

BMO Financial Group

# Supplementary Regulatory Capital Information

For the Quarter Ended - July 31, 2022

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*This report is unaudited and all amounts are in millions of Canadian dollars, unless otherwise indicated.*

**Use of this Document**

The supplemental information contained in this package is designed to improve the readers' understanding of the capital requirements of BMO Financial Group (the Bank). This information should be used in conjunction with the Bank's Third Quarter 2022 Report to Shareholders and the 2021 Annual Report available on SEDAR at [www.sedar.com](http://www.sedar.com) and BMO's website at [www.bmo.com/investorrelations](http://www.bmo.com/investorrelations).

Additional financial information is also available in the Q3 2022 Supplementary Financial Information, and the Q3 2022 Investor Presentation which can be accessed at our website at [www.bmo.com/investorrelations](http://www.bmo.com/investorrelations).

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Items indicated n.a. were not applicable.

**Regulatory Framework**

Regulatory capital requirements for BMO are determined in accordance with guidelines issued by the Office of the Superintendent of Financial Institutions (OSFI), which are based on the Basel III framework developed by the Basel Committee on Banking Supervision (BCBS). The measures and disclosures herein are presented in accordance with OSFI's Pillar 3 Requirements Guideline and the Enhanced Disclosure Task Force (EDTF) regulatory capital related disclosures and reflect our adherence with, as applicable, OSFI's Capital Adequacy Requirements (CAR) Guideline, Leverage Requirements Guideline, and Total Loss Absorbing Capacity (TLAC) Guideline.

**Changes**

In March 2020, OSFI's letter to Federally Regulated Deposit-Taking Institutions (DTIs) introduced an adjustment to Common Equity Tier 1 (CET1) capital for Expected Credit Loss (ECL) provisioning. The adjustment to CET1 capital is measured each quarter as the increase in Stage 1 and Stage 2 allowances relative to January 31, 2020. The increased amount is adjusted for tax effects and subject to a scaling factor. The scaling factor was set at 70% in fiscal 2020, 50% in fiscal 2021 and 25% in fiscal 2022. We implemented this adjustment effective Q2 2020.

In April 2020, OSFI announced temporary exclusions to the Leverage Ratio Requirements. Such exclusions are limited to central bank reserves and securities issued by sovereigns that qualify as High Quality Liquid Assets under the Liquidity Adequacy Requirements Guideline. We adopted this treatment prospectively effective Q2 2020 and it remained in place through Q4 2021.

In August 2021, OSFI announced the exclusion of securities issued by sovereigns that qualify as High Quality Liquid Assets under the Liquidity Adequacy Requirements Guidelines from the leverage ratio exposure measure would not be extended past December 31, 2021. Central bank reserves will continue to be excluded from the leverage ratio measure.

On November 1, 2021, the minimum TLAC requirements set by OSFI came into effect. The minimum risk based TLAC ratio is set at 24% of RWA, including a 2.5% Domestic Stability Buffer. The minimum TLAC Leverage Ratio is set at 6.75%.

*Users may provide their comments and suggestions on the Supplementary Regulatory Capital Information document by contacting Bill Anderson at (416) 867-7834 or [bill2.anderson@bmo.com](mailto:bill2.anderson@bmo.com)*

