subsidiaries are Scotia Insurance Barbados Ltd (assets: \$404MM, equity: \$295MM), Scotia Life Insurance Company (assets: \$75MM, equity: \$20MM), Scotia Reinsurance Limited (assets: \$138MM, equity: \$74MM), Scotia Jamaica Life Insurance Co. Ltd (assets: \$484MM, equity: \$77MM), Scotia Life Trinidad and Tobago Ltd (assets: \$480MM, equity: \$75MM), Scotia Insurance Caribbean Ltd. (assets: \$36MM, equity: \$15MM), and MD Life Insurance Company (assets: \$2,001MM, equity: \$17MM).

TLAC1: TLAC composition for G-SIBs (at resolution group level)

(in \$ millions)		a	a ₂	a ₃	a ₄
		Q2 2022 Amounts	Q1 2022 Amounts	Q4 2021 Amounts	Q3 2021 Amounts
Regulatory capital elements of TLAC and adjustments					
1	Common Equity Tier 1 capital (CET1)	51,547	52,150	51,010	50,465
2	Additional Tier 1 capital (AT1) before TLAC adjustments	5,654	5,761	6,905	6,165
3	AT1 ineligible as TLAC as issued out of subsidiaries to third parties	-	-	-	-
4	Other adjustments	-	-	-	-
5	AT1 instruments eligible under the TLAC framework	5,654	5,761	6,905	6,165
6	Tier 2 capital (T2) before TLAC adjustments	9,427	7,616	8,186	8,471
7	Amortized portion of T2 instruments where remaining maturity > 1 year	641	635	411	414
8	T2 capital ineligible as TLAC as issued out of subsidiaries to third parties	-	-	-	-
9	Other adjustments	-	-	-	-
10	T2 instruments eligible under the TLAC framework	10,068	8,251	8,597	8,885
11	TLAC arising from regulatory capital	67,269	66,162	66,512	65,515
Non-regulatory capital elements of TLAC					
12	External TLAC instruments issued directly by the bank and subordinated to excluded liabilities	-	-	-	-
13	External TLAC instruments issued directly by the bank which are not subordinated to excluded liabilities but meet all other TLAC term sheet requirements.	67,072	56,821	49,327	39,451
14	Of which: amount eligible as TLAC after application of the caps	N/A	N/A	N/A	N/A
15	External TLAC instruments issued by funding vehicles prior to 1 January 2022	-	-	-	-
16	Eligible ex ante commitments to recapitalise a G-SIB in resolution	N/A	N/A	N/A	N/A
17	TLAC arising from non-regulatory capital instruments before adjustments	67,072	56,821	49,327	39,451
Non-regulatory capital elements of TLAC: adjustments					
18	TLAC before deductions	134,341	122,983	115,839	104,966
19	Deductions of exposures between MPE resolution groups that correspond to items eligible for TLAC (not applicable to SPE G-SIBs)	N/A	N/A	N/A	N/A
20	Deduction of investments in own other TLAC liabilities	(500)	(370)	(158)	(207)
21	Other adjustments to TLAC	-	-	-	-
22	TLAC available after deductions	133,841	122,613	115,681	104,759
Risk-weighted assets and leverage exposure measure for TLAC purposes					
23	Total risk-weighted assets adjusted as permitted under the TLAC regime	445,273	433,682	416,105	414,169
24	Leverage exposure measure	1,360,184	1,308,247	1,201,766	1,191,993
TLAC ratios and buffers					
25	TLAC (as a percentage of risk-weighted assets adjusted as permitted under the TLAC regime)	30.1%	28.3%	27.8%	25.3%
26	TLAC (as a percentage of leverage exposure)	9.8%	9.4%	9.6%	8.8%
27	CET1 (as a percentage of risk-weighted assets) available after meeting the resolution group's minimum capital and TLAC requirements	7.0%	7.1%	N/A	N/A
28	Institution-specific buffer requirement (capital conservation buffer plus countercyclical buffer requirements plus higher loss absorbency requirement, expressed as a percentage of risk-weighted assets)	3.5%	3.5%	3.5%	3.5%
29	Of which: capital conservation buffer requirement	2.5%	2.5%	2.5%	2.5%
30	Of which: bank specific countercyclical buffer requirement	0.0%	0.0%	0.0%	0.0%
31	Of which: D-SIB / G-SIB buffer	1.0%	1.0%	1.0%	1.0%

Rows 14, 16, and 19 are not applicable to Canadian D-SIBs.

TLAC3: Resolution entity – creditor ranking at legal entity level

(in \$ millions)		Creditor ranking						Sum of 1 to 6
		1 (most junior)	2	3	4	5	6 (most senior)	
Q2 2022								
1	Description of creditor ranking	Common shares Book value	Preferred shares Stated value	Additional Tier 1 and Limited Recourse Capital Notes Stated value	Subordinated Debt Par value	Bail-in Debt ⁽¹⁾ Par value	Other Liabilities ⁽²⁾	Total
2	Total capital and liabilities net of credit risk mitigation	18,799	300	5,252	8,510	71,009	-	103,870
3	Subset of row 2 that are excluded liabilities	14	-	-	-	502	-	516
4	Total capital and liabilities less excluded liabilities (row 2 minus row 3)	18,785	300	5,252	8,510	70,507	-	103,354
5	Subset of row 4 that are <i>potentially</i> eligible as TLAC	18,785	300	5,252	8,510	67,269	-	100,116
6	Subset of row 5 with 1 year ≤ residual maturity < 2 years	-	-	-	-	11,924	-	11,924
7	Subset of row 5 with 2 years ≤ residual maturity < 5 years	-	-	-	1,853	35,127	-	36,980
8	Subset of row 5 with 5 years ≤ residual maturity < 10 years	-	-	-	3,241	11,310	-	14,551
9	Subset of row 5 with residual maturity ≥ 10 years, but excluding perpetual securities	-	-	-	3,416	8,908	-	12,324
10	Subset of row 5 that is perpetual securities	18,785	300	5,252	-	-	-	24,337
Q1 2022								
1	Description of creditor ranking	Common shares Book value	Preferred shares Stated value	Additional Tier 1 and Limited Recourse Capital Notes Stated value	Subordinated Debt Par value	Bail-in Debt ⁽¹⁾ Par value	Other Liabilities ⁽²⁾	Total
2	Total capital and liabilities net of credit risk mitigation	18,421	300	5,252	6,281	58,949	-	89,203
3	Subset of row 2 that are excluded liabilities	34	-	-	-	370	-	404
4	Total capital and liabilities less excluded liabilities (row 2 minus row 3)	18,387	300	5,252	6,281	58,579	-	88,799
5	Subset of row 4 that are potentially eligible as TLAC	18,387	300	5,252	6,281	56,536	-	86,756
6	Subset of row 5 with 1 year ≤ residual maturity < 2 years	-	-	-	-	13,229	-	13,229
7	Subset of row 5 with 2 years ≤ residual maturity < 5 years	-	-	-	1,837	29,154	-	30,991
8	Subset of row 5 with 5 years ≤ residual maturity < 10 years	-	-	-	4,347	5,565	-	9,912
9	Subset of row 5 with residual maturity ≥ 10 years, but excluding perpetual securities	-	-	-	97	8,588	-	8,685
10	Subset of row 5 that is perpetual securities	18,387	300	5,252	-	-	-	23,939

TLAC3: Resolution entity – creditor ranking at legal entity level

(in \$ millions)		Creditor ranking						Sum of 1 to 6
		1 (most junior)	2	3	4	5	6 (most senior)	
Q4 2021								
1	Description of creditor ranking	Common shares Book value	Preferred shares Stated value	Additional Tier 1 and Limited Recourse Capital Notes Stated value	Subordinated Debt Par value	Bail-in Debt ⁽¹⁾ Par value	Other Liabilities ⁽²⁾	Total
2	Total capital and liabilities net of credit risk mitigation	18,507	800	5,252	6,262	49,745	-	80,566
3	Subset of row 2 that are excluded liabilities	99	-	-	-	158	-	257
4	Total capital and liabilities less excluded liabilities (row 2 minus row 3)	18,408	800	5,252	6,262	49,587	-	80,309
5	Subset of row 4 that are potentially eligible as TLAC	18,408	800	5,252	6,262	49,372	-	80,094
6	Subset of row 5 with 1 year ≤ residual maturity < 2 years	-	-	-	-	14,422	-	14,422
7	Subset of row 5 with 2 years ≤ residual maturity < 5 years	-	-	-	1,797	21,842	-	23,639
8	Subset of row 5 with 5 years ≤ residual maturity < 10 years	-	-	-	4,370	6,838	-	11,208
9	Subset of row 5 with residual maturity ≥ 10 years, but excluding perpetual securities	-	-	-	95	6,270	-	6,365
10	Subset of row 5 that is perpetual securities	18,408	800	5,252	-	-	-	24,460
Q3 2021								
1	Description of creditor ranking	Common shares Book value	Preferred shares Stated value	Additional Tier 1 and Limited Recourse Capital Notes Stated value	Subordinated Debt Par value	Bail-in Debt ⁽¹⁾ Par value	Other Liabilities ⁽²⁾	Total
2	Total capital and liabilities net of credit risk mitigation	18,493	800	4,499	6,315	40,007	-	70,114
3	Subset of row 2 that are excluded liabilities	70	-	-	-	207	-	277
4	Total capital and liabilities less excluded liabilities (row 2 minus row 3)	18,423	800	4,499	6,315	39,800	-	69,837
5	Subset of row 4 that are potentially eligible as TLAC	18,423	800	4,499	6,315	39,584	-	69,621
6	Subset of row 5 with 1 year ≤ residual maturity < 2 years	-	-	-	-	9,557	-	9,557
7	Subset of row 5 with 2 years ≤ residual maturity < 5 years	-	-	-	1,810	17,460	-	19,270
8	Subset of row 5 with 5 years ≤ residual maturity < 10 years	-	-	-	4,410	5,765	-	10,175
9	Subset of row 5 with residual maturity ≥ 10 years, but excluding perpetual securities	-	-	-	95	6,802	-	6,897
10	Subset of row 5 that is perpetual securities	18,423	800	4,499	-	-	-	23,722

(1) Under the Bank Recapitalization (Bail-In) Regime. Please refer to the Page 62 of the 2021 Annual Report, for a description of the requirements.

(2) Disclosure not currently required by OSFI.

LR1: Summary comparison of accounting assets vs leverage ratio exposure measure

(in \$ millions)		a	a ₂	a ₃	a ₄
		Q2 2022	Q1 2022	Q4 2021	Q3 2021
1	Total consolidated assets as per published financial statements	1,288,506	1,245,474	1,184,844	1,163,429
2	Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation	(2,544)	(2,663)	(2,872)	(2,824)
3	Adjustment for securitized exposures that meet the operational requirements for the recognition of risk transference	(1,089)	(1,099)	(1,538)	(689)
4	Adjustment for fiduciary assets recognized on the balance sheet pursuant to the operative accounting framework but excluded from the leverage ratio exposure measure	-	-	-	-
5	Adjustments for derivative financial instruments	(17,492)	(3,715)	(4,639)	(4,011)
6	Adjustment for securities financing transactions (i.e. repos and similar secured lending)	21,032	16,194	16,869	17,969
7	Adjustment for off-balance sheet items (i.e. conversion to credit equivalent amounts of off-balance sheet exposures)	157,975	155,281	152,141	148,511
8	Other adjustments ⁽¹⁾	(86,204)	(101,225)	(143,039)	(130,392)
9	Leverage ratio exposure measure	1,360,184	1,308,247	1,201,766	1,191,993

(1) Commencing Q2 2020, amount includes temporary leverage ratio exposure exemptions (Q2 2022: central bank reserves: \$72.6 billion; Q1 2022: central bank reserves: \$85.7 billion; Q4 2021: sovereign-issued securities: \$53.9 billion and central bank reserves: \$73.6 billion) in accordance with OSFI's COVID-19 capital relief measures and asset amounts deducted in determining Basel III Tier 1 capital.

LR2: Leverage ratio common disclosure

(in \$ millions)		a	a ₂	a ₃	a ₄
		Q2 2022	Q1 2022	Q4 2021	Q3 2021
On-balance sheet exposures ⁽¹⁾					
1	On-balance sheet exposures (excluding derivatives and securities financing transactions (SFTs), but including collateral)	1,008,998	982,598	882,887	874,788
2	Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the operative accounting framework	-	-	-	-
3	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	(9,552)	(5,518)	(6,517)	(6,523)
4	(Asset amounts deducted in determining Basel III Tier 1 capital)	(13,644)	(15,481)	(15,532)	(16,182)
5	Total on-balance sheet exposures (excluding derivatives and SFTs) (sum of rows 1 to 4)	985,802	961,599	860,838	852,083
Derivative exposures					
6	Replacement cost associated with <i>all</i> derivatives transactions (where applicable net of eligible cash variation margin and/or with bilateral netting)	24,842	20,880	22,297	23,800
7	Add-on amounts for PFE associated with <i>all</i> derivatives transactions	19,886	19,303	19,626	20,617
8	(Exempted CCP leg of client-cleared trade exposures)	-	-	-	-
9	Adjusted effective notional amount of written credit derivatives	2,404	2,818	2,687	-
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	(463)	(542)	(431)	-
11	Total derivative exposures (sum of rows 6 to 10)	46,669	42,459	44,179	44,417
Securities financing transaction exposures					
12	Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions	190,175	176,631	160,621	159,790
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	(41,469)	(43,917)	(32,882)	(30,777)
14	CCR exposure for SFT assets	21,032	16,194	16,869	17,969
15	Agent transaction exposures	-	-	-	-
16	Total securities financing transaction exposures (sum of rows 12 to 15)	169,738	148,908	144,608	146,982
Other off-balance sheet exposures					
17	Off-balance sheet exposure at gross notional amount	500,492	494,737	483,525	478,144
18	(Adjustments for conversion to credit equivalent amounts)	(342,517)	(339,456)	(331,384)	(329,633)
19	Off-balance sheet items (sum of rows 17 and 18)	157,975	155,281	152,141	148,511
Capital and total exposures					
20	Tier 1 capital	57,201	57,911	57,915	56,630
20a	Tier 1 capital with transitional arrangements for ECL provisioning not applied	57,147	57,823	57,680	56,248
21	Total exposures (sum of rows 5, 11, 16 and 19)	1,360,184	1,308,247	1,201,766	1,191,993
Leverage ratio					
22	Basel III leverage ratio	4.2%	4.4%	4.8%	4.8%
22a	Leverage Ratio with transitional arrangements for ECL provisioning not applied	4.2%	4.4%	4.8%	4.7%

(1) On-balance sheet items exclude securities purchased under resale agreements and securities borrowed (\$148,706MM), derivative financial instruments (\$54,608MM), assets outside the regulatory scope of consolidation (\$2,544MM).

CR1: Credit quality of assets ⁽¹⁾

(in \$ millions)	a	b	c	d	e	f	g	
	Gross carrying values of ⁽²⁾		Allowances/ impairments ⁽⁴⁾	Of which ECL accounting provisions for credit losses on SA exposures		Of which ECL accounting provisions for credit losses on IRB exposures	Net values (a+b-c)	
	Defaulted exposures ⁽³⁾	Non-defaulted exposures		Allocated in regulatory category of Specific	Allocated in regulatory category of General			
Q2 2022								
1	Loans ⁽⁵⁾	4,093	786,835	5,224	1,311	2,390	1,523	785,704
2	Debt Securities	213	96,501	-	-	-	-	96,714
3	Off-balance sheet exposures ⁽⁶⁾	295	264,672	49	-	9	40	264,918
4	Total	4,601	1,148,008	5,273	1,311	2,399	1,563	1,147,336
Q1 2022								
1	Loans ⁽⁵⁾	4,285	777,049	5,420	1,302	2,412	1,706	775,914
2	Debt Securities	211	76,509	-	-	-	-	76,720
3	Off-balance sheet exposures ⁽⁶⁾	294	262,308	55	-	9	46	262,547
4	Total	4,790	1,115,866	5,475	1,302	2,421	1,752	1,115,181
Q4 2021								
1	Loans ⁽⁵⁾	4,426	734,831	5,568	1,320	2,418	1,830	733,689
2	Debt Securities	205	69,987	-	-	-	-	70,192
3	Off-balance sheet exposures ⁽⁶⁾	304	257,453	65	-	8	57	257,692
4	Total	4,935	1,062,271	5,633	1,320	2,426	1,887	1,061,573
Q3 2021								
1	Loans ⁽⁵⁾	4,968	712,164	6,034	1,417	2,604	2,013	711,098
2	Debt Securities	207	76,572	-	-	-	-	76,779
3	Off-balance sheet exposures ⁽⁶⁾	228	254,088	87	-	8	79	254,229
4	Total	5,403	1,042,824	6,121	1,417	2,612	2,092	1,042,106

(1) This table incorporates the BCBS Technical Amendments to Pillar 3 disclosure requirements - regulatory treatment of accounting provisions (August 2018). Consistent with the requirements for regulatory capital reporting and in accordance with OSFI Capital Adequacy Requirements (Chapter 2), General Allowances are defined as Stage 1 and Stage 2 allowances under IFRS 9 and Specific Allowances are defined as Stage 3 allowances under IFRS 9.

(2) The accounting value of on- and off-balance sheet exposures before any credit conversion factor (CCF) or credit risk mitigation (CRM), but after considering write-offs.

(3) Defaulted exposures include: (i) the Bank's reported Gross Impaired Loans, (ii) credit cards which meet the regulatory definition of default, and (iii) off-balance sheet commitments, LCs and/or LGs which meet the regulatory definition of default.

(4) Includes all three ECL Stages, net of allowances related to securitizations of bank originated credit card receivables and ECL related to entities outside the scope of regulatory consolidation.