Tables and Templates		Frequency	Q3 2022 Supplementary Financial Information	Q3 2022 Supplementary Regulatory Capital Information	2021 Annual MD&A	2021 Annual Financial Statements
			Page Reference			
Overview of Risk Management, Key Prudential Metrics and RWA	KM2 - Key metrics - TLAC requirements	Quarterly		7		
	OVA - Bank risk management approach	Annual			65-72, 74-113	
	OV1 - Overview of RWA	Quarterly		11		
Linkages between Financial Statements and Regulatory Exposures	LI1 - Differences between accounting and regulatory scopes of consolidation and mapping of financial statement categories with regulatory risk categories	Quarterly		12		
	LI2 - Main sources of differences between regulatory exposure amounts and carrying values in financial statements	Quarterly		13		
	LIA - Explanations of differences between accounting and regulatory exposure amounts	Annual		12-13	116	188-194
Composition of Capital and TLAC	CCA - Main features of regulatory capital instruments and other TLAC - eligible instruments (1)	Quarterly				
	CC1 - Composition of regulatory capital	Quarterly		3-4		
	CC2 - Reconciliation of regulatory capital to balance sheet	Quarterly		5		
	TLAC1 - TLAC composition	Quarterly		8		
	TLAC2 - Material subgroup entity - creditor ranking at legal entity level		Not applicable to BMO			
Leverage Ratio	TLAC3 - Resolution entity - creditor ranking at legal entity level	Quarterly		9		
	LR1 - Summary comparison of accounting assets vs leverage ratio exposure measure	Quarterly		10		
	LR2 - Leverage ratio common disclosure	Quarterly		10		
Credit Risk	CRA - General qualitative information about credit risk	Annual			78-84	
	CR1 - Credit quality of assets	Quarterly		14		
	CR2 - Changes in stock of defaulted loans and debt securities	Quarterly		15		
	CRB - Additional disclosures related to the credit quality of assets - Qualitative disclosures	Annual		14	114-116	155, 160-166
	CRB - Additional disclosures related to the credit quality of assets - Quantitative disclosures	Quarterly	26-32, 34	14, 32-34		
	CRC - Qualitative disclosure requirements related to credit risk mitigation techniques	Annual			84-86	177, 189
	CR3 - Credit risk mitigation techniques - overview	Quarterly		16		
	CRD - Qualitative disclosures on banks' use of external credit ratings under the standardized approach for credit risk	Annual		19-20	86-87	
	CR4 - Standardized approach - credit risk exposure and Credit Risk Mitigation (CRM) effects	Quarterly		17-18		
	CR5 - Standardized approach - exposures by asset classes and risk weights	Quarterly		19-20		
	CRE - Qualitative disclosures related to IRB models	Annual		32	85-87, 108	
	CR6 - IRB - Credit risk exposures by portfolio and PD range	Quarterly		21-30		
	CR7 - IRB - Effect on RWA of credit derivatives used as CRM techniques	Quarterly	Impact is immaterial and has been disclosed in page 32, footnote 3.			
	CR8 - RWA flow statements of credit risk exposures under IRB	Quarterly		31		
	CR9 - IRB - Backtesting of probability of default (PD) per portfolio (2)	Annual			86-87, 108	
Counterparty Credit Risk	CR10 - IRB (specialized lending and equities under the simple risk-weight method)		Not applicable to BMO			
	CCRA - Qualitative disclosure related to counterparty credit risk	Annual			84-85, 101	
	CCR1 - Analysis of counterparty credit risk (CCR) exposure by approach	Quarterly		35		
	CCR2 - Credit valuation adjustment (CVA) capital charge	Quarterly		36		
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	CCR7 - RWA flow statements of CCR exposures under Internal Model Method (IMM)		Not applicable to BMO			
	CCR8 - Exposures to central counterparties	Quarterly		46		
Securitization	SECA - Qualitative disclosure requirements related to securitization exposures	Annual			72-73, 85	151, 156, 168-170
	SEC1 - Securitization exposures in the banking book	Quarterly		49-50		
	SEC2 - Securitization exposures in the trading book	Quarterly		51-52		
	SEC3 - Securitization exposures in the banking book and associated regulatory capital requirements (bank acting as originator or as sponsor)	Quarterly		53-54		
	SEC4 - Securitization exposures in the banking book and associated capital requirements (bank acting as investor)	Quarterly		55-56		
Market Risk	MRA - Qualitative disclosure requirements related to market risk		BMO has deferred these disclosures as allowed per OSFI's Pillar 3 guidance issued April 2017			
	MRB - Qualitative disclosures for banks using the Internal Models Approach (IMA)					
	MR1 - Market risk under standardized approach					
	MR2 - RWA flow statements of market risk exposures under an IMA					
	MR3 - IMA values for trading portfolios					
	MR4 - Comparison of VaR estimates with gains/losses					
Operational Risk	General qualitative information on a bank's operational risk framework	Annual			106-108	
Interest Rate Risk in the Banking Book	Qualitative disclosures on IRRBB	Annual			95	
	Quantitative disclosures on IRRBB	Annual			95	
Macroprudential supervisory measures	GSIB1 - Disclosure of global systemically important bank (G-SIB) indicators (3)	Annual	Disclosed in the Q1 2022 Report to Shareholders, page 34.			

(1) CCA is available at <https://www.bmo.com/home/about/banking/investor-relations/regulatory-disclosure>.

(2) Refer to Q4 2021 Supplementary Regulatory Capital Information for CR9 - IRB - Backtesting of probability of default (PD) per portfolio quantitative disclosure.

(3) Current and previous years' GSIB1 disclosure is available at <https://www.bmo.com/main/about-bmo/banking/investor-relations/financial-information#2022>

## CC1 - COMPOSITION OF REGULATORY CAPITAL (1)

(\$ millions except as noted)

		Cross reference (2)	Q3 2022	Q2 2022	Q1 2022	Q4 2021	Q3 2021
1	<b>Common Equity Tier 1 Capital: instruments and reserves</b>						
2	Directly issued qualifying common share capital plus related stock surplus	a+b	17,707	17,356	13,944	13,912	13,919
3	Retained earnings	c	41,653	41,275	37,513	35,497	34,089
4	Accumulated other comprehensive income (and other reserves)	d	1,926	1,253	2,789	2,556	3,840
5	<i>Directly issued capital subject to phase out from CET1 (3)</i>		n.a.	n.a.	n.a.	n.a.	n.a.
6	Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)		—	—	—	—	—
6	<b>Common Equity Tier 1 Capital before regulatory adjustments</b>		61,286	59,884	54,246	51,965	51,848
7	<b>Common Equity Tier 1 Capital: regulatory adjustments</b>						
7	Prudential valuation adjustments		134	119	108	88	88
8	Goodwill (net of related tax liability)	e+f-g	4,825	4,824	4,780	5,207	5,277
9	Other intangibles other than mortgage-servicing rights (net of related tax liability)	h-i	1,737	1,826	1,813	1,923	1,956
10	Deferred tax assets excluding those arising from temporary differences (net of related tax liability)	j-k	3	1	14	13	20
11	Cash flow hedge reserve	l	(2,508)	(2,974)	(431)	185	1,308
12	Shortfall of provisions to expected losses	m	—	—	—	—	—
13	Securitization gain on sale		—	—	—	—	—
14	Gains or losses due to changes in own credit risk on fair valued liabilities		881	420	(201)	(320)	(330)
15	Defined benefit pension fund net assets (net of related tax liability)	n-o	900	1,026	705	704	557
16	Investments in own shares (if not already netted off paid-in capital on reported balance sheet)	p	—	—	—	—	24
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)		—	—	—	—	—
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 financials		—	—	—	—	—
24	of which: mortgage servicing rights		—	—	—	—	—
25	of which: deferred tax assets arising from temporary differences		—	—	—	—	—
26	Other deductions or regulatory adjustments to CET1 as determined by OSFI (4)	q	(150)	(133)	(152)	(326)	(401)
27	Regulatory adjustments applied to Common Equity Tier 1 due to insufficient Additional Tier 1 and Tier 2 to cover deductions		—	—	—	—	—
28	<b>Total regulatory adjustments to Common Equity Tier 1 Capital</b>		5,822	5,109	6,636	7,474	8,499
29	<b>Common Equity Tier 1 Capital (CET1)</b>		55,464	54,775	47,610	44,491	43,349
29a	<b>Common Equity Tier 1 Capital (CET1) with transitional arrangements for ECL provisioning not applied</b>		55,314	54,642	47,458	44,165	42,948
30	<b>Additional Tier 1 Capital: instruments</b>						
31	Directly issued qualifying Additional Tier 1 instruments plus related stock surplus	r	5,308	5,208	4,958	5,558	5,558
32	of which: classified as equity under applicable accounting standards		5,308	5,208	4,958	5,558	5,558