(5) Includes bankers acceptances and deposits with banks.

(6) Excludes all revocable loan commitments.

CR2: Changes in stock of defaulted loans and debt securities⁽¹⁾

(in \$ millions)		a	a ₂	a ₃	a ₄
		Q2 2022	Q1 2022	Q4 2021	Q3 2021
1	Defaulted loans and debt securities - Beginning of Quarter ⁽²⁾	4,790	4,935	5,403	5,846
2	Loans and debt securities that have defaulted since the last reporting period ⁽³⁾	1,154	1,162	1,237	1,588
3	Returned to non-defaulted status ⁽³⁾⁽⁴⁾	(795)	(682)	(720)	(801)
4	Amounts written off	(550)	(593)	(706)	(1,144)
5	Other changes ⁽⁵⁾	2	(32)	(279)	(86)
6	Defaulted loans and debt securities - End of Quarter ⁽²⁾	4,601	4,790	4,935	5,403

(1) Defaulted exposures include: (i) the Bank's reported Gross Impaired Loans, (ii) credit cards which meet the regulatory definition of default, and (iii) off-balance sheet commitments, LCs and/or LGs which meet the regulatory definition of default.

(2) Regulatory Definition of Default: when there is objective evidence that the Bank no longer has reasonable assurance as to the timely collection of interest and principal, or where a contractual payment is 90 days in arrears (including credit cards), or the customer is declared to be bankrupt.

(3) Prior quarters numbers are restated to align with presentation on Page 20 of the Bank's Supplementary Financial Information disclosures.

(4) Includes returned to non-defaulted status and payments on defaulted accounts.

(5) Includes the impact from foreign currency translation and changes in credit cards and off-balance sheet exposures which meet the regulatory definition of default.

CR3: Credit risk mitigation techniques – overview

		a	b1	b	d	f
(in \$ millions)		Unsecured exposures: carrying amount ⁽¹⁾	Exposures to be secured ⁽¹⁾	Exposures secured by collateral ^{(2) (3)}	Exposures secured by financial guarantees ⁽⁴⁾	Exposures secured by credit derivatives
Q2 2022						
1	Loans ⁽⁵⁾	287,424	498,280	409,856	88,424	-
2	Debt Securities	71,600	25,114	-	25,114	-
3	Total	359,024	523,394	409,856	113,538	-
4	Of which defaulted	1,408	1,286	1,035	251	-
Q1 2022						
1	Loans ⁽⁵⁾	291,909	484,005	393,877	90,128	-
2	Debt Securities	50,870	25,850	-	25,850	-
3	Total	342,779	509,855	393,877	115,978	-
4	Of which defaulted	1,514	1,346	1,072	274	-
Q4 2021						
1	Loans ⁽⁵⁾	265,637	468,052	376,982	91,070	-
2	Debt Securities	46,046	24,146	-	24,146	-
3	Total	311,683	492,198	376,982	115,216	-
4	Of which defaulted	1,617	1,345	1,057	288	-
Q3 2021						
1	Loans ⁽⁵⁾	254,426	456,672	363,128	93,544	-
2	Debt Securities	50,313	26,466	-	26,466	-
3	Total	304,739	483,138	363,128	120,010	-
4	Of which defaulted	1,831	1,574	1,265	309	-

(1) Carrying amounts of on-balance sheet exposures are net of all three ECL Stages and write-offs.

(2) Includes non-retail and retail AIRB exposures, where collateral is used within the estimation of LGD.

(3) Includes retail mortgages and real estate secured lines of credit under both AIRB and standardized approaches.

(4) Includes government insured mortgages.

(5) Includes bankers acceptances and deposits with banks.

CR4: Standardized approach – credit risk exposures and Credit Risk Mitigation (CRM) effects

(in \$ millions)		a	b	c	d	e	f
		Exposures before CCF and CRM		Exposures post-CCF and CRM ⁽¹⁾		RWA and RWA density	
Asset classes		On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA	RWA density
Q2 2022							
1	Bank	4,262	306	4,240	42	3,034	71%
2	Corporate	56,287	25,876	53,988	5,611	56,135	94%
3	Sovereign	8,520	582	8,520	-	535	6%
4	Real Estate Secured	60,314	982	60,314	-	24,196	40%
5	Other Retail	39,294	30,882	39,107	-	28,880	74%
6	Equity ⁽²⁾	4,000	-	4,000	-	4,240	106%
7	Other Assets ⁽³⁾	62,036	-	62,036	-	15,429	25%
8	Total	234,713	58,628	232,205	5,653	132,449	56%

Q1 2022							
1	Bank	3,180	370	3,157	12	2,662	84%
2	Corporate	56,122	26,117	53,681	5,708	55,777	94%
3	Sovereign	8,848	819	8,848	49	797	9%
4	Real Estate Secured	58,769	883	58,769	-	23,440	40%
5	Other Retail	38,168	31,047	37,985	-	28,013	74%
6	Equity ⁽²⁾	3,547	-	3,547	-	3,759	106%
7	Other Assets ⁽³⁾	61,833	-	61,833	-	15,281	25%
8	Total	230,467	59,236	227,820	5,769	129,729	56%

Q4 2021							
1	Bank	3,072	257	3,048	15	2,481	81%
2	Corporate	54,860	24,549	52,545	5,466	54,093	93%
3	Sovereign	8,641	557	8,641	-	737	9%
4	Real Estate Secured	54,617	822	54,617	-	21,458	39%
5	Other Retail	36,617	29,640	36,445	-	26,869	74%
6	Equity ⁽²⁾	3,249	-	3,249	-	3,444	106%
7	Other Assets ⁽³⁾	48,834	-	48,834	-	14,646	30%
8	Total	209,890	55,825	207,379	5,481	123,728	58%

Q3 2021							
1	Bank	2,753	665	2,753	6	2,348	85%
2	Corporate	54,713	23,908	52,500	5,364	54,264	94%
3	Sovereign	9,142	70	9,142	-	775	8%
4	Real Estate Secured	53,215	733	53,215	-	21,070	40%
5	Other Retail	36,776	29,365	36,596	-	26,930	74%
6	Equity ⁽²⁾	2,708	-	2,708	-	2,871	106%
7	Other Assets ⁽³⁾	48,049	-	48,049	-	15,149	32%
8	Total	207,356	54,741	204,963	5,370	123,407	59%

(1) Includes adjustments for credit risk mitigation based on the application of the Comprehensive Approach for collateral.

(2) Includes equities under the AIRB Materiality Threshold which are risk weighted at 100% plus the 6% scalar requirement.

(3) Exposures to CCP and risk-weighted threshold deductions are excluded.

CR5: Standardized approach – exposures by asset classes and risk weights

(in \$ millions)	Risk weight	a b c d e f g h i j									
											Total credit exposures amount (post-CCF and post-CRM) ⁽¹⁾
		0%	10%	20%	35%	50%	75%	100%	150%	Others	
Asset classes											
Q2 2022											
1	Bank	-	-	1,557	-	3	-	2,722	-	-	4,282
2	Corporate	3,540	-	139	-	28	-	55,489	403	-	59,599
3	Sovereign	7,463	-	-	-	1,045	-	12	-	-	8,520
4	Real Estate Secured	4,167	-	-	45,192	-	10,316	636	3	-	60,314
5	Other Retail	320	-	468	-	-	38,166	136	17	-	39,107
6	Equity ⁽²⁾	-	-	-	-	-	-	4,000	-	-	4,000
7	Other Assets ⁽³⁾	48,096	-	-	-	-	-	13,811	-	129	62,036
8	Total	63,586	-	2,164	45,192	1,076	48,482	76,806	423	129	237,858
Q1 2022											
1	Bank	-	-	664	-	6	-	2,443	56	-	3,169
2	Corporate	3,624	-	134	-	28	-	55,335	268	-	59,389
3	Sovereign	7,593	-	-	-	1,016	-	288	-	-	8,897
4	Real Estate Secured	4,604	-	-	43,365	-	10,163	633	4	-	58,769
5	Other Retail	358	-	491	-	-	36,938	173	25	-	37,985
6	Equity ⁽²⁾	-	-	-	-	-	-	3,547	-	-	3,547
7	Other Assets ⁽³⁾	48,188	-	-	-	-	-	13,502	-	143	61,833
8	Total	64,367	-	1,289	43,365	1,050	47,101	75,921	353	143	233,589
Q4 2021											
1	Bank	-	-	759	-	8	-	2,238	58	-	3,063
2	Corporate	3,936	-	128	-	30	-	53,647	270	-	58,011
3	Sovereign	7,445	-	-	-	918	-	278	-	-	8,641
4	Real Estate Secured	5,083	-	-	39,644	-	9,235	651	4	-	54,617
5	Other Retail	384	-	490	-	-	35,258	285	28	-	36,445
6	Equity ⁽²⁾	-	-	-	-	-	-	3,249	-	-	3,249
7	Other Assets ⁽³⁾	35,694	-	-	-	-	-	13,009	-	131	48,834
8	Total	52,542	-	1,377	39,644	956	44,493	73,357	360	131	212,860
Q3 2021											
1	Bank	-	-	510	-	6	-	2,243	-	-	2,759
2	Corporate	3,662	-	110	-	60	-	53,673	359	-	57,864
3	Sovereign	7,884	-	2	-	962	-	294	-	-	9,142
4	Real Estate Secured	5,361	-	-	37,586	-	9,423	842	3	-	53,215
5	Other Retail	419	-	587	-	-	35,203	340	47	-	36,596
6	Equity ⁽²⁾	-	-	-	-	-	-	2,708	-	-	2,708
7	Other Assets ⁽³⁾	34,409	-	-	-	-	-	13,509	-	131	48,049
8	Total	51,735	-	1,209	37,586	1,028	44,626	73,609	409	131	210,333

(1) Exposure amount used for the calculation of capital requirements, including both on- and off-balance sheet amounts, net of allowances (ECL Stage 3) and write-offs.

The amounts are after application of credit risk mitigation (CRM) techniques and credit conversion factors (CCF). Includes CRM adjustments to exposures based on the application of the Comprehensive Approach for collateral.

(2) Includes equities under the AIRB Materiality Threshold which are risk weighted at 100% plus the 6% scalar requirement.

(3) Exposures to CCPs and risk-weighted threshold deduction amounts are excluded.

CR6: IRB – Credit risk exposures by portfolio and PD range - Retail

		a	b	c	d	e	f	g	h	i	j	k	l
(in \$ millions)	PD scale	Original on- balance sheet gross exposures	Off- balance sheet exposures pre-CCF	Average CCF	EAD post- CRM and post-CCF ⁽¹⁾	Average PD ⁽²⁾	Number of obligors ⁽³⁾	Average LGD ⁽⁴⁾	Average maturity ⁽⁵⁾	RWA ⁽¹⁾⁽⁶⁾	RWA density ⁽⁷⁾	EL ⁽¹⁾	Provisions ⁽⁸⁾
Q2 2022													
Retail - insured exposures secured by residential real estate	0.00 to <0.15	30,162	-	0%	72,811	0.00%	193,460	22.37%		264	0.4%	-	
	0.15 to <0.25	26,192	-	0%	1,816	0.18%	113,761	22.12%		161	8.9%	1	
	0.25 to <0.50	607	-	0%	-	0.00%	3,424	0.00%		-	0.0%	-	
	0.50 to <0.75	14,311	-	0%	399	0.75%	54,302	17.86%		78	19.5%	1	
	0.75 to <2.50	2,766	-	0%	4	1.95%	9,995	10.77%		1	25.0%	-	
	2.50 to <10.00	380	-	0%	-	0.00%	1,816	0.00%		-	0.0%	-	
	10.00 to <100.00	409	-	0%	-	0.00%	1,984	0.00%		-	0.0%	-	
	100.00 (Default)	203	-	0%	-	100.00%	1,164	105.00%		-	0.0%	-	
	Sub-total	75,030	-	0%	75,030	0.01%	379,906	22.34%		504	0.7%	2	11
Retail - uninsured exposures secured by residential real estate	0.00 to <0.15	80,786	56,955	36%	101,576	0.06%	888,401	18.93%		3,415	3.4%	13	
	0.15 to <0.25	76,731	-	0%	76,731	0.18%	233,582	18.45%		5,672	7.4%	26	
	0.25 to <0.50	919	-	0%	919	0.44%	2,880	41.01%		286	31.1%	2	
	0.50 to <0.75	43,497	-	0%	43,497	0.75%	111,458	19.51%		9,261	21.3%	63	
	0.75 to <2.50	16,447	990	64%	17,078	1.65%	78,647	24.90%		7,334	42.9%	66	
	2.50 to <10.00	946	45	80%	981	5.05%	8,478	24.88%		813	82.9%	11	
	10.00 to <100.00	492	2	126%	494	21.88%	2,970	18.10%		488	98.8%	19	
	100.00 (Default)	206	-	0%	206	100.00%	26,125	59.24%		916	444.7%	61	
	Sub-total	220,024	57,992	37%	241,482	0.49%	1,352,541	19.45%		28,185	11.7%	261	139

CR6: IRB – Credit risk exposures by portfolio and PD range - Retail

		a	b	c	d	e	f	g	h	i	j	k	l
(in \$ millions)	PD scale	Original on- balance sheet gross exposures	Off- balance sheet exposures pre-CCF	Average CCF	EAD post- CRM and post-CCF ⁽¹⁾	Average PD ⁽²⁾	Number of obligors ⁽³⁾	Average LGD ⁽⁴⁾	Average maturity ⁽⁵⁾	RWA ⁽¹⁾⁽⁶⁾	RWA density ⁽⁷⁾	EL ⁽¹⁾	Provisions ⁽⁸⁾
Retail - qualifying revolving (QRRE)	0.00 to <0.15	997	20,132	57%	12,448	0.05%	866,205	80.06%		327	2.6%	5	
	0.15 to <0.25	1,233	16,067	58%	10,601	0.19%	1,928,635	76.51%		884	8.3%	16	
	0.25 to <0.50	3,405	5,377	67%	7,018	0.33%	366,936	87.60%		1,037	14.8%	20	
	0.50 to <0.75	231	258	104%	499	0.61%	17,348	66.41%		92	18.4%	2	
	0.75 to <2.50	5,433	5,743	68%	9,320	1.27%	1,100,444	86.69%		3,886	41.7%	103	
	2.50 to <10.00	3,249	592	89%	3,775	5.59%	540,899	89.43%		4,549	120.5%	190	
	10.00 to <100.00	523	16	271%	566	27.30%	106,006	85.77%		1,287	227.4%	132	
	100.00 (Default)	94	-	0%	94	100.00%	749,514	86.00%		452	480.9%	49	
	Sub-total	15,165	48,185	61%	44,321	1.42%	5,675,987	82.53%		12,514	28.2%	517	750
Other Retail Exposures	0.00 to <0.15	5,503	1,143	60%	6,187	0.09%	298,487	59.83%		857	13.9%	3	
	0.15 to <0.25	1	6	56%	4	0.19%	35	81.80%		1	25.0%	-	
	0.25 to <0.50	7,350	273	76%	7,558	0.32%	298,871	61.41%		2,690	35.6%	15	
	0.50 to <0.75	1,402	2,674	103%	4,159	0.61%	14,183	66.41%		2,354	56.6%	17	
	0.75 to <2.50	14,627	60	89%	14,681	1.17%	468,304	64.92%		10,723	73.0%	112	
	2.50 to <10.00	2,740	1	112%	2,740	4.86%	93,468	66.31%		2,840	103.6%	88	
	10.00 to <100.00	691	-	204%	692	27.88%	25,440	61.89%		1,069	154.5%	119	
	100.00 (Default)	131	-	0%	131	100.00%	12,877	84.73%		610	465.6%	117	
	Sub-total	32,445	4,157	89%	36,152	1.89%	1,211,665	63.61%		21,144	58.5%	471	371
Total		342,664	110,334	49%	396,985	0.63%	8,620,099	31.06%		62,347	15.7%	1,251	1,271

CR6: IRB – Credit risk exposures by portfolio and PD range - Retail

		a	b	c	d	e	f	g	h	i	j	k	l
(in \$ millions)	PD scale	Original on- balance sheet gross exposures	Off- balance sheet exposures pre-CCF	Average CCF	EAD post- CRM and post-CCF ⁽¹⁾	Average PD ⁽²⁾	Number of obligors ⁽³⁾	Average LGD ⁽⁴⁾	Average maturity ⁽⁵⁾	RWA ⁽¹⁾⁽⁶⁾	RWA density ⁽⁷⁾	EL ⁽¹⁾	Provisions ⁽⁸⁾
Q1 2022													
Retail - insured exposures secured by residential real estate		0.00 to <0.15	30,096	-	0%	74,274	0.00%	194,195	21.41%	263	0.4%	-	
		0.15 to <0.25	26,751	-	0%	1,839	0.18%	116,869	20.84%	154	8.4%	1	
		0.25 to <0.50	643	-	0%	-	0.00%	3,607	0.00%	-	0.0%	-	
		0.50 to <0.75	15,015	-	0%	458	0.75%	57,125	17.74%	89	19.4%	1	
		0.75 to <2.50	2,974	-	0%	5	1.95%	10,791	10.77%	1	20.0%	-	
		2.50 to <10.00	401	-	0%	-	0.00%	1,964	0.00%	-	0.0%	-	
		10.00 to <100.00	464	-	0%	-	0.00%	2,210	0.00%	-	0.0%	-	
		100.00 (Default)	231	-	0%	-	100.00%	1,304	105.00%	-	0.0%	-	
		Sub-total	76,575	-	0%	76,576	0.01%	388,065	21.38%	507	0.7%	2	14
Retail - uninsured exposures secured by residential real estate		0.00 to <0.15	76,486	55,251	37%	96,705	0.06%	870,346	18.20%	3,150	3.3%	12	
		0.15 to <0.25	75,298	-	0%	75,298	0.18%	228,867	16.47%	4,970	6.6%	23	
		0.25 to <0.50	845	-	0%	845	0.44%	2,761	40.96%	263	31.1%	2	
		0.50 to <0.75	43,489	-	0%	43,489	0.75%	113,206	17.43%	8,269	19.0%	57	
		0.75 to <2.50	15,004	842	64%	15,540	1.62%	76,500	22.45%	5,874	37.8%	52	
		2.50 to <10.00	926	62	78%	975	5.00%	8,909	24.39%	784	80.4%	11	
		10.00 to <100.00	555	3	104%	559	22.69%	3,254	16.76%	513	91.8%	21	
		100.00 (Default)	232	-	0%	232	100.00%	25,584	55.10%	964	415.5%	62	
		Sub-total	212,835	56,158	37%	233,643	0.51%	1,329,427	17.92%	24,787	10.6%	240	138

CR6: IRB – Credit risk exposures by portfolio and PD range - Retail

		a	b	c	d	e	f	g	h	i	j	k	l
(in \$ millions)	PD scale	Original on- balance sheet gross exposures	Off- balance sheet exposures pre-CCF	Average CCF	EAD post- CRM and post-CCF ⁽¹⁾	Average PD ⁽²⁾	Number of obligors ⁽³⁾	Average LGD ⁽⁴⁾	Average maturity ⁽⁵⁾	RWA ⁽¹⁾⁽⁶⁾	RWA density ⁽⁷⁾	EL ⁽¹⁾	Provisions ⁽⁸⁾
Retail - qualifying revolving (QRRE)	0.00 to <0.15	916	19,345	57%	11,911	0.05%	829,674	80.19%		313	2.6%	4	
	0.15 to <0.25	1,096	15,942	59%	10,487	0.19%	1,903,832	76.34%		873	8.3%	15	
	0.25 to <0.50	3,288	5,204	67%	6,768	0.33%	349,598	87.75%		1,003	14.8%	19	
	0.50 to <0.75	225	264	104%	499	0.61%	17,312	66.41%		92	18.4%	2	
	0.75 to <2.50	5,349	5,629	68%	9,156	1.27%	1,080,796	86.67%		3,835	41.9%	103	
	2.50 to <10.00	3,335	585	88%	3,851	5.66%	547,145	89.53%		4,684	121.6%	196	
	10.00 to <100.00	566	16	277%	610	27.82%	113,052	85.92%		1,393	228.4%	145	
	100.00 (Default)	88	-	0%	88	100.00%	743,709	86.59%		446	506.8%	45	
	Sub-total	14,863	46,985	61%	43,370	1.48%	5,585,118	82.57%		12,639	29.1%	529	821
Other Retail Exposures	0.00 to <0.15	5,657	1,099	60%	6,315	0.09%	305,195	59.51%		875	13.9%	3	
	0.15 to <0.25	-	5	56%	3	0.19%	33	80.89%		1	33.3%	-	
	0.25 to <0.50	7,308	269	77%	7,514	0.32%	301,825	61.44%		2,674	35.6%	15	
	0.50 to <0.75	1,347	2,681	103%	4,110	0.61%	14,046	66.41%		2,325	56.6%	17	
	0.75 to <2.50	14,157	52	88%	14,203	1.17%	470,459	64.60%		10,328	72.7%	108	
	2.50 to <10.00	2,942	1	92%	2,943	4.84%	101,180	66.35%		3,049	103.6%	94	
	10.00 to <100.00	707	-	228%	708	28.13%	26,334	61.84%		1,093	154.4%	123	
	100.00 (Default)	135	-	0%	135	100.00%	12,559	84.99%		654	484.4%	117	
	Sub-total	32,253	4,107	90%	35,931	1.94%	1,231,631	63.42%		20,999	58.4%	477	398
Total		336,526	107,250	49%	389,520	0.65%	8,534,241	30.00%		58,932	15.1%	1,248	1,371

CR6: IRB – Credit risk exposures by portfolio and PD range - Retail

		a	b	c	d	e	f	g	h	i	j	k	l
(in \$ millions)	PD scale	Original on-balance sheet gross exposures	Off-balance sheet exposures pre-CCF	Average CCF	EAD post-CRM and post-CCF ⁽¹⁾	Average PD ⁽²⁾	Number of obligors ⁽³⁾	Average LGD ⁽⁴⁾	Average maturity ⁽⁵⁾	RWA ⁽¹⁾⁽⁶⁾	RWA density ⁽⁷⁾	EL ⁽¹⁾	Provisions ⁽⁸⁾
Q4 2021													
Retail - insured exposures secured by residential real estate													
	0.00 to <0.15	30,912	-	0%	75,805	0.00%	198,941	21.56%		258	0.3%	-	
	0.15 to <0.25	27,453	-	0%	1,877	0.18%	119,891	21.03%		158	8.4%	1	
	0.25 to <0.50	659	-	0%	-	0.00%	3,756	0.00%		-	0.0%	-	
	0.50 to <0.75	15,182	-	0%	474	0.75%	58,172	17.92%		93	19.6%	1	
	0.75 to <2.50	2,823	-	0%	6	1.95%	10,721	10.71%		1	16.7%	-	
	2.50 to <10.00	429	-	0%	-	0.00%	2,103	0.00%		-	0.0%	-	
	10.00 to <100.00	456	-	0%	-	0.00%	2,214	0.00%		-	0.0%	-	
	100.00 (Default)	248	-	0%	-	100.00%	1,361	105.00%		-	0.0%	-	
	Sub-total	78,162	-	0%	78,162	0.01%	397,159	21.52%		510	0.7%	2	20
Retail - uninsured exposures secured by residential real estate													
	0.00 to <0.15	74,443	53,476	36%	93,952	0.06%	862,580	18.36%		3,067	3.3%	11	
	0.15 to <0.25	72,755	-	0%	72,755	0.18%	223,280	17.49%		5,099	7.0%	23	
	0.25 to <0.50	864	-	0%	864	0.44%	2,995	40.95%		269	31.1%	2	
	0.50 to <0.75	41,100	-	0%	41,100	0.75%	108,474	18.45%		8,274	20.1%	57	
	0.75 to <2.50	12,947	678	63%	13,371	1.59%	72,416	22.86%		5,080	38.0%	45	
	2.50 to <10.00	892	60	79%	939	5.01%	8,876	24.10%		750	79.9%	11	
	10.00 to <100.00	551	3	115%	555	22.32%	3,199	17.53%		528	95.1%	21	
	100.00 (Default)	219	-	0%	219	100.00%	24,918	58.24%		966	441.1%	63	
	Sub-total	203,771	54,217	37%	223,755	0.49%	1,306,738	18.51%		24,033	10.7%	233	143

CR6: IRB – Credit risk exposures by portfolio and PD range - Retail

		a	b	c	d	e	f	g	h	i	j	k	l
(in \$ millions)	PD scale	Original on-balance sheet gross exposures	Off-balance sheet exposures pre-CCF	Average CCF	EAD post-CRM and post-CCF ⁽¹⁾	Average PD ⁽²⁾	Number of obligors ⁽³⁾	Average LGD ⁽⁴⁾	Average maturity ⁽⁵⁾	RWA ⁽¹⁾⁽⁶⁾	RWA density ⁽⁷⁾	EL ⁽¹⁾	Provisions ⁽⁸⁾
Retail - qualifying revolving (QRRE)													
	0.00 to <0.15	928	18,759	57%	11,594	0.05%	804,478	77.71%		295	2.5%	4	
	0.15 to <0.25	1,032	15,146	58%	9,809	0.19%	1,819,073	76.62%		820	8.4%	14	
	0.25 to <0.50	3,312	5,096	67%	6,715	0.33%	338,518	83.53%		947	14.1%	18	
	0.50 to <0.75	211	336	103%	558	0.61%	18,261	66.41%		103	18.5%	2	
	0.75 to <2.50	5,222	5,383	67%	8,827	1.28%	1,045,420	84.32%		3,597	40.7%	96	
	2.50 to <10.00	3,104	593	87%	3,619	5.66%	535,782	87.49%		4,293	118.6%	179	
	10.00 to <100.00	524	16	270%	567	27.90%	112,660	84.76%		1,284	226.5%	133	
	100.00 (Default)	82	-	0%	82	100.00%	734,307	83.72%		394	480.5%	48	
Sub-total	14,415	45,329	60%	41,771	1.46%	5,408,499	80.59%		11,733	28.1%	494	920	
Other Retail Exposures													
	0.00 to <0.15	5,986	1,054	60%	6,615	0.09%	318,040	58.11%		902	13.6%	3	
	0.15 to <0.25	1	5	55%	3	0.19%	32	81.32%		1	33.3%	-	
	0.25 to <0.50	7,620	254	76%	7,813	0.32%	313,873	58.94%		2,667	34.1%	15	
	0.50 to <0.75	1,295	2,722	103%	4,099	0.61%	14,114	66.41%		2,319	56.6%	17	
	0.75 to <2.50	14,083	55	89%	14,132	1.17%	473,707	62.15%		9,880	69.9%	104	
	2.50 to <10.00	2,757	1	104%	2,758	4.83%	97,260	64.60%		2,781	100.8%	86	
	10.00 to <100.00	656	2	121%	658	27.25%	26,450	59.90%		979	148.8%	107	
	100.00 (Default)	129	-	0%	129	100.00%	11,619	85.48%		635	492.2%	123	
Sub-total	32,527	4,093	90%	36,207	1.83%	1,255,095	61.43%		20,164	55.7%	455	430	
Total		328,875	103,639	49%	379,895	0.63%	8,367,491	30.05%		56,440	14.9%	1,184	1,513

(1) Includes the retail residential mortgage exposures insured by CMHC, Genworth Canada and Canada Guaranty Insurance.

(2) Post-CRM PD weighted by post-CRM EAD.

(3) Number of obligors represents the number of retail accounts.

(4) Post-CRM LGD weighted by post-CRM EAD.

(5) Average maturity is not used in RWA calculation for retail exposures except for the retail residential mortgages where a substitution approach was done to recognize the government guarantee and guarantee of insurance companies.

(6) After application of AIRB scalar of 1.06.

(7) RWA density is calculated as Risk-weighted Assets (column i) divided by EAD post-CRM and post-CCF (column d).

(8) Includes all three ECL stages under IFRS 9.

CR6: IRB – Credit risk exposures by portfolio and PD range - Non-Retail ⁽¹⁾

		a	b	c	d	e	f	g	h	i	j	k	l
(in \$ millions)	PD scale	Original on-balance sheet gross exposures	Off-balance sheet exposures pre-CCF	Average CCF	EAD post-CRM and post-CCF	Average PD ⁽²⁾	Number of obligors ⁽³⁾	Average LGD ⁽⁴⁾	Average maturity ⁽⁵⁾	RWA ⁽⁶⁾	RWA density ⁽⁷⁾	EL	Provisions ⁽⁸⁾
Q2 2022													
Sovereign													
	0.00 to <0.15	150,953	3,016	48%	152,628	0.01%	106	10.87%	1.71	2,061	1.4%	5	
	0.15 to <0.25	992	7	30%	994	0.20%	5	22.31%	3.52	298	30.0%	-	
	0.25 to <0.50	1,322	166	38%	1,384	0.34%	11	24.60%	2.18	431	31.1%	1	
	0.50 to <0.75	2,519	3	46%	2,520	0.65%	10	21.11%	1.18	791	31.4%	3	
	0.75 to <2.50	1,924	-	44%	1,924	1.33%	5	17.54%	1.04	687	35.7%	4	
	2.50 to <10.00	151	-	0%	151	2.56%	3	12.05%	1.17	50	33.0%	-	
	10.00 to <100.00	561	-	0%	561	17.86%	1	3.10%	0.76	88	15.6%	3	
	100.00 (Default)	213	-	0%	213	100.00%	1	25.00%	3.88	-	0.0%	54	
	Sub-total	158,635	3,192	47%	160,375	0.24%	142	11.30%	1.71	4,406	2.7%	70	1
Bank													
	0.00 to <0.15	11,960	10,328	63%	18,431	0.06%	296	31.32%	1.39	2,556	13.9%	3	
	0.15 to <0.25	1,708	493	52%	1,965	0.19%	35	36.64%	0.74	565	28.7%	1	
	0.25 to <0.50	1,457	494	53%	1,725	0.40%	55	39.61%	0.61	754	43.7%	3	
	0.50 to <0.75	1,419	166	42%	1,489	0.52%	15	38.96%	0.60	833	55.9%	3	
	0.75 to <2.50	165	13	52%	172	1.33%	13	37.46%	0.68	119	69.6%	1	
	2.50 to <10.00	-	-	0%	-	0.00%	-	0.00%	-	-	0.0%	-	
	10.00 to <100.00	55	-	100%	55	34.44%	3	39.98%	0.76	121	219.7%	8	
	100.00 (Default)	107	2	50%	109	100.00%	3	39.98%	2.51	1	0.8%	43	
	Sub-total	16,871	11,496	61%	23,946	0.66%	420	32.94%	1.23	4,949	20.7%	62	2

CR6: IRB – Credit risk exposures by portfolio and PD range - Non-Retail ⁽¹⁾

		a	b	c	d	e	f	g	h	i	j	k	l
(in \$ millions)	PD scale	Original on- balance sheet gross exposures	Off- balance sheet exposures pre-CCF	Average CCF	EAD post- CRM and post-CCF	Average PD ⁽²⁾	Number of obligors ⁽³⁾	Average LGD ⁽⁴⁾	Average maturity ⁽⁵⁾	RWA ⁽⁶⁾	RWA density ⁽⁷⁾	EL	Provisions ⁽⁸⁾
Corporate - Other ⁽⁹⁾	0.00 to <0.15	59,962	124,823	56%	138,221	0.08%	1,952	39.82%	2.23	33,054	23.9%	43	
	0.15 to <0.25	21,706	30,672	51%	35,668	0.17%	1,532	44.28%	2.31	14,374	40.3%	27	
	0.25 to <0.50	58,356	53,901	46%	79,942	0.37%	5,186	47.01%	2.09	49,083	61.4%	141	
	0.50 to <0.75	21,663	16,591	42%	26,465	0.64%	2,743	44.43%	1.97	18,978	71.7%	75	
	0.75 to <2.50	3,517	4,767	44%	4,931	1.33%	602	39.93%	2.20	4,299	87.2%	26	
	2.50 to <10.00	2,615	2,510	45%	2,901	3.97%	431	40.12%	1.70	3,288	113.3%	48	
	10.00 to <100.00	820	1,468	52%	1,263	26.27%	58	51.44%	1.70	3,427	271.3%	174	
	100.00 (Default)	495	190	69%	564	100.00%	64	43.03%	1.31	1,125	199.6%	225	
	Sub-total	169,134	234,922	52%	289,955	0.59%	12,568	42.83%	2.17	127,628	44.0%	759	479
Corporate – Specialized Lending	0.00 to <0.15	5,760	7,754	56%	11,441	0.09%	185	41.28%	2.09	2,759	24.1%	4	
	0.15 to <0.25	10,136	7,773	57%	14,579	0.16%	368	37.75%	1.83	4,378	30.0%	9	
	0.25 to <0.50	12,506	9,386	54%	16,348	0.31%	830	38.37%	1.75	7,060	43.2%	21	
	0.50 to <0.75	1,317	488	31%	1,431	0.65%	116	47.25%	1.71	1,082	75.6%	4	
	0.75 to <2.50	305	87	31%	328	1.33%	14	57.00%	1.66	404	123.4%	2	
	2.50 to <10.00	170	15	37%	230	3.90%	8	44.44%	1.11	279	121.3%	4	
	10.00 to <100.00	149	60	44%	73	20.55%	9	36.35%	1.41	141	193.8%	5	
	100.00 (Default)	179	21	100%	173	100.00%	2	52.33%	2.63	995	576.4%	15	
	Sub-total	30,522	25,584	55%	44,603	0.66%	1,532	39.42%	1.86	17,098	38.3%	64	30
Total		375,162	275,194	52%	518,879	0.49%	14,662	32.34%	1.96	154,081	29.7%	955	512

CR6: IRB – Credit risk exposures by portfolio and PD range - Non-Retail ⁽¹⁾

		a	b	c	d	e	f	g	h	i	j	k	l
(in \$ millions)	PD scale	Original on-balance sheet gross exposures	Off-balance sheet exposures pre-CCF	Average CCF	EAD post-CRM and post-CCF	Average PD ⁽²⁾	Number of obligors ⁽³⁾	Average LGD ⁽⁴⁾	Average maturity ⁽⁵⁾	RWA ⁽⁶⁾	RWA density ⁽⁷⁾	EL	Provisions ⁽⁸⁾
Q1 2022													
Sovereign													
	0.00 to <0.15	145,949	2,022	42%	147,064	0.01%	107	9.55%	1.38	2,286	1.6%	4	
	0.15 to <0.25	902	7	30%	904	0.20%	4	21.99%	3.45	264	29.2%	-	
	0.25 to <0.50	1,420	123	46%	1,478	0.33%	11	24.51%	2.25	462	31.3%	1	
	0.50 to <0.75	1,268	4	46%	1,270	0.64%	8	22.84%	1.33	439	34.6%	2	
	0.75 to <2.50	1,768	-	44%	1,768	1.33%	5	17.67%	1.25	655	37.1%	4	
	2.50 to <10.00	162	-	0%	162	2.56%	3	7.61%	1.21	36	21.9%	-	
	10.00 to <100.00	499	-	0%	499	17.86%	1	3.11%	1.00	79	15.9%	3	
	100.00 (Default)	211	-	0%	211	100.00%	1	25.00%	3.94	-	0.0%	53	
	Sub-total	152,179	2,156	42%	153,356	0.24%	140	9.97%	1.41	4,221	2.8%	67	-
Bank													
	0.00 to <0.15	11,577	9,949	63%	18,199	0.06%	303	30.95%	1.37	2,448	13.5%	3	
	0.15 to <0.25	1,461	489	50%	1,703	0.19%	33	37.26%	0.95	560	32.9%	1	
	0.25 to <0.50	1,320	797	59%	1,467	0.38%	63	38.72%	0.98	642	43.8%	2	
	0.50 to <0.75	1,334	177	40%	1,405	0.52%	19	38.84%	0.68	802	57.1%	3	
	0.75 to <2.50	207	11	58%	213	1.33%	14	31.50%	0.75	130	60.8%	1	
	2.50 to <10.00	-	-	0%	-	0.00%	-	0.00%	-	-	0.0%	-	
	10.00 to <100.00	-	-	100%	-	34.44%	2	3.00%	1.00	-	16.6%	-	
	100.00 (Default)	113	3	55%	114	100.00%	3	39.97%	2.66	1	0.5%	46	
	Sub-total	16,012	11,426	62%	23,101	0.62%	437	32.44%	1.28	4,583	19.8%	56	2