33	of which: classified as liabilities under applicable accounting standards		—	—	—	—	—
34	<i>Directly issued capital instruments subject to phase out from Additional Tier 1 (3)</i>	s	n.a.	n.a.	n.a.	—	—
35	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)		—	—	—	—	—
36	<i>of which: instruments issued by subsidiaries subject to phase out (3)</i>		n.a.	n.a.	n.a.	—	—
36	<b>Additional Tier 1 Capital before regulatory adjustments</b>		5,308	5,208	4,958	5,558	5,558
37	<b>Additional Tier 1 Capital: regulatory adjustments</b>						
38	Investments in own Additional Tier 1 instruments	t	10	6	9	5	3
39	Reciprocal cross holdings in Additional Tier 1 instruments		—	—	—	—	—
40	Non-significant investments in the capital of banking, financial and insurance entities, net of eligible short positions (amount above 10% threshold)		—	—	—	—	—
41	Significant investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation, net of eligible short positions	u	78	78	78	78	78
42	Other deductions from Tier 1 Capital as determined by OSFI		—	—	—	—	—
43	of which: Reverse mortgages		—	—	—	—	—
44	Regulatory adjustments applied to Additional Tier 1 due to insufficient Tier 2 to cover deductions		—	—	—	—	—
45	<b>Total regulatory adjustments applied to Additional Tier 1 Capital</b>		88	84	87	83	81
46	<b>Additional Tier 1 Capital (AT1)</b>		5,220	5,124	4,871	5,475	5,477
47	<b>Tier 1 Capital (T1 = CET1 + AT1)</b>		60,684	59,899	52,481	49,966	48,826
48a	<b>Tier 1 Capital with transitional arrangements for ECL provisioning not applied</b>		60,534	59,766	52,329	49,640	48,425
49	<b>Tier 2 Capital: instruments and provisions</b>						
50	Directly issued qualifying Tier 2 instruments plus related stock surplus	v	7,296	7,242	8,335	6,747	6,827
51	<i>Directly issued capital instruments subject to phase out from Tier 2 Capital (3)</i>	w	n.a.	n.a.	n.a.	141	141
52	Tier 2 instruments (and CET1 and AT1 instruments not included in row 5 or 34) issued by subsidiaries and held by third parties (amount allowed in group Tier 2 Capital)		—	—	—	—	—
53	<i>of which: instruments issued by subsidiaries subject to phase out (3)</i>		n.a.	n.a.	n.a.	—	—
54	General allowances	x	203	248	284	398	460
55	<b>Tier 2 Capital before regulatory adjustments</b>		7,499	7,490	8,619	7,286	7,428

(1) Row numbering, as per OSFI May 2018 advisory, is provided for consistency and comparability in the disclosure of elements of capital among banks and across jurisdictions. Banks are required to maintain the same row numbering per OSFI advisory. Where there is no value in a row, institutions should report n.a. or nil and the row number must not change.

(2) Cross reference to CC2 - Reconciliation of Regulatory Capital to Balance Sheet (page 5).

(3) Q3 2021 and Q4 2021 include the capital value of instruments which no longer qualify as regulatory capital under Basel III rules and were phased out at a rate of 10% per year from January 1, 2013 through January 1, 2022.

(4) Represents the transitional arrangements for the capital treatment of ECL provisioning announced by OSFI in March 2020 applying a scaling factor. The scaling factor is set at 50% in fiscal 2021 and 25% in fiscal 2022.

## CC1 - COMPOSITION OF REGULATORY CAPITAL (CONTINUED)

(\$ millions except as noted)		Cross reference	Q3 2022	Q2 2022	Q1 2022	Q4 2021	Q3 2021
52	<b>Tier 2 Capital: regulatory adjustments</b>						
53	Investments in own Tier 2 instruments	y	—	1	—	1	1
54	Reciprocal cross holdings in Tier 2 instruments and Other TLAC-eligible instruments		—	—	—	—	—
54a	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)		—	—	—	—	—
55	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		—	—	—	—	—
56	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, net of eligible short positions	z	50	50	50	50	50
57	Other deductions from Tier 2 capital		—	—	—	—	—
58	<b>Total regulatory adjustments to Tier 2 Capital</b>		50	51	50	51	51
59	<b>Tier 2 Capital (T2)</b>		7,449	7,439	8,569	7,235	7,377
59a	<b>Total Capital (TC = T1 + T2)</b>		68,133	67,338	61,050	57,201	56,203
60	<b>Total Capital with transitional arrangements for ECL provisioning not applied</b>		68,133	67,338	61,050	57,201	56,203
60a	<b>Total Risk-Weighted Assets</b>						
60a	<b>Common Equity Tier 1 (CET 1) Capital RWA (1)</b>		351,711	342,287	337,652	325,433	322,529
60b	<b>Tier 1 Capital RWA (1)</b>		351,711	342,287	337,652	325,433	322,529
60c	<b>Total Capital RWA (1)</b>		351,711	342,287	337,652	325,433	322,529
61	<b>Capital Ratios</b>						
61a	Common Equity Tier 1 (as percentage of risk-weighted assets)		15.8%	16.0%	14.1%	13.7%	13.4%
62	CET1 Ratio with transitional arrangements for ECL provisioning not applied		15.7%	16.0%	14.1%	13.6%	13.3%
62a	Tier 1 (as percentage of risk-weighted assets)		17.3%	17.5%	15.5%	15.4%	15.1%
63	Tier 1 Capital Ratio with transitional arrangements for ECL provisioning not applied		17.2%	17.5%	15.5%	15.3%	15.0%
63a	Total Capital (as percentage of risk-weighted assets)		19.4%	19.7%	18.1%	17.6%	17.4%
64	Total Capital Ratio with transitional arrangements for ECL provisioning not applied		19.4%	19.7%	18.1%	17.6%	17.4%
65	Buffer (minimum CET1 plus capital conservation buffer plus G-SIB buffer plus D-SIB buffer requirement, expressed as a percentage of risk-weighted assets)		8.0%	8.0%	8.0%	8.0%	8.0%
66	of which: capital conservation buffer		2.5%	2.5%	2.5%	2.5%	2.5%
67	of which: bank specific countercyclical buffer		0.0%	0.0%	0.0%	0.0%	0.0%
67a	of which: G-SIB buffer		n.a.	n.a.	n.a.	n.a.	n.a.
68	of which: D-SIB buffer		1.0%	1.0%	1.0%	1.0%	1.0%
68	Common Equity Tier 1 available to meet buffers (as a percentage of risk-weighted assets)		15.8%	16.0%	14.1%	13.7%	13.4%
69	<b>OSFI target (minimum + capital conservation buffer + D-SIB buffer (if applicable))</b>						
70	Common Equity Tier 1 target ratio		8.0%	8.0%	8.0%	8.0%	8.0%
71	Tier 1 capital target ratio		9.5%	9.5%	9.5%	9.5%	9.5%
71	Total capital target ratio		11.5%	11.5%	11.5%	11.5%	11.5%
72	<b>Amounts below the thresholds for deduction (before risk weighting)</b>						
73	Non-significant investments in the capital and Other TLAC-eligible instruments of other financial entities	a1 - b1	1,108	1,048	1,364	822	911
74	Significant investments in the common stock of financials	c1	2,124	2,092	2,209	2,081	2,003
75	Mortgage servicing rights (net of related tax liability)	d1	35	36	32	29	27
75	Deferred tax assets arising from temporary differences (net of related tax liability)	e1 - f1	1,685	1,581	1,661	1,899	1,763
76	<b>Applicable caps on the inclusion of provisions in Tier 2</b>						
77	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to standardized approach (prior to application of cap)		109	107	115	231	246
78	Cap on inclusion of provisions in Tier 2 under standardized approach		109	107	115	231	246
79	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings based approach (prior to application of cap)		1,977	1,947	2,039	2,039	2,225
80	Cap on inclusion of provisions in Tier 2 under internal ratings-based approach		244	274	321	492	614
81	<b>Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2013 and 1 Jan 2022)</b>						
82	Current cap on CET1 instruments subject to phase out arrangements		n.a.	n.a.	n.a.	—	—
83	Amounts excluded from CET1 due to cap (excess over cap after redemptions and maturities)		n.a.	n.a.	n.a.	—	—
84	Current cap on AT1 instruments subject to phase out arrangements		n.a.	n.a.	n.a.	432	432
85	Amounts excluded from AT1 due to cap (excess over cap after redemptions and maturities)		n.a.	n.a.	n.a.	—	—
86	Current cap on T2 instruments subject to phase out arrangements		n.a.	n.a.	n.a.	513	513
87	Amounts excluded from T2 due to cap (excess over cap after redemptions and maturities)		n.a.	n.a.	n.a.	—	—