CR6: IRB – Credit risk exposures by portfolio and PD range - Non-Retail ⁽¹⁾

		a	b	c	d	e	f	g	h	i	j	k	l
(in \$ millions)	PD scale	Original on- balance sheet gross exposures	Off- balance sheet exposures pre-CCF	Average CCF	EAD post- CRM and post-CCF	Average PD ⁽²⁾	Number of obligors ⁽³⁾	Average LGD ⁽⁴⁾	Average maturity ⁽⁵⁾	RWA ⁽⁶⁾	RWA density ⁽⁷⁾	EL	Provisions ⁽⁸⁾
Corporate - Other ⁽⁹⁾	0.00 to <0.15	57,303	118,386	55%	131,783	0.08%	1,881	39.66%	2.19	31,151	23.6%	41	
	0.15 to <0.25	18,445	35,473	50%	34,140	0.17%	1,504	44.41%	2.35	13,935	40.8%	26	
	0.25 to <0.50	53,683	54,567	45%	74,943	0.37%	5,080	47.24%	2.10	46,289	61.8%	133	
	0.50 to <0.75	21,412	17,755	41%	26,952	0.65%	2,771	43.79%	1.90	18,705	69.4%	75	
	0.75 to <2.50	3,980	4,227	46%	5,277	1.33%	667	39.82%	1.99	4,451	84.4%	28	
	2.50 to <10.00	2,784	3,024	46%	3,361	4.04%	448	39.48%	1.84	3,739	111.2%	54	
	10.00 to <100.00	676	2,182	45%	1,093	23.81%	60	49.00%	2.09	2,884	263.8%	130	
	100.00 (Default)	637	204	78%	739	100.00%	69	43.71%	1.19	1,456	197.0%	324	
	Sub-total	158,920	235,818	51%	278,288	0.65%	12,480	42.73%	2.15	122,610	44.1%	811	628
Corporate – Specialized Lending	0.00 to <0.15	4,639	7,007	57%	9,971	0.09%	157	41.55%	2.03	2,341	23.5%	4	
	0.15 to <0.25	5,482	5,150	57%	8,118	0.16%	244	38.50%	1.74	2,414	29.7%	5	
	0.25 to <0.50	15,975	11,302	54%	21,136	0.31%	914	38.10%	1.75	9,057	42.9%	25	
	0.50 to <0.75	1,588	510	25%	1,660	0.65%	126	45.13%	1.71	1,203	72.4%	5	
	0.75 to <2.50	115	44	40%	128	1.33%	11	32.61%	1.66	93	72.0%	1	
	2.50 to <10.00	88	-	44%	59	2.56%	5	42.35%	3.03	76	129.7%	1	
	10.00 to <100.00	194	62	45%	222	20.08%	10	36.84%	1.44	434	195.6%	16	
	100.00 (Default)	179	21	100%	174	100.00%	3	52.35%	1.54	1,141	654.6%	5	
	Sub-total	28,260	24,096	55%	41,468	0.77%	1,470	39.33%	1.81	16,759	40.4%	62	20
Total		355,371	273,496	51%	496,213	0.53%	14,527	31.84%	1.85	148,173	29.9%	996	650

CR6: IRB – Credit risk exposures by portfolio and PD range - Non-Retail ⁽¹⁾

		a	b	c	d	e	f	g	h	i	j	k	l
(in \$ millions)	PD scale	Original on-balance sheet gross exposures	Off-balance sheet exposures pre-CCF	Average CCF	EAD post-CRM and post-CCF	Average PD ⁽²⁾	Number of obligors ⁽³⁾	Average LGD ⁽⁴⁾	Average maturity ⁽⁵⁾	RWA ⁽⁶⁾	RWA density ⁽⁷⁾	EL	Provisions ⁽⁸⁾
Q4 2021													
Sovereign													
	0.00 to <0.15	128,128	1,731	40%	129,068	0.02%	107	9.90%	1.50	2,299	1.8%	4	
	0.15 to <0.25	911	7	28%	913	0.20%	3	24.40%	3.42	280	30.7%	-	
	0.25 to <0.50	1,435	224	44%	1,533	0.33%	11	24.54%	2.41	493	32.2%	1	
	0.50 to <0.75	1,167	102	44%	1,212	0.65%	10	22.37%	1.27	411	33.9%	2	
	0.75 to <2.50	1,789	-	0%	1,789	1.33%	5	17.03%	1.45	654	36.6%	4	
	2.50 to <10.00	136	-	0%	136	2.56%	3	7.10%	1.48	29	21.4%	-	
	10.00 to <100.00	478	-	0%	478	17.86%	1	3.11%	0.08	73	15.2%	3	
	100.00 (Default)	206	-	0%	206	100.00%	1	25.00%	3.99	1	0.4%	52	
	Sub-total	134,250	2,064	40%	135,335	0.26%	141	10.36%	1.52	4,240	3.1%	66	-
Bank													
	0.00 to <0.15	11,240	9,628	63%	17,637	0.06%	310	31.46%	1.40	2,482	14.1%	3	
	0.15 to <0.25	1,233	495	47%	1,464	0.20%	35	37.19%	0.48	402	27.4%	1	
	0.25 to <0.50	1,482	734	54%	1,526	0.38%	63	38.40%	0.78	634	41.5%	2	
	0.50 to <0.75	1,443	207	35%	1,516	0.53%	18	38.84%	0.21	769	50.8%	3	
	0.75 to <2.50	214	9	65%	220	1.33%	12	34.25%	0.91	148	67.3%	1	
	2.50 to <10.00	-	-	0%	-	0.00%	-	0.00%	-	-	0.0%	-	
	10.00 to <100.00	-	-	100%	-	34.44%	2	3.00%	1.00	-	16.6%	-	
	100.00 (Default)	120	3	53%	121	100.00%	5	39.40%	2.75	-	0.3%	50	
	Sub-total	15,732	11,076	61%	22,484	0.67%	445	32.87%	1.22	4,435	19.7%	60	3

CR6: IRB – Credit risk exposures by portfolio and PD range - Non-Retail ⁽¹⁾

		a	b	c	d	e	f	g	h	i	j	k	l
(in \$ millions)	PD scale	Original on-balance sheet gross exposures	Off-balance sheet exposures pre-CCF	Average CCF	EAD post-CRM and post-CCF	Average PD ⁽²⁾	Number of obligors ⁽³⁾	Average LGD ⁽⁴⁾	Average maturity ⁽⁵⁾	RWA ⁽⁶⁾	RWA density ⁽⁷⁾	EL	Provisions ⁽⁸⁾
Corporate - Other ⁽⁹⁾	0.00 to <0.15	51,455	112,091	56%	122,550	0.08%	1,798	39.47%	2.14	28,418	23.2%	38	
	0.15 to <0.25	15,261	34,044	51%	30,317	0.17%	1,429	44.55%	2.27	12,210	40.3%	23	
	0.25 to <0.50	51,217	56,069	45%	73,382	0.37%	4,974	47.24%	2.07	45,048	61.4%	130	
	0.50 to <0.75	18,968	18,373	41%	25,326	0.64%	2,793	43.12%	1.90	17,340	68.5%	69	
	0.75 to <2.50	4,655	4,967	45%	6,052	1.33%	699	40.22%	1.98	5,243	86.6%	32	
	2.50 to <10.00	2,921	2,708	46%	3,368	4.43%	469	39.16%	1.69	3,852	114.4%	61	
	10.00 to <100.00	924	2,840	46%	1,671	23.76%	75	45.52%	2.17	4,093	245.0%	184	
	100.00 (Default)	652	194	78%	728	100.00%	72	44.06%	1.26	1,549	212.9%	292	
	Sub-total	146,053	231,286	51%	263,394	0.73%	12,309	42.64%	2.10	117,753	44.7%	829	624
Corporate – Specialized Lending	0.00 to <0.15	4,386	6,992	57%	9,375	0.09%	161	41.30%	2.08	2,194	23.4%	3	
	0.15 to <0.25	4,608	4,919	57%	7,411	0.16%	225	38.59%	1.79	2,242	30.3%	5	
	0.25 to <0.50	14,646	11,293	53%	19,830	0.32%	878	37.77%	1.76	8,446	42.6%	24	
	0.50 to <0.75	1,472	467	25%	1,504	0.65%	115	44.77%	1.88	1,118	74.4%	4	
	0.75 to <2.50	54	64	43%	73	1.33%	12	40.94%	2.66	74	101.1%	-	
	2.50 to <10.00	112	-	45%	81	2.56%	6	42.52%	2.66	102	125.4%	1	
	10.00 to <100.00	190	49	45%	212	20.17%	10	36.82%	1.63	419	197.3%	16	
	100.00 (Default)	175	23	100%	173	100.00%	3	52.48%	1.47	1,138	656.3%	5	
	Sub-total	25,643	23,807	55%	38,659	0.81%	1,410	39.13%	1.85	15,733	40.7%	58	20
Total		321,678	268,233	52%	459,872	0.60%	14,305	32.37%	1.87	142,161	30.9%	1,013	647

(1) Excludes the retail residential mortgages insured by CMHC, Genworth Canada and Canada Guaranty Insurance.

(2) Post-CRM PD weighted by post-CRM EAD.

(3) Represents the number of individual borrowers.

(4) Post-CRM LGD weighted by post-CRM EAD.

(5) Effective remaining maturity in years.

(6) After application of AIRB scalar of 1.06.

(7) RWA density is calculated as Risk-weighted Assets (column i) divided by EAD post-CRM and post-CCF (column d).

(8) Includes all three ECL stages under IFRS 9, and partial write-offs.

(9) Includes purchased receivables portfolio totaling \$1.6 billion EAD, \$0.3 billion RWA (\$1.5 billion EAD, \$0.3 billion RWA in Q1 2022; and \$1.3 billion EAD, \$0.3 billion RWA in Q4 2021).

CR7: IRB – Effect on RWA of credit derivatives used as CRM techniques

(in \$ millions)		Q2 2022		Q1 2022		Q4 2021		Q3 2021	
		a	b	a ₂	b ₂	a ₃	b ₃	a ₄	b ₄
		Pre-credit derivatives RWA	Actual RWA ⁽¹⁾	Pre-credit derivatives RWA	Actual RWA ⁽¹⁾	Pre-credit derivatives RWA	Actual RWA ⁽¹⁾	Pre-credit derivatives RWA	Actual RWA ⁽¹⁾
1	Sovereign – FIRB	-	-	-	-	-	-	-	-
2	Sovereign – AIRB	4,406	4,406	4,221	4,221	4,240	4,240	4,499	4,499
3	Bank – FIRB	-	-	-	-	-	-	-	-
4	Bank – AIRB	4,949	4,949	4,583	4,583	4,435	4,435	4,508	4,508
5	Corporate – FIRB	-	-	-	-	-	-	-	-
6	Corporate – AIRB	127,330	127,330	122,293	122,293	117,484	117,484	117,621	117,621
7	Specialized lending – FIRB	-	-	-	-	-	-	-	-
8	Specialized lending – AIRB	17,098	17,098	16,759	16,759	15,733	15,733	15,027	15,027
9	Retail – qualifying revolving (QRRE)	12,514	12,514	12,639	12,639	11,733	11,733	12,109	12,109
10	Retail – residential mortgage exposures	28,689	28,689	25,294	25,294	24,543	24,543	22,609	22,609
11	Retail – SME	-	-	-	-	-	-	-	-
12	Other retail exposures	21,144	21,144	20,999	20,999	20,164	20,164	19,310	19,310
13	Equity – FIRB	-	-	-	-	-	-	-	-
14	Equity – AIRB	-	-	-	-	-	-	-	-
15	Purchased receivables – FIRB	-	-	-	-	-	-	-	-
16	Purchased receivables – AIRB	298	298	317	317	269	269	211	211
17	Total	216,428	216,428	207,105	207,105	198,601	198,601	195,894	195,894

(1) As at the reporting date, there was no impact on RWA from credit derivatives, used as a CRM technique, within the banking book.

CR8: RWA flow statements of credit risk exposures under IRB

(in \$ millions)		a	a ₂	a ₃	a ₄
		Q2 2022	Q1 2022	Q4 2021	Q3 2021
1	RWA as at end of previous reporting period	207,105	198,601	195,894	193,125
2	Asset size ⁽¹⁾	11,222	7,476	5,147	4,086
3	Asset quality ⁽²⁾	(2,342)	(2,835)	(1,243)	(2,946)
4	Model updates ⁽³⁾	-	919	696	856
5	Methodology and policy ⁽⁴⁾	-	-	-	-
6	Acquisitions and disposals ⁽⁵⁾	-	-	(45)	-
7	Foreign exchange movements ⁽⁶⁾	443	2,631	(1,259)	773
8	Other ⁽⁷⁾	-	313	(589)	-
9	RWA as at end of reporting period	216,428	207,105	198,601	195,894

(1) Organic changes in book size and composition (including origination of new businesses and maturing loans) excluding acquisitions and disposal of entities.

(2) Changes in the assessed quality of the bank's assets due to changes in borrower risk, such as rating grade migration, parameter recalibration, or similar effects.

(3) Changes due to model implementation, changes in model scope, or any changes intended to address model weaknesses.

(4) Changes due to methodological changes in calculations driven by regulatory policy changes, including both revisions to existing regulations and new regulations.

(5) Changes in book size due to acquisitions and/or divestitures.

(6) Changes driven by market movements such as foreign exchange movements.

(7) This category captures changes that cannot be attributed to any other category.

CR10: IRB (Specialized lending and equities under the simple risk-weight method)

Specialized Lending ⁽¹⁾ - Q2 2022												
Other than HVCRE												
Regulatory Categories	Remaining Maturity	On-balance sheet amount	Off-balance sheet amount	RW	Exposure Amount					RWA	Expected Losses	
					PF	OF	CF	IPRE	Total			
Strong	Less than 2.5 years	-	-	50%	-	-	-	-	-	-	-	
	Equal to or more than 2.5 years	-	-	70%	-	-	-	-	-	-	-	
Good	Less than 2.5 years	-	-	70%	-	-	-	-	-	-	-	
	Equal to or more than 2.5 years	-	-	90%	-	-	-	-	-	-	-	
Satisfactory		-	-	115%	-	-	-	-	-	-	-	
Weak		-	-	250%	-	-	-	-	-	-	-	
Default		-	-	-	-	-	-	-	-	-	-	
Total		-	-		-	-	-	-	-	-	-	
HVCRE												
Regulatory Categories	Remaining Maturity	On-balance sheet amount	Off-balance sheet amount	RW	Exposure Amount					RWA	Expected Losses	
Strong	Less than 2.5 years	-	-	70%						-	-	-
	Equal to or more than 2.5 years	-	-	95%						-	-	-
Good	Less than 2.5 years	-	-	95%						-	-	-
	Equal to or more than 2.5 years	-	-	120%						-	-	-
Satisfactory		-	-	140%						-	-	-
Weak		-	-	250%						-	-	-
Default		-	-	-						-	-	-
Total		-	-							-	-	-
Equities under the simple risk-weight approach												
Categories		On-balance sheet amount	Off-balance sheet amount	RW	Exposure Amount					RWA	Expected Losses	
Exchange-traded equity exposures		-	-	190%						-	-	
Private equity exposures		-	-	290%						-	-	
Other equity exposures		-	-	370%						-	-	
Total			-							-	-	

(1) As at the reporting date, specialized lending and equities under the simple risk-weight method are not applicable.

CR10: IRB (Specialized lending and equities under the simple risk-weight method)

Specialized Lending ⁽¹⁾ - Q1 2022											
Other than HVCRE											
Regulatory Categories	Remaining Maturity	On-balance sheet amount	Off-balance sheet amount	RW	Exposure Amount					RWA	Expected Losses
					PF	OF	CF	IPRE	Total		
Strong	Less than 2.5 years	-	-	50%	-	-	-	-	-	-	-
	Equal to or more than 2.5 years	-	-	70%	-	-	-	-	-	-	-
Good	Less than 2.5 years	-	-	70%	-	-	-	-	-	-	-
	Equal to or more than 2.5 years	-	-	90%	-	-	-	-	-	-	-
Satisfactory		-	-	115%	-	-	-	-	-	-	-
Weak		-	-	250%	-	-	-	-	-	-	-
Default		-	-	-	-	-	-	-	-	-	-
Total		-	-	-	-	-	-	-	-	-	-
HVCRE											
Regulatory Categories	Remaining Maturity	On-balance sheet amount	Off-balance sheet amount	RW	Exposure Amount					RWA	Expected Losses
Strong	Less than 2.5 Years	-	-	70%					-	-	-
	Equal to or more than 2.5 years	-	-	95%					-	-	-
Good	Less than 2.5 Years	-	-	95%					-	-	-
	Equal to or more than 2.5 years	-	-	120%					-	-	-
Satisfactory		-	-	140%					-	-	-
Weak		-	-	250%					-	-	-
Default		-	-	-					-	-	-
Total		-	-	-					-	-	-
Equities under the simple risk-weight approach											
Categories		On-balance sheet amount	Off-balance sheet amount	RW	Exposure Amount					RWA	Expected Losses
Exchange-traded equity exposures		-	-	190%					-	-	
Private equity exposures		-	-	290%					-	-	
Other equity exposures		-	-	370%					-	-	
Total		-	-	-					-	-	

(1) As at the reporting date, specialized lending and equities under the simple risk-weight method are not applicable.

CCR1: Analysis of counterparty credit risk (CCR) exposure by approach ⁽¹⁾

(in \$ millions)		a	b	c	d	e	f
		Replacement cost	Potential future exposure	EEPE	Alpha used for computing regulatory EAD	EAD post- CRM	RWA
Q2 2022							
1	CEM / SA-CCR (for derivatives)	1,294	909		1.4	3,084	1,916
2	Internal Model Method (for derivatives and SFTs) ⁽²⁾			19,182	1.4	26,574	5,576
3	Simple Approach for credit risk mitigation (for SFTs)					-	-
4	Comprehensive Approach for credit risk mitigation (for SFTs)					20,705	3,155
5	VaR for SFTs					18,025	2,061
6	Total						12,708
Q1 2022							
1	CEM / SA-CCR (for derivatives)	926	1,372		1.4	3,217	1,750
2	Internal Model Method (for derivatives and SFTs) ⁽²⁾			16,437	1.4	22,790	5,285
3	Simple Approach for credit risk mitigation (for SFTs)					-	-
4	Comprehensive Approach for credit risk mitigation (for SFTs)					29,715	4,289
5	VaR for SFTs					16,284	1,933
6	Total						13,257
Q4 2021							
1	CEM / SA-CCR (for derivatives)	458	1,437		1.4	2,654	1,026
2	Internal Model Method (for derivatives and SFTs) ⁽²⁾			18,045	1.4	25,082	6,203
3	Simple Approach for credit risk mitigation (for SFTs)					-	-
4	Comprehensive Approach for credit risk mitigation (for SFTs)					30,118	4,519
5	VaR for SFTs					14,641	1,729
6	Total						13,477
Q3 2021							
1	CEM / SA-CCR (for derivatives)	756	1,572		1.4	3,258	1,341
2	Internal Model Method (for derivatives and SFTs) ⁽²⁾			18,578	1.4	25,804	6,860
3	Simple Approach for credit risk mitigation (for SFTs)					-	-
4	Comprehensive Approach for credit risk mitigation (for SFTs)					31,500	4,463
5	VaR for SFTs					15,819	1,833
6	Total						14,497

(1) Excludes exposures cleared through a CCP and CVA charges.

(2) Includes OTC derivatives related transactions only.

CCR2: Credit valuation adjustment (CVA) capital charge

(in \$ millions)	Q2 2022		Q1 2022		Q4 2021		Q3 2021	
	a	b	a ₂	b ₂	a ₃	b ₃	a ₄	b ₄
	EAD post-CRM	RWA	EAD post-CRM	RWA	EAD post-CRM	RWA	EAD post-CRM	RWA
Total portfolios subject to the Advanced CVA capital charge	29,458	5,919	25,883	4,312	27,380	3,957	28,930	4,835
1 (i) VaR component (including the 3x multiplier)		1,587		872		883		962
2 (ii) Stressed VaR component (including the multiplier)		4,332		3,440		3,074		3,873
3 All portfolios subject to the Standardized CVA capital charge	-	-	-	-	-	-	-	-
4 Total subject to the CVA capital charge	29,458	5,919	25,883	4,312	27,380	3,957	28,930	4,835

CCR3: Standardized approach – CCR exposures by regulatory portfolio and risk weights

(in \$ millions)	a	b	c	d	e	f	g	h	i
Risk weight	0%	10%	20%	50%	75%	100%	150%	Others	Total credit exposure ⁽¹⁾
Regulatory portfolio									
Q2 2022									
Sovereigns	-	-	-	32	-	15	-	-	47
Non-central government public sector entities (PSEs)	-	-	-	-	-	-	-	-	-
Multilateral development banks (MDBs)	-	-	-	-	-	-	-	-	-
Banks	-	-	-	-	-	5	-	-	5
Securities firms	-	-	-	-	-	-	-	-	-
Corporates	-	-	-	-	-	1,851	2	-	1,853
Regulatory retail portfolios	-	-	-	-	-	-	-	-	-
Other assets ⁽²⁾	-	-	-	-	-	-	-	-	-
Total	-	-	-	32	-	1,871	2	-	1,905
Q1 2022									
Sovereigns	-	-	-	5	-	24	-	-	29
Non-central government public sector entities (PSEs)	-	-	-	-	-	-	-	-	-
Multilateral development banks (MDBs)	-	-	-	-	-	-	-	-	-
Banks	-	-	-	-	-	3	-	-	3
Securities firms	-	-	-	-	-	-	-	-	-
Corporates	-	-	-	-	-	2,108	-	-	2,108
Regulatory retail portfolios	-	-	-	-	-	-	-	-	-
Other assets ⁽²⁾	-	-	-	-	-	-	-	-	-
Total	-	-	-	5	-	2,135	-	-	2,140
Q4 2021									
Sovereigns	-	-	-	99	-	33	-	-	132
Non-central government public sector entities (PSEs)	-	-	-	-	-	-	-	-	-
Multilateral development banks (MDBs)	-	-	-	-	-	-	-	-	-
Banks	-	-	-	-	-	1	-	-	1
Securities firms	-	-	-	-	-	-	-	-	-
Corporates	-	-	-	-	-	1,398	-	-	1,398
Regulatory retail portfolios	-	-	-	-	-	-	-	-	-
Other assets ⁽²⁾	-	-	-	-	-	-	-	-	-
Total	-	-	-	99	-	1,432	-	-	1,531
Q3 2021									
Sovereigns	-	-	-	69	-	24	-	-	93
Non-central government public sector entities (PSEs)	-	-	-	-	-	-	-	-	-
Multilateral development banks (MDBs)	-	-	-	-	-	-	-	-	-
Banks	-	-	-	-	-	9	-	-	9
Securities firms	-	-	-	-	-	-	-	-	-
Corporates	-	-	-	-	-	1,791	-	-	1,791
Regulatory retail portfolios	-	-	-	-	-	-	-	-	-
Other assets ⁽²⁾	-	-	-	-	-	-	-	-	-
Total	-	-	-	69	-	1,824	-	-	1,893

(1) Total credit exposure: the amount relevant for the capital requirements calculation, having applied CRM techniques.

(2) Other assets: the amount excludes exposures to CCPs, which are reported in CCR8.

CCR4: IRB – CCR exposures by portfolio and PD scale ⁽¹⁾

(in \$ millions)	PD scale	a	b	c	d	e	f	g
		EAD post-CRM	Average PD ⁽²⁾	Number of obligors	Average LGD ⁽³⁾	Average maturity ⁽⁴⁾	RWA ⁽⁵⁾	RWA density ⁽⁶⁾
Q2 2022								
Sovereign								
	0.00 to <0.15	5,732	0.03%	54	15.50%	3.13	120	2.1%
	0.15 to <0.25	43	0.16%	3	16.75%	0.19	4	9.6%
	0.25 to <0.50	91	0.43%	2	25.00%	0.46	22	24.6%
	0.50 to <0.75	4	0.69%	2	25.00%	1.00	1	36.3%
	0.75 to <2.50	-	0.00%	-	0.00%	-	-	0.0%
	2.50 to <10.00	-	0.00%	-	0.00%	-	-	0.0%
	10.00 to <100.00	-	0.00%	-	0.00%	-	-	0.0%
	100.00 (Default)	-	0.00%	-	0.00%	-	-	0.0%
	Sub-total	5,870	0.03%	61	15.66%	3.06	147	2.5%
Bank								
	0.00 to <0.15	10,619	0.06%	160	30.75%	1.37	1,084	10.2%
	0.15 to <0.25	636	0.19%	27	36.00%	0.42	141	22.2%
	0.25 to <0.50	350	0.35%	52	36.80%	2.19	133	38.1%
	0.50 to <0.75	6	0.68%	4	30.71%	1.55	3	47.6%
	0.75 to <2.50	-	0.00%	-	0.00%	-	-	0.0%
	2.50 to <10.00	-	2.56%	2	40.00%	1.76	-	98.1%
	10.00 to <100.00	1	34.44%	1	40.00%	2.57	1	221.6%
	100.00 (Default)	-	0.00%	-	0.00%	-	-	0.0%
	Sub-total	11,612	0.07%	246	31.22%	1.34	1,362	11.7%
Corporate								
	0.00 to <0.15	38,948	0.07%	4,141	44.91%	0.49	4,981	12.8%
	0.15 to <0.25	3,593	0.17%	460	43.96%	1.38	998	27.8%
	0.25 to <0.50	4,370	0.37%	718	43.98%	1.56	1,952	44.7%
	0.50 to <0.75	1,419	0.66%	277	46.89%	1.62	969	68.3%
	0.75 to <2.50	292	1.33%	57	25.91%	1.58	146	50.2%
	2.50 to <10.00	362	2.95%	39	22.90%	1.36	225	62.2%
	10.00 to <100.00	18	18.35%	6	43.66%	1.09	39	222.6%
	100.00 (Default)	-	0.00%	-	0.00%	-	-	0.0%
	Sub-total	49,002	0.16%	5,698	44.54%	0.69	9,310	19.0%
Total		66,484	0.13%	6,005	39.66%	1.02	10,819	16.3%

CCR4: IRB – CCR exposures by portfolio and PD scale ⁽¹⁾

(in \$ millions)		PD scale	a	b	c	d	e	f	g
			EAD post-CRM	Average PD ⁽²⁾	Number of obligors	Average LGD ⁽³⁾	Average maturity ⁽⁴⁾	RWA ⁽⁵⁾	RWA density ⁽⁶⁾
Q1 2022									
Sovereign									
	0.00 to <0.15	5,492	0.02%	56	15.46%	2.74	89	1.6%	
	0.15 to <0.25	21	0.16%	3	16.85%	0.20	2	9.7%	
	0.25 to <0.50	23	0.43%	1	25.00%	1.00	6	28.2%	
	0.50 to <0.75	1	0.69%	1	25.00%	1.01	-	36.3%	
	0.75 to <2.50	-	0.00%	-	0.00%	-	-	0.0%	
	2.50 to <10.00	-	2.56%	1	25.00%	1.00	-	61.3%	
	10.00 to <100.00	-	0.00%	-	0.00%	-	-	0.0%	
	100.00 (Default)	-	0.00%	-	0.00%	-	-	0.0%	
	Sub-total	5,537	0.02%	62	15.51%	2.72	97	1.8%	
Bank									
	0.00 to <0.15	10,892	0.06%	174	30.67%	1.21	1,052	9.7%	
	0.15 to <0.25	457	0.18%	23	33.42%	0.61	95	20.9%	
	0.25 to <0.50	392	0.35%	50	36.55%	2.06	150	38.2%	
	0.50 to <0.75	8	0.68%	4	30.55%	1.27	4	44.6%	
	0.75 to <2.50	-	0.00%	-	0.00%	-	-	0.0%	
	2.50 to <10.00	-	2.56%	1	40.00%	1.76	-	98.1%	
	10.00 to <100.00	-	34.44%	1	40.00%	3.08	1	221.6%	
	100.00 (Default)	-	0.00%	-	0.00%	-	-	0.0%	
	Sub-total	11,749	0.08%	253	30.97%	1.21	1,302	11.1%	
Corporate									
	0.00 to <0.15	42,262	0.07%	3,961	45.31%	0.42	5,289	12.5%	
	0.15 to <0.25	4,693	0.16%	445	44.24%	1.31	1,333	28.4%	
	0.25 to <0.50	2,993	0.35%	690	44.96%	1.49	1,363	45.6%	
	0.50 to <0.75	2,074	0.68%	283	43.28%	1.28	1,351	65.1%	
	0.75 to <2.50	263	1.33%	66	31.58%	2.45	161	61.1%	
	2.50 to <10.00	271	2.79%	43	25.21%	1.34	172	63.5%	
	10.00 to <100.00	24	18.81%	7	42.45%	1.32	52	218.4%	
	100.00 (Default)	-	0.00%	-	0.00%	-	-	0.0%	
	Sub-total	52,580	0.15%	5,495	44.94%	0.61	9,721	18.5%	
Total		69,866	0.12%	5,810	40.26%	0.88	11,120	15.9%	

CCR4: IRB – CCR exposures by portfolio and PD scale ⁽¹⁾

(in \$ millions)		a		b		c		d		e		f		g	
		EAD post-CRM	Average PD ⁽²⁾	Number of obligors	Average LGD ⁽³⁾	Average maturity ⁽⁴⁾	RWA ⁽⁵⁾	RWA density ⁽⁶⁾							
Q4 2021															
Sovereign	0.00 to <0.15	4,754	0.03%	51	15.80%	3.22	107	2.2%							
	0.15 to <0.25	23	0.17%	3	22.15%	0.72	3	13.6%							
	0.25 to <0.50	142	0.43%	3	25.00%	0.28	33	23.5%							
	0.50 to <0.75	-	0.69%	1	25.00%	1.39	-	36.3%							
	0.75 to <2.50	-	0.00%	-	0.00%	-	-	0.0%							
	2.50 to <10.00	1	2.56%	1	25.00%	1.00	-	61.3%							
	10.00 to <100.00	-	0.00%	-	0.00%	-	-	0.0%							
	100.00 (Default)	-	0.00%	-	0.00%	-	-	0.0%							
	Sub-total	4,920	0.04%	59	16.10%	3.12	143	2.9%							
Bank	0.00 to <0.15	11,979	0.06%	173	30.57%	1.14	1,165	9.7%							
	0.15 to <0.25	944	0.17%	25	31.70%	0.29	180	19.0%							
	0.25 to <0.50	378	0.35%	47	36.01%	2.11	147	39.0%							
	0.50 to <0.75	7	0.68%	3	30.80%	1.49	3	45.2%							
	0.75 to <2.50	-	0.00%	-	0.00%	-	-	0.0%							
	2.50 to <10.00	-	2.56%	1	40.00%	2.11	-	98.1%							
	10.00 to <100.00	-	34.44%	1	40.00%	3.09	1	221.6%							
	100.00 (Default)	-	0.00%	-	0.00%	-	-	0.0%							
	Sub-total	13,308	0.08%	250	30.81%	1.11	1,496	11.2%							
Corporate	0.00 to <0.15	41,160	0.07%	3,674	45.24%	0.45	5,102	12.4%							
	0.15 to <0.25	4,291	0.17%	414	44.40%	1.38	1,190	27.7%							
	0.25 to <0.50	4,017	0.34%	704	45.27%	1.31	1,820	45.3%							
	0.50 to <0.75	2,368	0.68%	291	42.59%	1.31	1,507	63.7%							
	0.75 to <2.50	316	1.33%	67	33.81%	2.59	207	65.4%							
	2.50 to <10.00	530	7.43%	51	23.48%	1.41	434	81.9%							
	10.00 to <100.00	54	18.68%	11	35.10%	1.23	97	180.3%							
	100.00 (Default)	-	0.00%	-	0.00%	-	-	0.0%							
	Sub-total	52,736	0.23%	5,212	44.76%	0.65	10,357	19.6%							
Total		70,964	0.18%	5,521	40.15%	0.91	11,996	16.9%							

(1) Represents AIRB exposures for Derivatives and SFT.

(2) Post-CRM PD weighted by post-CRM EAD.

(3) Post-CRM LGD weighted by post-CRM EAD.

(4) Effective remaining maturity in years.

(5) After application of AIRB scalar of 1.06.

(6) RWA density is calculated as Risk-weighted Assets (column f) divided by EAD post-CRM (column a).