(1) The Bank is subject to a capital floor as prescribed in OSFI's CAR Guideline. In calculating regulatory capital ratios, there is a requirement to increase total RWA when a capital floor amount calculated under the Standardized Approach is higher than a similar calculation using the more risk-sensitive advanced approach rules. At July 31, 2022, a Basel Capital Floor adjustment of \$2,544 million (\$7,848 million at April 30, 2022, \$nil at January 31, 2022, \$nil at October 31, 2021, and \$nil at July 31, 2021) was applied to the Bank's RWA.

**CC2 - RECONCILIATION OF REGULATORY CAPITAL TO BALANCE SHEET**

(\$ millions)	LINE #	Balance sheet as in Report to Shareholders	Under regulatory scope of consolidation (1)	Cross Reference (2)		LINE #	Balance sheet as in Report to Shareholders	Under regulatory scope of consolidation (1)	Cross Reference (2)
		Q3 2022	Q3 2022	Q3 2022			Q3 2022	Q3 2022	Q3 2022
Assets					Liabilities and Equity				
Cash and Cash Equivalents	1	69,586	69,476		Deposits	40	729,385	729,385	
Interest Bearing Deposits with Banks	2	7,317	7,312		Other Liabilities				
Securities	3	265,614	256,585		Derivative instruments	41	43,643	43,450	
Investments in own shares CET1 (if not already netted off paid-in capital on reported balance sheet)	4	—	—	p	Acceptances	42	12,615	12,615	
Investments in own Additional Tier 1 instruments not derecognized for accounting purposes	5	—	10	t	Securities sold but not yet purchased	43	41,187	41,187	
Investments in own Tier 2 instruments not derecognized for accounting purposes	6	—	—	y	Non-significant investments in the capital and other TLAC-eligible instruments of other financial entities (3)	44	—	27,506	b1
Non-significant investments in the capital and other TLAC-eligible instruments of other financial entities (3)	7	—	28,614	a1	Securities lent or sold under repurchase agreements	45	100,646	100,646	
Significant investments in the common stock of financials exceeding regulatory thresholds (4)	8	—	—		Securitization and structured entities' liabilities	46	25,020	25,020	
Significant investments in the common stock of financials not exceeding regulatory thresholds (4)	9	—	2,124	c1	Current tax liabilities	47	232	218	
Goodwill embedded in significant investments	10	—	55	e	Deferred tax liabilities (5)	48	81	81	
Significant investments in the Additional Tier 1 instruments of banking, financial and insurance entities that are outside the scope of regulatory consolidation	11	—	78	u	related to goodwill	49	—	225	g
Significant investments in the Tier 2 instruments of banking, financial and insurance entities that are outside the scope of regulatory consolidation	12	—	50	z	related to intangibles	50	—	393	i
Securities Borrowed or Purchased Under Resale Agreements	13	108,391	108,391		related to defined-benefit pension fund net assets	51	—	358	o
Loans					related to deferred tax assets excluding those arising from temporary differences	52	—	2	k