CCR5: Composition of collateral for CCR exposure ⁽¹⁾

(in \$ millions)	a	b	c	d	e	f
	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 ⁽²⁾	Unsegregated ⁽²⁾	Segregated ⁽²⁾	Unsegregated ⁽²⁾		
Q2 2022						
Cash – domestic currency	13	1,406	-	714	7,990	753
Cash – other currencies	89	10,057	5	13,592	49,212	23,500
Domestic sovereign debt	84	640	188	1,370	890	2,734
Other sovereign debt	1,769	446	1,630	789	3,016	4,498
Government agency debt	2,244	789	2,684	3,185	2,005	15,149
Corporate bonds	1,809	72	316	120	26,213	40,796
Equity securities	1,273	-	3,832	222	40,062	28,563
Other collateral	-	-	-	-	91	-
Total	7,281	13,410	8,655	19,992	129,479	115,993
Q1 2022						
Cash – domestic currency	13	1,717	-	412	7,655	918
Cash – other currencies	41	7,997	106	7,567	48,892	23,812
Domestic sovereign debt	96	248	287	1,346	1,134	5,076
Other sovereign debt	2,520	465	1,257	568	3,005	4,786
Government agency debt	1,325	394	3,040	1,882	1,641	11,653
Corporate bonds	2,446	215	126	83	23,038	46,545
Equity securities	2,332	-	4,871	243	41,101	23,036
Other collateral	-	-	-	-	42	-
Total	8,773	11,036	9,687	12,101	126,508	115,826
Q4 2021						
Cash – domestic currency	12	1,017	-	607	7,030	1,231
Cash – other currencies	45	7,270	163	8,631	46,494	25,062
Domestic sovereign debt	109	312	604	2,271	774	4,884
Other sovereign debt	1,560	311	937	382	2,367	4,330
Government agency debt	706	113	1,763	2,284	1,851	10,325
Corporate bonds	1,832	232	55	305	22,962	39,064
Equity securities	1,270	-	3,162	274	36,509	24,514
Other collateral	-	-	-	-	33	-
Total	5,534	9,255	6,684	14,754	118,020	109,410
Q3 2021						
Cash – domestic currency	51	690	-	1,296	7,257	1,301
Cash – other currencies	34	6,524	190	8,254	44,608	24,529
Domestic sovereign debt	30	83	311	2,133	1,022	3,864
Other sovereign debt	1,599	342	927	13,759	2,424	5,454
Government agency debt	797	438	1,520	2,084	927	8,049
Corporate bonds	1,560	131	95	409	26,158	42,417
Equity securities	1,294	-	2,952	323	37,221	22,944
Other collateral	-	-	-	-	27	-
Total	5,365	8,208	5,995	28,258	119,644	108,558

(1) Provides breakdown of collateral posted or received for SFTs or derivative transactions, including transactions cleared through CCPs.

(2) Segregated refers to collateral which is held in a bankruptcy-remote manner. Unsegregated refers to collateral that is not held in a bankruptcy-remote manner.

CCR6: Credit derivatives exposures

(in \$ millions)	a	b
	Protection bought	Protection sold
Q2 2022		
Notionals		
Single-name credit default swaps	4,424	1,964
Index credit default swaps	-	-
Credit default swaps	4,424	1,964
Total return swaps	17,886	440
Credit options	-	-
Other credit derivatives	-	-
Total notionals	22,310	2,404
Fair values		
Positive fair value (asset)	472	15
Negative fair value (liability)	-	(27)
Q1 2022		
Notionals		
Single-name credit default swaps	5,860	2,005
Index credit default swaps	-	-
Credit default swaps	5,860	2,005
Total return swaps	19,181	813
Credit options	-	-
Other credit derivatives	-	-
Total notionals	25,041	2,818
Fair values		
Positive fair value (asset)	335	7
Negative fair value (liability)	-	(26)
Q4 2021		
Notionals		
Single-name credit default swaps	6,167	2,189
Index credit default swaps	-	-
Credit default swaps	6,167	2,189
Total return swaps	18,567	498
Credit options	-	-
Other credit derivatives	-	-
Total notionals	24,734	2,687
Fair values		
Positive fair value (asset)	237	8
Negative fair value (liability)	-	(30)
Q3 2021		
Notionals		
Single-name credit default swaps	7,240	2,314
Index credit default swaps	-	-
Credit default swaps	7,240	2,314
Total return swaps	17,585	440
Credit options	-	-
Other credit derivatives	-	-
Total notionals	24,825	2,754
Fair values		
Positive fair value (asset)	162	10
Negative fair value (liability)	-	(33)

CCR7: RWA flow statements of CCR exposures under Internal Model Method (IMM)					
(in \$ millions) ⁽¹⁾		a	a ₂	a ₃	a ₄
		Q2 2022	Q1 2022	Q4 2021	Q3 2021
1	RWA as at end of previous reporting period	5,303	6,220	6,874	6,395
2	Asset size ⁽²⁾	355	(1,013)	(497)	336
3	Asset quality ⁽³⁾	(70)	(60)	(109)	42
4	Model updates ⁽⁴⁾	-	-	-	-
5	Methodology and policy ⁽⁵⁾	-	-	-	-
6	Acquisitions and disposals ⁽⁶⁾	-	-	-	-
7	Foreign exchange movements ⁽⁷⁾	43	156	(48)	101
8	Other ⁽⁸⁾	-	-	-	-
9	RWA as at end of current reporting period	5,631	5,303	6,220	6,874

(1) Includes exposures under IMM cleared through a CCP.

(2) Organic changes in book size and composition (including origination of new businesses) excluding acquisitions and disposal of entities.

(3) Changes in the assessed quality of the bank's assets due to changes in borrower risk, such as rating grade migration, parameter recalibrations, or similar effects.

(4) Changes due to model implementation, changes in model scope, or any changes intended to address model weaknesses.

(5) Changes due to methodological changes in calculations driven by changes in regulatory policy and/or regulatory oversight including interpretation.

(6) Changes in book size from acquisitions and/or divestitures.

(7) Changes driven by market movements such as foreign exchange movements.

(8) This category captures changes that cannot be attributed to any other category.

CCR8: Exposures to central counterparties

(in \$ millions)	a		b		a ₂		b ₂		a ₃		b ₃		a ₄		b ₄	
	EAD (post-CRM)		RWA		EAD (post-CRM)		RWA		EAD (post-CRM)		RWA		EAD (post-CRM)		RWA	
	Q2 2022		Q1 2022		Q4 2021		Q3 2021									
1 Exposures to QCCPs (total)			750		804		612				615					
2 Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	11,860	252	10,285	226	10,301	225	9,592	205								
3 (i) OTC derivatives	2,728	55	929	19	849	17	709	14								
4 (ii) Exchange-traded derivatives	5,033	115	4,744	115	5,200	123	4,621	106								
5 (iii) Securities financing transactions	4,099	82	4,612	92	4,252	85	4,262	85								
6 (iv) Netting sets where cross-product netting has been approved	-	-	-	-	-	-	-	-								
7 Segregated initial margin	9,553	-	5,170	-	5,929	-	5,602	-								
8 Non-segregated initial margin	-	-	-	-	-	-	-	-								
9 Pre-funded default fund contributions	844	498	814	578	663	387	756	410								
10 Unfunded default fund contributions ⁽¹⁾	1,950	-	1,969	-	2,061	-	2,094	-								
11 Exposures to non-QCCPs (total)																
12 Exposures for trades at non-QCCPs (excluding initial margin and default fund contributions); of which	-	-	-	-	-	-	-	-								
13 (i) OTC derivatives	-	-	-	-	-	-	-	-								
14 (ii) Exchange-traded derivatives	-	-	-	-	-	-	-	-								
15 (iii) Securities financing transactions	-	-	-	-	-	-	-	-								
16 (iv) Netting sets where cross-product 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) Unfunded default fund contributions are risk weighted at 0%.

SEC1: Securitization exposures in the banking book

(in \$ millions)		a ⁽¹⁾	a ⁽²⁾	b	c	e	f	g	i	j	k
		Bank acts as Originator				Bank acts as Sponsor ⁽³⁾			Bank acts as Investor ⁽⁴⁾		
		Traditional	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total
Q2 2022											
1	Retail (total)	272	12	-	284	10,221	-	10,221	2,982	-	2,982
	– of which										
2	Residential Mortgage ⁽⁵⁾	-	-	-	-	510	-	510	-	-	-
3	Credit Card	-	-	-	-	436	-	436	1,825	-	1,825
4	Consumer Receivables	-	-	-	-	2,396	-	2,396	227	-	227
5	Auto Loans/Leases	272	12	-	284	6,879	-	6,879	930	-	930
6	Wholesale (total)	-	-	-	-	6,717	-	6,717	1,033	-	1,033
	– of which										
7	Trade Receivables	-	-	-	-	3,500	-	3,500	-	-	-
8	Diversified Asset-Backed Securities	-	-	-	-	-	-	-	-	-	-
9	Auto Wholesale/Rentals	-	-	-	-	1,412	-	1,412	252	-	252
10	Other Wholesale	-	-	-	-	1,805	-	1,805	735	-	735
11	Re-Securitization	-	-	-	-	-	-	-	46	-	46
Q1 2022											
1	Retail (total)	323	73	-	396	10,582	-	10,582	3,117	-	3,117
	– of which										
2	Residential Mortgage ⁽⁵⁾	-	-	-	-	510	-	510	-	-	-
3	Credit Card	-	-	-	-	259	-	259	1,826	-	1,826
4	Consumer Receivables	-	-	-	-	2,756	-	2,756	259	-	259
5	Auto Loans/Leases	323	73	-	396	7,057	-	7,057	1,032	-	1,032
6	Wholesale (total)	-	-	-	-	6,574	-	6,574	1,087	-	1,087
	– of which										
7	Trade Receivables	-	-	-	-	3,479	-	3,479	-	-	-
8	Diversified Asset-Backed Securities	-	-	-	-	-	-	-	-	-	-
9	Auto Wholesale/Rentals	-	-	-	-	1,217	-	1,217	305	-	305
10	Other Wholesale	-	-	-	-	1,878	-	1,878	736	-	736
11	Re-Securitization	-	-	-	-	-	-	-	46	-	46

SEC1: Securitization exposures in the banking book

(in \$ millions)		a ⁽¹⁾	a ⁽²⁾	b	c	e	f	g	i	j	k
		Bank acts as Originator				Bank acts as Sponsor ⁽³⁾			Bank acts as Investor ⁽⁴⁾		
		Traditional	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total
Q4 2021											
1	Retail (total)	378	76	-	454	10,207	-	10,207	3,141	-	3,141
	– of which										
2	Residential Mortgage ⁽⁵⁾	-	-	-	-	510	-	510	-	-	-
3	Credit Card	-	-	-	-	252	-	252	1,825	-	1,825
4	Consumer Receivables	-	-	-	-	2,221	-	2,221	303	-	303
5	Auto Loans/Leases	378	76	-	454	7,224	-	7,224	1,013	-	1,013
6	Wholesale (total)	-	-	-	-	6,142	-	6,142	1,097	-	1,097
	– of which										
7	Trade Receivables	-	-	-	-	2,965	-	2,965	-	-	-
8	Diversified Asset-Backed Securities	-	-	-	-	-	-	-	-	-	-
9	Auto Wholesale/Rentals	-	-	-	-	1,193	-	1,193	298	-	298
10	Other Wholesale	-	-	-	-	1,984	-	1,984	754	-	754
11	Re-Securitization	-	-	-	-	-	-	-	45	-	45
Q3 2021											
1	Retail (total)	446	131	-	578	10,645	-	10,645	3,273	-	3,273
	– of which										
2	Residential Mortgage ⁽⁵⁾	-	-	-	-	510	-	510	-	-	-
3	Credit Card	-	-	-	-	255	-	255	1,826	-	1,826
4	Consumer Receivables	-	-	-	-	2,169	-	2,169	399	-	399
5	Auto Loans/Leases	446	131	-	578	7,711	-	7,711	1,048	-	1,048
6	Wholesale (total)	-	-	-	-	6,087	-	6,087	1,181	-	1,181
	– of which										
7	Trade Receivables	-	-	-	-	3,327	-	3,327	-	-	-
8	Diversified Asset-Backed Securities	-	-	-	-	-	-	-	-	-	-
9	Auto Wholesale/Rentals	-	-	-	-	1,279	-	1,279	309	-	309
10	Other Wholesale	-	-	-	-	1,481	-	1,481	826	-	826
11	Re-Securitization	-	-	-	-	-	-	-	46	-	46

(1) Retained positions where the Bank acts as an originator and has achieved significant and effective risk transfer.

(2) Retained positions where the Bank acts as an originator and has not achieved significant and effective risk transfer.

(3) Retained positions where the Bank acts as sponsor include exposures to commercial paper conduits to which the bank provides liquidity facilities.

(4) Retained positions where the Bank acts as an investor are the investment positions purchased in third-party deals.

(5) Excludes mortgage-backed securities that do not involve the tranching of credit risk (e.g. NHA MBS) which are not considered securitizations as per OSFI Capital Adequacy Requirements Guideline, Chapter 7, paragraph 3.

SEC2: Securitization exposures in the trading book

(in \$ millions)	a ⁽¹⁾	a ⁽²⁾	b	c	e	f	g	i	j	k
	Bank acts as Originator				Bank acts as Sponsor ⁽³⁾			Bank acts as Investor ⁽⁴⁾		
	Traditional	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total
Q2 2022										
1 Retail (total) ⁽⁵⁾	-	-	-	-	-	-	-	105	-	105
– of which										
2 Residential Mortgage ⁽⁶⁾	-	-	-	-	-	-	-	-	-	-
3 Credit Card	-	-	-	-	-	-	-	58	-	58
4 Consumer Receivables	-	-	-	-	-	-	-	3	-	3
5 Auto Loans/Leases	-	-	-	-	-	-	-	44	-	44
6 Wholesale (total) ⁽⁵⁾	-	-	-	-	-	-	-	54	-	54
– of which										
7 Trade Receivables	-	-	-	-	-	-	-	-	-	-
8 Diversified Asset-Backed Securities	-	-	-	-	-	-	-	-	-	-
9 Auto Wholesale/Rentals	-	-	-	-	-	-	-	54	-	54
10 Other Wholesale	-	-	-	-	-	-	-	-	-	-
11 Re-Securitization	-	-	-	-	-	-	-	-	-	-
Q1 2022										
1 Retail (total) ⁽⁵⁾	-	-	-	-	-	-	-	88	-	88
– of which										
2 Residential Mortgage ⁽⁶⁾	-	-	-	-	-	-	-	-	-	-
3 Credit Card	-	-	-	-	-	-	-	31	-	31
4 Consumer Receivables	-	-	-	-	-	-	-	6	-	6
5 Auto Loans/Leases	-	-	-	-	-	-	-	51	-	51
6 Wholesale (total) ⁽⁵⁾	-	-	-	-	-	-	-	48	-	48
– of which										
7 Trade Receivables	-	-	-	-	-	-	-	-	-	-
8 Diversified Asset-Backed Securities	-	-	-	-	-	-	-	-	-	-
9 Auto Wholesale/Rentals	-	-	-	-	-	-	-	48	-	48
10 Other Wholesale	-	-	-	-	-	-	-	-	-	-
11 Re-Securitization	-	-	-	-	-	-	-	-	-	-

SEC2: Securitization exposures in the trading book

(in \$ millions)		Assets																	
		a ⁽¹⁾		b		c		e		f		g		i		j		k	
		Bank acts as Originator				Bank acts as Sponsor ⁽³⁾				Bank acts as Investor ⁽⁴⁾									
		Traditional	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total					
Q4 2021																			
1	Retail (total) ⁽⁵⁾	-	-	-	-	-	-	-	-	-	-	99	-	99					
	– of which																		
2	Residential Mortgage ⁽⁶⁾	-	-	-	-	-	-	-	-	-	-	-	-	-					
3	Credit Card	-	-	-	-	-	-	-	-	-	-	43	-	43					
4	Consumer Receivables	-	-	-	-	-	-	-	-	-	-	5	-	5					
5	Auto Loans/Leases	-	-	-	-	-	-	-	-	-	-	51	-	51					
6	Wholesale (total) ⁽⁵⁾	-	-	-	-	-	-	-	-	-	-	41	-	41					
	– of which																		
7	Trade Receivables	-	-	-	-	-	-	-	-	-	-	-	-	-					
8	Diversified Asset-Backed Securities	-	-	-	-	-	-	-	-	-	-	-	-	-					
9	Auto Wholesale/Rentals	-	-	-	-	-	-	-	-	-	-	41	-	41					
10	Other Wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-					
11	Re-Securitization	-	-	-	-	-	-	-	-	-	-	-	-	-					
Q3 2021																			
1	Retail (total) ⁽⁵⁾	-	-	-	-	-	-	-	-	-	-	200	-	200					
	– of which																		
2	Residential Mortgage ⁽⁶⁾	-	-	-	-	-	-	-	-	-	-	-	-	-					
3	Credit Card	-	-	-	-	-	-	-	-	-	-	110	-	110					
4	Consumer Receivables	-	-	-	-	-	-	-	-	-	-	-	-	-					
5	Auto Loans/Leases	-	-	-	-	-	-	-	-	-	-	90	-	90					
6	Wholesale (total) ⁽⁵⁾	-	-	-	-	-	-	-	-	-	-	9	-	9					
	– of which																		
7	Trade Receivables	-	-	-	-	-	-	-	-	-	-	-	-	-					
8	Diversified Asset-Backed Securities	-	-	-	-	-	-	-	-	-	-	-	-	-					
9	Auto Wholesale/Rentals	-	-	-	-	-	-	-	-	-	-	9	-	9					
10	Other Wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-					
11	Re-Securitization	-	-	-	-	-	-	-	-	-	-	-	-	-					

(1) Retained positions where the Bank acts as an originator and has achieved significant and effective risk transfer.

(2) Retained positions where the Bank acts as an originator and has not achieved significant and effective risk transfer.

(3) Retained positions where the Bank acts as sponsor include exposures to commercial paper conduits to which the bank provides liquidity facilities.

(4) Retained positions where the Bank acts as an investor are the investment positions purchased in third-party deals.

(5) Capital charges related to trading book securitization exposures are based upon the Bank's internal market risk models including its comprehensive risk measure.

(6) Excludes mortgage-backed securities that do not involve the tranching of credit risk (e.g. NHA MBS) which are not considered securitizations as per OSFI Capital Adequacy Requirements Guideline, Chapter 7, paragraph 3.

SEC3: Securitization exposures in the banking book and associated regulatory capital requirements – bank acting as originator or as sponsor

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
	Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach)				Capital charge after cap			
(in \$ millions)	≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW	IRBA	ERBA / IAA	SA	1250%	IRBA	ERBA / IAA	SA	1250%	IRBA	ERBA / IAA	SA	1250%
Q2 2022																	
1 Total exposures ⁽¹⁾⁽²⁾	13,463	2,541	1,121	82	3	272	16,938	-	-	84	3,234	-	-	7	258	-	-
2 Traditional securitization	13,463	2,541	1,121	82	3	272	16,938	-	-	84	3,234	-	-	7	258	-	-
3 Of which securitization	13,463	2,541	1,121	82	3	272	16,938	-	-	84	3,234	-	-	7	258	-	-
4 Of which retail underlying	9,383	1,055	52	-	3	272	10,221	-	-	84	1,506	-	-	7	120	-	-
5 Of which wholesale	4,080	1,486	1,069	82	-	-	6,717	-	-	-	1,728	-	-	-	138	-	-
6 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Synthetic securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Of which securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Of which wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Q1 2022																	
1 Total exposures ⁽¹⁾⁽²⁾	13,810	2,390	1,276	-	3	323	17,156	-	-	91	3,171	-	-	7	254	-	-
2 Traditional securitization	13,810	2,390	1,276	-	3	323	17,156	-	-	91	3,171	-	-	7	254	-	-
3 Of which securitization	13,810	2,390	1,276	-	3	323	17,156	-	-	91	3,171	-	-	7	254	-	-
4 Of which retail underlying	9,847	980	75	-	3	323	10,582	-	-	91	1,544	-	-	7	124	-	-
5 Of which wholesale	3,963	1,410	1,201	-	-	-	6,574	-	-	-	1,627	-	-	-	130	-	-
6 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Synthetic securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Of which securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Of which wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SEC3: Securitization exposures in the banking book and associated regulatory capital requirements – bank acting as originator or as sponsor

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
	Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach)				Capital charge after cap			
(in \$ millions)	≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW	IRBA	ERBA / IAA	SA	1250%	IRBA	ERBA / IAA	SA	1250%	IRBA	ERBA / IAA	SA	1250%
Q4 2021																	
1 Total exposures ⁽¹⁾⁽²⁾	13,660	1,809	1,255	-	3	378	16,349	-	-	100	2,924	-	-	8	234	-	-
2 Traditional securitization	13,660	1,809	1,255	-	3	378	16,349	-	-	100	2,924	-	-	8	234	-	-
3 Of which securitization	13,660	1,809	1,255	-	3	378	16,349	-	-	100	2,924	-	-	8	234	-	-
4 Of which retail underlying	10,007	502	73	-	3	378	10,207	-	-	100	1,378	-	-	8	110	-	-
5 Of which wholesale	3,653	1,307	1,182	-	-	-	6,142	-	-	-	1,546	-	-	-	124	-	-
6 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Synthetic securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Of which securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Of which wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Q3 2021																	
1 Total exposures ⁽¹⁾⁽²⁾	14,468	1,778	929	-	3	446	16,732	-	-	110	2,800	-	-	9	224	-	-
2 Traditional securitization	14,468	1,778	929	-	3	446	16,732	-	-	110	2,800	-	-	9	224	-	-
3 Of which securitization	14,468	1,778	929	-	3	446	16,732	-	-	110	2,800	-	-	9	224	-	-
4 Of which retail underlying	10,573	442	73	-	3	446	10,645	-	-	110	1,409	-	-	9	113	-	-
5 Of which wholesale	3,895	1,336	856	-	-	-	6,087	-	-	-	1,391	-	-	-	111	-	-
6 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Synthetic securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Of which securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Of which wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(1) Includes banking book on-balance sheet investments in asset backed securities (ABS), collateralized loan obligations (CLOs), collateralized debt obligations (CDOs), and off-balance sheet liquidity lines and credit enhancements to bank sponsored conduits.

(2) Includes retained positions in securitizations where the Bank acts as an originator and has achieved significant and effective risk transfer.

SEC4: Securitization exposures in the banking book and associated capital requirements – bank acting as investor

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
	Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach)				Capital charge after cap			
(in \$ millions)	≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW	IRBA	ERBA / IAA	SA	1250%	IRBA	ERBA / IAA	SA	1250%	IRBA	ERBA / IAA	SA	1250%
Q2 2022																	
1 Total exposures⁽¹⁾	2,557	54	1,316	69	19	-	3,497	518	-	-	1,030	278	-	-	83	23	-
2 Traditional securitization	2,557	54	1,316	69	19	-	3,497	518	-	-	1,030	278	-	-	83	23	-
3 Of which securitization	2,557	54	1,270	69	19	-	3,497	472	-	-	1,030	232	-	-	83	19	-
4 Of which retail underlying	2,093	54	766	69	-	-	2,982	-	-	-	758	-	-	-	61	-	-
5 Of which wholesale	464	-	504	-	19	-	515	472	-	-	272	232	-	-	22	19	-
6 Of which re-securitization	-	-	46	-	-	-	-	46	-	-	-	46	-	-	-	4	-
7 Of which senior	-	-	46	-	-	-	-	46	-	-	-	46	-	-	-	4	-
8 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Synthetic securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Of which securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Of which wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Q1 2022																	
1 Total exposures⁽¹⁾	2,645	87	1,356	96	20	-	3,607	597	-	-	1,077	290	-	-	86	24	-
2 Traditional securitization	2,645	87	1,356	96	20	-	3,607	597	-	-	1,077	290	-	-	86	24	-
3 Of which securitization	2,645	87	1,310	96	20	-	3,607	551	-	-	1,077	244	-	-	86	20	-
4 Of which retail underlying	2,114	87	820	96	-	-	3,117	-	-	-	814	-	-	-	65	-	-
5 Of which wholesale	531	-	490	-	20	-	490	551	-	-	263	244	-	-	21	20	-
6 Of which re-securitization	-	-	46	-	-	-	-	46	-	-	-	46	-	-	-	4	-
7 Of which senior	-	-	46	-	-	-	-	46	-	-	-	46	-	-	-	4	-
8 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Synthetic securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Of which securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Of which wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SEC4: Securitization exposures in the banking book and associated capital requirements – bank acting as investor

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
	Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach)				Capital charge after cap			
(in \$ millions)	≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW	IRBA	ERBA / IAA	SA	1250%	IRBA	ERBA / IAA	SA	1250%	IRBA	ERBA / IAA	SA	1250%
Q4 2021																	
1 Total exposures ⁽¹⁾	2,653	147	1,419	-	19	-	3,630	608	-	-	1,049	280	-	-	83	23	-
2 Traditional securitization	2,653	147	1,419	-	19	-	3,630	608	-	-	1,049	280	-	-	83	23	-
3 Of which securitization	2,653	147	1,374	-	19	-	3,630	563	-	-	1,049	235	-	-	83	19	-
4 Of which retail underlying	2,110	136	895	-	-	-	3,141	-	-	-	793	-	-	-	63	-	-
5 Of which wholesale	543	11	479	-	19	-	489	563	-	-	256	235	-	-	20	19	-
6 Of which re-securitization	-	-	45	-	-	-	-	45	-	-	-	45	-	-	-	4	-
7 Of which senior	-	-	45	-	-	-	-	45	-	-	-	45	-	-	-	4	-
8 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Synthetic securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Of which securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Of which wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Q3 2021																	
1 Total exposures ⁽¹⁾	2,736	232	1,396	69	21	-	3,770	684	-	-	1,115	303	-	-	89	25	-
2 Traditional securitization	2,736	232	1,396	69	21	-	3,770	684	-	-	1,115	303	-	-	89	25	-
3 Of which securitization	2,736	232	1,350	69	21	-	3,770	638	-	-	1,115	257	-	-	89	21	-
4 Of which retail underlying	2,119	232	853	69	-	-	3,273	-	-	-	850	-	-	-	68	-	-
5 Of which wholesale	617	-	497	-	21	-	497	638	-	-	265	257	-	-	21	21	-
6 Of which re-securitization	-	-	46	-	-	-	-	46	-	-	-	46	-	-	-	4	-
7 Of which senior	-	-	46	-	-	-	-	46	-	-	-	46	-	-	-	4	-
8 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Synthetic securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Of which securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Of which retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Of which wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(1) Includes banking book investments in asset backed securities (ABS), collateralized loan obligations (CLOs), collateralized debt obligations (CDOs).

Flow Statement for Regulatory Capital

(in \$ millions)	Q2 2022	Q1 2022	Q4 2021	Q3 2021	Q2 2021
Common Equity Tier 1 (CET1) capital					
Opening amount	52,150	51,010	50,465	49,697	49,542
Net income attributable to equity holders of the Bank	2,669	2,652	2,489	2,461	2,366
Dividends paid to equity holders of the Bank	(1,269)	(1,251)	(1,173)	(1,128)	(1,169)
Shares issued	590	104	14	116	80
Shares repurchased/redeemed	(1,250)	(1,086)	-	-	-
Removal of own credit spread (net of tax)	(646)	(193)	23	(55)	91
ECL transitional adjustment	(34)	(147)	(147)	(180)	(323)
Movements in other comprehensive income (OCI), excluding cash flow hedges	640	1,249	(668)	(232)	(978)
Currency translation differences	(264)	1,030	(804)	(166)	(1,382)
Debt and equity investments fair valued through OCI	(473)	(30)	(145)	(51)	(136)
Employee Benefits	778	74	292	(72)	643
Other	599	175	(11)	57	(103)
Goodwill and other intangible assets (deduction, net of related tax liability)	(18)	(166)	108	79	145
Other, including regulatory adjustments and transitional arrangements	(1,285)	(22)	(101)	(293)	(57)
Deferred tax assets that rely on future probability	107	(10)	21	12	44
Threshold deductions	-	-	-	-	-
Other	(1,392)	(12)	(122)	(305)	(101)
Closing Amount	51,547	52,150	51,010	50,465	49,697
Other Additional Tier 1 capital					
Opening amount	5,761	6,905	6,165	5,455	5,751
Capital issuances	-	-	753	1,250	-
Redeemed capital (Qualifying and Non-Qualifying)	-	(500)	-	(500)	(759)
Phase out of non-qualifying capital	-	(750)	-	-	-
Other, capital including regulatory adjustments and transitional arrangements (NVCC)	(107)	106	(13)	(40)	463
Closing Amount	5,654	5,761	6,905	6,165	5,455
Total Tier 1 capital	57,201	57,911	57,915	56,630	55,152
Tier 2 capital					
Opening amount	7,616	8,186	8,471	8,534	8,431
Capital issuances	3,356	-	-	-	-
Redeemed capital	(1,251)	-	-	-	-
Phase out of non-qualifying capital	-	(250)	-	-	-
Amortization adjustments	(5)	(327)	3	(5)	13
Other, including regulatory adjustments and transitional adjustments (NVCC)	(289)	7	(288)	(58)	90
Closing Amount	9,427	7,616	8,186	8,471	8,534
Total regulatory capital	66,628	65,527	66,101	65,101	63,686

Risk-Weighted Assets and Capital Ratios					
(in \$ billions)	Q2 2022	Q1 2022	Q4 2021	Q3 2021	Q2 2021
RISK-WEIGHTED ASSETS: ⁽¹⁾					
On-Balance Sheet Assets					
Cash Resources	3.1	2.7	2.7	2.4	2.6
Securities	12.2	11.5	10.2	10.1	10.2
Residential Mortgages	46.8	43.0	40.6	38.5	36.3
Loans					
- Personal Loans	58.8	57.9	55.1	55.0	54.3
- Non-Personal Loans	143.6	138.4	131.7	132.7	131.3
All Other	33.6	35.1	33.8	34.2	34.3
	298.1	288.6	274.1	272.9	269.0
Off-Balance Sheet Assets					
Indirect Credit Instruments	62.6	62.1	61.5	59.5	57.3
Derivative Instruments	13.2	11.2	11.0	12.8	11.8
	75.8	73.3	72.5	72.3	69.1
Total Credit Risk before AIRB scaling factor	373.9	361.9	346.6	345.2	338.1
AIRB Scaling factor ⁽²⁾	13.2	12.7	12.2	12.0	11.9
Total Credit Risk after AIRB scaling factor	387.1	374.6	358.8	357.2	350.0
Market Risk - Risk Assets Equivalent	8.2	9.4	8.1	8.0	6.2
Operational Risk - Risk Assets Equivalent	50.0	49.7	49.2	49.0	48.5
Regulatory Capital Floor Adjustment to RWA ⁽³⁾	-	-	-	-	-
Risk-Weighted Assets ⁽³⁾	445.3	433.7	416.1	414.2	404.7
REGULATORY CAPITAL RATIOS (%):					
Common Equity Tier 1	11.6	12.0	12.3	12.2	12.3
Tier 1	12.8	13.4	13.9	13.7	13.6
Total	15.0	15.1	15.9	15.7	15.7

(1) For purposes of this presentation only, Risk-weighted Assets (RWA) are shown by balance sheet categories. Details by Basel III exposure type are shown on tab EAD_RWA (page 5), "Exposure at Default and Risk-Weighted Assets for Credit Risk Portfolios".

(2) The Basel Framework requires an additional 6% scaling factor to AIRB credit risk portfolios (excluding CVA and Securitizations).

(3) The Bank did not have a regulatory capital floor add-on for CET1, Tier 1 and Total capital risk-weighted assets from April 30, 2018 onwards.

Movement of Risk-Weighted Assets by Risk Type

Credit Risk RWA (in \$ millions)	Q2 2022		Q1 2022	
	Credit Risk	Of which Counterparty Credit Risk	Credit Risk	Of which Counterparty Credit Risk
Credit risk-weighted assets as at beginning of Quarter	374,586	18,374	358,782	18,046
Book size ⁽¹⁾	15,246	1,276	11,636	2
Book quality ⁽²⁾	(2,393)	(52)	(2,894)	(58)
Model updates ⁽³⁾	(360)	(360)	919	-
Methodology and policy ⁽⁴⁾	-	-	-	-
Acquisitions and disposals	(353)	-	-	-
Foreign exchange movements	338	139	5,830	384
Other	-	-	313	-
Credit risk-weighted assets as at end of Quarter	387,064	19,377	374,586	18,374

(1) Book size is defined as organic changes in book size and composition (including new business and maturing loans).

(2) Changes in the assessed quality of the bank's assets due to changes in borrower risk, such as rating grade migration, parameter recalibration, or similar effects.

(3) Model updates are defined as model implementation, change in model scope or any change to address model enhancement.

(4) Methodology and policy is defined as methodology changes to the calculations driven by regulatory policy changes, such as new regulation (e.g. Basel III), including regulatory interpretation.

Market Risk RWA (in \$ millions)	Q2 2022	Q1 2022
Market risk-weighted assets as at beginning of Quarter	9,423	8,112
Movement in risk levels ⁽¹⁾	(1,845)	1,724
Model updates ⁽²⁾	603	(413)
Methodology and policy ⁽³⁾	-	-
Acquisitions and disposals	-	-
Other	-	-
Market risk-weighted assets as at end of Quarter	8,181	9,423

(1) Movement in risk levels is defined as changes in risk due to position changes and market movements. Foreign exchange movements are embedded within Movement in risk levels.

(2) Model updates are defined as updates to the model to reflect recent experience and change in model scope.

(3) Methodology and policy is defined as methodology changes to the calculations driven by regulatory policy changes (e.g. Basel III).

Operational Risk RWA (in \$ millions)	Q2 2022	Q1 2022
Operational risk-weighted assets as at beginning of Quarter	49,673	49,210
Acquisitions and disposals	-	-
Higher Revenue	354	463
Operational risk-weighted assets as at end of Quarter	50,027	49,673

Risk-weighted Assets Arising from the Activities of the Bank's Businesses

(in \$ billions)

Risk-weighted Assets (RWA)	Q2 2022					
	Canadian Banking	International Banking	Global Banking & Markets	Global Wealth Management	Other	All Bank
RWA	\$140.8	\$161.6	\$107.4	\$20.8	\$14.7	\$445.3
Proportion of Bank	32%	36%	24%	5%	3%	100%
Comprised of:						
Credit risk	88%	89%	86%	65%	94%	87%
Market risk	- %	1%	5%	- %	5%	2%
Operational risk	12%	10%	9%	35%	1%	11%

(in \$ billions)

Risk-weighted Assets (RWA)	Q1 2022					
	Canadian Banking	International Banking	Global Banking & Markets	Global Wealth Management	Other	All Bank
RWA	\$136.3	\$157.6	\$105.5	\$19.5	\$14.8	\$433.7
Proportion of Bank	31%	36%	24%	4%	5%	100%
Comprised of:						
Credit risk	88%	89%	84%	63%	93%	87%
Market risk	- %	1%	6%	- %	7%	2%
Operational risk	12%	10%	10%	37%	- %	11%

Credit Risk Exposures by Geography ⁽¹⁾⁽²⁾

Exposure at Default										
(in \$ millions)	Q2 2022					Q1 2022				
	Non-Retail		Other ⁽³⁾	Retail	Total	Non-Retail		Other ⁽³⁾	Retail	Total
	Drawn	Undrawn				Drawn	Undrawn			
Canada	147,712	57,526	40,708	429,576	675,522	141,732	57,288	39,331	420,961	659,312
USA	141,609	44,014	40,643	-	226,266	132,769	42,125	45,044	-	219,938
Chile	25,646	1,335	3,954	26,159	57,094	26,281	1,438	4,045	26,419	58,183
Mexico	25,345	1,618	2,325	13,520	42,808	23,453	1,560	2,361	12,920	40,294
Peru	17,584	1,131	2,943	8,917	30,575	16,904	1,086	2,839	8,449	29,278
Colombia	7,135	311	1,072	6,204	14,722	6,523	481	1,056	5,848	13,908
Other International										
Europe	22,950	7,392	18,140	-	48,482	22,130	7,401	17,917	-	47,448
Caribbean	15,422	1,294	874	11,278	28,868	14,812	1,436	932	11,014	28,194
Latin America (other)	13,379	1,638	2,023	721	17,761	12,571	1,373	1,135	631	15,710
All Other	25,128	4,442	5,600	31	35,201	23,882	4,782	6,671	32	35,367
Total	441,910	120,701	118,282	496,406	1,177,299	421,057	118,970	121,331	486,274	1,147,632

(in \$ millions)	Q4 2021	Q3 2021	Q2 2021	Q1 2021	Q4 2020
Canada	639,748	637,805	617,120	632,303	621,409
USA	194,424	177,444	163,088	184,650	188,210
Chile	54,777	56,357	58,698	57,225	56,738
Mexico	38,422	39,398	38,298	38,540	39,187
Peru	28,152	28,281	28,757	33,229	33,931
Colombia	14,446	12,860	12,350	14,091	13,123
Other International					
Europe	47,179	49,926	53,967	50,765	51,770
Caribbean	27,673	28,078	28,018	30,182	31,420
Latin America (other)	14,080	14,866	14,308	13,569	13,647
All Other	35,104	34,744	32,961	35,902	34,789
Total	1,094,005	1,079,759	1,047,565	1,090,456	1,084,224

(1) AIRB Exposure at default is after credit risk mitigation. Standardized Exposure at default is after related IFRS 9 (Stage 3) allowances for credit losses, and commencing Q2, 2021, also includes the collateral impact under the Comprehensive Approach. This excludes equity investment securities and other assets. Residential Mortgages include insured mortgages.