Residential mortgages	14	144,076	144,076		related to deferred tax assets arising from temporary differences	53	—	748	f1
Consumer instalment and other personal	15	84,337	84,337		Other	54	41,092	29,409	
Credit cards	16	9,132	9,132		Total other liabilities	55	264,516	252,626	
Business and government	17	287,669	287,375		Subordinated Debt				
Allowance for credit losses	18	(2,412)	(2,411)		Subordinated debt	56	7,443	7,443	
Transitional arrangements for capital treatment of ECL provisioning included in CET1	19	—	(150)	q	Directly issued qualifying subordinated debt	57	—	7,296	v
Allowance reflected in Tier 2 regulatory capital	20	—	(203)	x	Directly issued subordinated debt subject to phase out	58	—	—	w
Shortfall of provisions to expected loss	21	—	—	m	Equity				
Total net loans	22	522,802	522,509		Preferred shares and other equity instruments	59	5,708	5,708	
Other Assets					Directly issued qualifying Additional Tier 1 instruments	60	—	5,308	r
Derivative instruments	23	39,717	39,714		Directly issued Additional Tier 1 instruments subject to phase out	61	—	—	s
Customers' liability under acceptances	24	12,615	12,615		Common shares	62	17,392	17,392	a
Premises and equipment	25	4,604	4,508		Contributed surplus	63	315	315	b
Goodwill	26	4,995	4,995	f	Retained earnings	64	41,653	41,653	c
Intangible assets	27	2,130	2,130	h	Accumulated other comprehensive income	65	1,926	1,926	d
Current tax assets	28	1,545	1,545		of which: Cash flow hedges	66	—	(2,508)	l
Deferred tax assets (5)	29	794	797		Total Equity	67	66,994	66,994	
Deferred tax assets excluding those arising from temporary differences	30	—	5	j	Total Liabilities and Equity	68	1,068,338	1,056,448	
Deferred tax assets arising from temporary differences	31	—	2,433						
of which: exceeding regulatory thresholds	32	—	—						
of which: not exceeding regulatory thresholds	33	—	2,433	e1					
Other	34	28,228	25,871						
Defined-benefit pension fund net assets	35	—	1,258	n					
Mortgage servicing rights	36	—	35						
of which: exceeding regulatory thresholds	37	—	—						
of which: not exceeding regulatory thresholds	38	—	35	d1					
Total Assets	39	1,068,338	1,056,448						

(1) Balance sheet under regulatory scope does not include the following entities: BMO Life Insurance Company and BMO Reinsurance Limited. BMO Life Insurance Company (\$13,295 million assets and \$1,495 million equity) covers the development and marketing of individual life, critical illness and annuity products as well as segregated funds. It also offers group creditor and travel insurance to bank customers in Canada. BMO Reinsurance Limited (\$258 million assets and \$117 million equity) covers the reinsurance of life, health and disability insurance risks. The business reinsured is written by insurers and reinsurers principally in North America and Europe.

(2) Cross reference to CC1 - Composition of Regulatory Capital (pages 3 and 4).

(3) Includes synthetic holdings of non-significant capital investments in banking, financial and insurance entities.