(2) Geographic segmentation is based upon the location of the ultimate risk of the credit exposure.

(3) Includes off-balance sheet lending instruments such as letters of credit and letters of guarantee, OTC derivatives, securitization and repo-style transactions net of related collateral.

AIRB Credit Risk Exposures by Maturity ⁽¹⁾⁽²⁾

Exposure at Default								
(in \$ millions)	Q2 2022				Q1 2022			
	Drawn	Undrawn	Other ⁽³⁾	Total	Drawn	Undrawn	Other ⁽³⁾	Total
Non-Retail								
Less than 1 year	184,206	35,380	76,715	296,301	196,690	36,170	82,226	315,086
1 to 5 years	166,191	75,518	28,084	269,793	140,605	75,956	25,206	241,767
Over 5 Years	24,765	5,997	5,712	36,474	18,076	3,034	5,580	26,690
Total Non-Retail	375,162	116,895	110,511	602,568	355,371	115,160	113,012	583,543
Retail								
Less than 1 year	23,209	25,165	-	48,374	25,412	24,487	-	49,899
1 to 5 years	264,220	-	-	264,220	256,766	-	-	256,766
Over 5 Years	16,529	-	-	16,529	16,631	-	-	16,631
Revolving Credits ⁽⁴⁾	38,707	29,156	-	67,863	37,717	28,507	-	66,224
Total Retail	342,665	54,321	-	396,986	336,526	52,994	-	389,520
Total	717,827	171,216	110,511	999,554	691,897	168,154	113,012	973,063

(in \$ millions)	Q4 2021	Q3 2021	Q2 2021	Q1 2021
Non-Retail				
Less than 1 year	290,050	288,279	267,498	310,970
1 to 5 years	230,974	226,012	229,644	228,208
Over 5 Years	26,540	28,542	29,511	28,453
Total Non-Retail	547,564	542,833	526,653	567,631
Retail				
Less than 1 year	49,980	48,147	47,909	52,913
1 to 5 years	249,195	242,214	229,994	221,586
Over 5 Years	16,230	16,163	16,494	14,944
Revolving Credits ⁽⁴⁾	64,490	64,480	64,144	67,764
Total Retail	379,895	371,004	358,541	357,207
Total	927,459	913,837	885,194	924,838

(1) Before credit risk mitigation, excluding equity investment securities and other assets.

(2) Remaining term to maturity of the credit exposure.

(3) Off-balance sheet lending instruments such as letters of credit and letters of guarantee, securitization, derivatives and repo-style transactions net of related collateral.

(4) Credit cards and lines of credit with unspecified maturity.

AIRB Credit Losses

Exposure Type	Q2 2022		Q1 2022		Q4 2021		Q3 2021		Q2 2021	
	Actual Loss	Expected Loss	Actual Loss	Expected Loss	Actual Loss	Expected Loss	Actual Loss	Expected Loss	Actual Loss	Expected Loss
	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate
	%	%	%	%	%	%	%	%	%	%
Non-Retail ⁽¹⁾⁽³⁾										
Corporate	0.03	0.50	0.04	0.47	0.05	0.48	0.10	0.37	0.12	0.34
Sovereign	-	0.06	-	0.04	-	0.05	-	0.05	-	0.04
Bank	-	0.42	-	0.37	-	0.15	-	0.25	-	0.08
Retail ⁽²⁾⁽³⁾										
Real Estate Secured	-	0.08	-	0.08	-	0.10	0.01	0.10	0.01	0.11
QRRE	1.79	3.03	1.93	3.14	2.06	3.12	2.26	3.28	2.56	3.56
Other Retail	0.39	1.38	0.45	1.38	0.52	1.40	0.59	1.34	0.63	1.60

- (1) Non-retail actual loss rates represent the credit losses net of recoveries for the current and prior three quarters divided by the 5-point average of outstanding loan balances for the same four-quarter period beginning 12 months ago. Expected loss rates represent the expected losses that were predicted at the beginning of the four-quarter period divided by outstanding loan balances at the beginning of the four-quarter period.
- (2) Retail actual loss rates represent write-offs net of recoveries for the current and prior three quarters divided by the 5-point average of outstanding loan balances for the same four-quarter period beginning 12 months ago. Expected loss rates represent the expected losses that were predicted at the beginning of the four-quarter period divided by outstanding loan balances at the beginning of the four-quarter period.
- (3) Expected losses are calculated using "through the business cycle" Basel risk parameters (PD, LGD, and EAD) on AIRB portfolio, which are estimated to include a long term time horizon. Actual losses are a "point in time" representation and reflect the current economic conditions. During an economic downturn PCL on impaired loans may exceed expected losses, and may fall below expected losses during times of economic growth.

Estimated and Actual Loss Parameters - Non-Retail and Retail AIRB Portfolios

Exposure Type	Q2 2022						Q1 2022					
	Average	Actual default	Average	Actual LGD	Average	Actual CCF ⁽²⁾	Average	Actual default	Average	Actual LGD	Average	Actual CCF ⁽²⁾
	estimated PD %	rate %	estimated LGD %	%	estimated CCF ⁽²⁾ %	%	estimated PD %	rate %	estimated LGD %	%	estimated CCF ⁽²⁾ %	%
Non-Retail ⁽¹⁾	0.60	0.19	39.50	48.91	48.61	37.11	0.60	0.18	39.76	48.14	48.62	16.69

(1) Reporting is on a one quarter lag basis. For reporting as of Q2/22, estimated parameters are based on portfolio averages at Q1/21 whereas actual parameters are based on averages of realized parameters during the subsequent four quarters (Q2/21 – Q1/22).

(2) EAD back-testing is performed through Credit Conversion Factor (CCF) back-testing, as EAD is computed using the sum of the drawn exposure and undrawn exposure multiplied by the estimated CCF.

(in \$ millions) ⁽¹⁾	Four-quarter period ending Q2 2022						Four-quarter period ending Q1 2022					
	Average	Actual default	Average	Actual LGD	Estimated	Actual EAD	Average	Actual default	Average	Actual LGD	Estimated	Actual EAD
	estimated PD ⁽²⁾⁽⁷⁾ %	rate ⁽²⁾⁽⁵⁾ %	estimated LGD ⁽³⁾⁽⁷⁾ %	% ⁽³⁾⁽⁶⁾	EAD ⁽⁴⁾⁽⁷⁾ \$	\$ ⁽⁴⁾⁽⁵⁾	estimated PD ⁽²⁾⁽⁷⁾ %	rate ⁽²⁾⁽⁵⁾ %	estimated LGD ⁽³⁾⁽⁷⁾ %	% ⁽³⁾⁽⁶⁾	EAD ⁽⁴⁾⁽⁷⁾ \$	\$ ⁽⁴⁾⁽⁵⁾
Residential real estate secured												
Residential mortgages												
Insured mortgages ⁽⁸⁾	0.46	0.30	-	-	-	-	0.51	0.32	-	-	-	-
Uninsured mortgages	0.36	0.18	16.49	16.49	-	-	0.44	0.19	17.23	14.40	-	-
Secured lines of credit	0.15	0.10	27.29	19.45	44	41	0.26	0.11	31.47	18.97	48	44
Qualifying revolving retail exposures	1.34	0.81	84.77	77.32	409	361	1.62	0.86	82.62	77.01	456	402
Other retail	1.45	0.80	60.26	62.05	5	5	1.49	0.83	59.98	61.08	8	8

(1) Estimates and Actual Values are recalculated to align with new models implemented during the period.

(2) Account weighted aggregation.

(3) Default weighted aggregation.

(4) EAD is estimated for revolving products only.

(5) Actual based on accounts not at default as at four quarters prior to reporting date.

(6) Actual LGD calculated based on 24-month recovery period after default and therefore excludes any recoveries received after the 24-month period.

(7) Estimates are based on the four quarters prior to the reporting date.

(8) Actual and Estimated LGD for insured mortgages are not shown. Actual LGD includes the insurance benefit, whereas estimated LGD may not.

Derivatives - Counterparty Credit Risk⁽¹⁾

(in \$ millions)

Contract Types	Q2 2022				Q1 2022				Q4 2021				Q3 2021			
	Notional Amount	Credit Risk Amount	Credit Risk Equivalent Amount	Risk-weighted Amount ⁽²⁾	Notional Amount	Credit Risk Amount	Credit Risk Equivalent Amount	Risk-weighted Amount ⁽²⁾	Notional Amount	Credit Risk Amount	Credit Risk Equivalent Amount	Risk-weighted Amount ⁽²⁾	Notional Amount	Credit Risk Amount	Credit Risk Equivalent Amount	Risk-weighted Amount ⁽²⁾
Interest Rate Contracts:																
Futures and Forward Rate Agreements	257,582	45	132	65	282,912	41	106	53	343,189	32	143	69	317,766	-	132	52
Swaps	5,149,814	3,813	5,777	640	5,239,714	3,584	4,289	888	4,361,426	3,951	4,760	1,120	3,820,001	4,784	6,141	1,698
Options Purchased	35,784	106	96	24	28,642	79	41	11	40,860	70	44	10	40,051	61	41	11
Options Written	40,696	-	8	2	31,434	-	8	2	41,785	-	11	3	40,876	-	26	7
Total	5,483,876	3,964	6,013	731	5,582,702	3,704	4,444	954	4,787,260	4,053	4,958	1,202	4,218,694	4,845	6,340	1,768
Foreign Exchange Contracts:																
Futures and Forwards	471,897	1,771	5,152	1,560	516,668	1,529	4,878	1,459	442,804	1,604	4,603	1,407	407,962	1,814	4,988	1,459
Swaps	659,038	1,935	9,448	2,592	631,286	1,231	7,094	2,051	571,933	1,151	7,342	1,715	567,138	1,200	7,379	2,032
Options Purchased	19,151	275	305	95	18,308	318	278	105	16,256	351	247	118	20,131	402	267	125
Options Written	20,059	-	12	2	18,699	-	15	4	16,495	-	14	2	21,165	-	17	3
Total	1,170,145	3,981	14,917	4,249	1,184,961	3,078	12,265	3,619	1,047,488	3,106	12,206	3,242	1,016,396	3,416	12,651	3,619
Other Derivatives Contracts:																
Equity	141,072	1,230	7,428	994	145,212	1,390	8,839	1,367	145,352	1,423	9,707	1,340	136,376	1,569	9,414	1,381
Credit	24,714	235	405	79	27,859	268	426	79	27,421	197	304	59	27,579	124	308	58
Other	73,524	5,707	8,656	1,269	64,675	4,502	5,707	851	61,329	4,562	6,610	1,182	58,933	3,877	5,678	1,112
Total	239,310	7,172	16,489	2,342	237,746	6,160	14,972	2,297	234,102	6,182	16,621	2,581	222,888	5,570	15,400	2,551
Credit Valuation Adjustment				5,919				4,312				3,957				4,835
Total Derivatives after Netting and Collateral	6,893,331	15,117	37,419	13,241	7,005,409	12,942	31,681	11,182	6,068,850	13,341	33,785	10,982	5,457,978	13,831	34,391	12,773

(1) The impact of Master Netting Agreements and Collateral has been incorporated within the various contracts. As a result, risk-weighted amounts are reported net of impact of collateral and master netting arrangements.

(2) Includes derivative exposures cleared through CCPs. Excludes (i) risk-weighted assets for default fund contributions to a CCP and (ii) the 6% AIRB scalar.

Total Market Risk-Weighted Assets					
(in \$ millions)	Q2 2022	Q1 2022	Q4 2021	Q3 2021	Q2 2021
All Bank VaR	1,400	1,476	1,160	1,422	1,981
All Bank stressed VaR ⁽¹⁾	3,156	4,691	4,410	4,142	1,591
Incremental risk charge	2,746	2,391	1,881	1,715	1,901
Comprehensive risk measure	-	-	-	-	-
Standardized approach	879	865	661	689	707
Market risk-weighted assets as at end of Quarter	8,181	9,423	8,112	7,968	6,180

(1) Commencing Q3 2021, amount includes the impact on market risk RWA from OSFI's announced reversal of the stressed VaR multiplier back to pre-pandemic levels.

Glossary

Credit Risk Parameters	
Exposure at Default (EAD)	Generally represents the expected gross exposures at default and includes outstanding amounts for on-balance sheet exposures and loan equivalent amounts for off-balance sheet exposures.
Probability of Default (PD)	Measures the likelihood that a borrower will default within a 1-year time horizon, expressed as a percentage.
Loss Given Default (LGD)	Measures the severity of loss on a facility in the event of a borrower's default, expressed as a percentage of exposure at default.
Exposure Types	
Non-retail	
Corporate	Debt obligation of a corporation, partnership, or proprietorship.
Bank	Debt obligation of a bank or bank equivalent (including certain public sector entities (PSEs) treated as Bank equivalent exposures).
Sovereign	Debt obligation of a sovereign, central bank, certain Multilateral Development Banks (MDBs) and certain PSEs treated as Sovereign.
Securitization	On-balance sheet investments in asset backed securities (ABS), mortgage backed securities (MBS), collateralized loan obligations (CLOs) and collateralized debt obligations (CDOs). Off-balance sheet liquidity lines include credit enhancements to Bank's sponsored ABCP conduits and liquidity lines to non-bank sponsored ABCP conduits.
Retail	
Real Estate Secured	
Residential Mortgages	Loans to individuals against residential property (four units or less).
Secured Lines Of Credit	Revolving personal lines of credit secured by first charge on residential real estate.
Qualifying Revolving Retail Exposures (QRRE)	Credit cards and unsecured line of credit for individuals.
Other Retail	All other personal loans.
Exposure Sub-types	
Drawn	Outstanding amounts for loans, leases, acceptances, deposits with banks and available-for-sale debt securities.
Undrawn	Unutilized portion of an authorized credit line.
Repo-Style Transactions	Reverse repurchase agreements (reverse repos) and repurchase agreements (repos), securities lending and borrowing.
Over-the-counter (OTC) Derivatives	Over-the-counter derivatives contracts.
Exchange-traded derivatives (ETD)	Derivative contracts (e.g. futures contracts and options) that are transacted on an organized futures exchange. These include Futures contracts (both Long and Short positions), Purchased Options and Written Options.
Other Off-Balance Sheet	Direct credit substitutes such as standby letters of credits and guarantees, trade letters of credits, and performance letters of credits and guarantees.
Qualifying central counterparty (QCCP)	A qualifying central counterparty (QCCP) is licensed as a central counterparty and is also considered as "qualifying" when it is compliant with CPSS-IOSCO standards and is able to assist clearing member banks in properly capitalizing for CCP exposures by either undertaking the calculations and/or making available sufficient information to its clearing members, or others, to enable the completion of capital calculations.
Non-qualifying central counterparties (NQCCP)	Defined as those central counterparties which are not compliant with CPSS-IOSCO standards as outlined under qualifying CCP's. The exposures to NQCCP will follow standardized treatment under the Basel accord.
Other	
Asset Value Correlation Multiplier (AVC)	Basel III has increased the risk-weights on exposures to certain Financial Institutions (FIs) relative to the non-financial corporate sector by introducing an Asset Value Correlation multiplier (AVC). The correlation factor in the risk-weight formula is multiplied by this AVC factor of 1.25 for all exposures to regulated FIs whose total assets are greater than or equal to US \$100 billion and all exposures to unregulated FIs.
Regulatory Capital Floor	A minimum capital floor requirement is prescribed for institutions that use the AIRB approach for credit risk. Effective Q2 2018, OSFI has replaced the Basel I regulatory capital floor with a capital floor based on the Basel II standardized approach for credit risk. The capital floor add-on is determined by comparing capital requirement calculated by reference to Basel II standardized approach against the Basel III calculation, as prescribed by OSFI. A shortfall in the Basel III capital requirement compared with the Basel II standardized capital floor added to RWAs. Revised capital floor requirements also include risk-weighted assets for market risk and CVA, but excludes operational risk.
Specific Wrong-Way Risk (WWR)	Specific Wrong-Way Risk arises when the exposure to a particular counterparty is positively correlated with the probability of default of the counterparty due to the nature of the transactions with the counterparty.
Credit Valuation Adjustment (CVA)	Credit Valuation Adjustment (CVA) is the difference between the risk free value of a portfolio and the true value of that portfolio, accounting for the possible default of a counterparty. CVA adjustment aims to identify the impact of Counterparty Risk.