(4) Under Basel III, significant investments in financial services entities that are outside the scope of regulatory consolidation are deducted from the Bank's capital using the corresponding deduction approach (e.g. investments in non-common Tier 1 are deducted from the Bank's non-common Tier 1 capital) except that investments in common equity capital of a significant investment which represents less than 10% of the Bank's CET1 are risk-weighted at 250% and are not deducted provided the sum of such investments, deferred tax assets related to timing differences and mortgage servicing rights are less than 15% of the Bank's CET1. Goodwill embedded in significant investments is separated and is shown in the corresponding line below.

(5) Deferred tax assets and liabilities are presented on the balance sheet net by legal jurisdiction.

## FLOW STATEMENT OF BASEL III REGULATORY CAPITAL

(\$ millions)	LINE #					
		Q3 2022	Q2 2022	Q1 2022	Q4 2021	Q3 2021
<b>Common Equity Tier 1 Capital</b>						
<b>Opening Balance</b>	1	54,775	47,610	44,491	43,349	41,415
New capital issues	2	358	3,428	22	23	40
Redeemed capital or Treasury Shares	3	(4)	(15)	4	(33)	33
Gross dividends and distributions (deduction)	4	(985)	(946)	(917)	(747)	(747)
Net Income	5	1,365	4,756	2,933	2,159	2,275
Removal of own credit spread (net of tax)	6	(461)	(621)	(119)	(10)	(26)
Movements in other comprehensive income						
Currency translation differences	7	(102)	258	709	(195)	382
Fair value through other comprehensive income securities	8	(11)	(232)	(88)	(148)	24
Other (1)	9	320	982	228	182	76
Goodwill and other intangible assets (deduction, net of related tax liability)	10	88	(57)	537	103	(39)
Other, including regulatory adjustments and transitional arrangements						
Deferred tax assets that rely on future profitability (excluding those arising from temporary differences)	11	(2)	13	(1)	7	10
Prudential valuation adjustments	12	(15)	(11)	(20)	—	(24)
Other (2)	13	138	(390)	(169)	(199)	(70)
<b>Closing Balance</b>	14	55,464	54,775	47,610	44,491	43,349
<b>Other non-core Tier 1 (Additional Tier 1) Capital</b>						
<b>Opening Balance</b>	15	5,124	4,871	5,475	5,477	5,765
New non-core tier 1 (Additional Tier 1) eligible capital issues	16	500	750	—	—	—
Redeemed capital	17	(400)	(500)	(600)	—	(290)
Other, including regulatory adjustments and transitional arrangements (3)	18	(4)	3	(4)	(2)	2
<b>Closing Balance</b>	19	5,220	5,124	4,871	5,475	5,477
<b>Total Tier 1 Capital</b>	20	60,684	59,899	52,481	49,966	48,826
<b>Tier 2 Capital</b>						
<b>Opening Balance</b>	21	7,439	8,569	7,235	7,377	6,303
New Tier 2 eligible capital issues	22	—	—	1,587	—	1,000
Redeemed capital	23	—	(850)	—	—	—
Amortization adjustments	24	—	—	—	—	—
Other, including regulatory adjustments and transitional arrangements (4)	25	10	(280)	(253)	(142)	74
<b>Closing Balance</b>	26	7,449	7,439	8,569	7,235	7,377
<b>Total Regulatory Capital</b>	27	68,133	67,338	61,050	57,201	56,203

(1) Includes: AOCI on pension and other post-employment benefits and on own credit risk on financial liabilities designated at fair value.

(2) Includes: Capital deductions for expected loss in excess of allowances, defined benefit pension assets (net of related deferred tax liability), investment in own shares, changes in contributed surplus, threshold deductions and transitional arrangements for the capital treatment of ECL provisioning announced by OSFI in March 2020.

(3) Includes: Changes in non-qualifying capital instruments.

(4) Includes: Changes in non-qualifying capital instruments and eligible allowances.

## CAPITAL RATIOS FOR SIGNIFICANT BANK SUBSIDIARIES

	LINE #					
		Q3 2022	Q2 2022	Q1 2022	Q4 2021	Q3 2021
<b>Bank of Montreal Mortgage Corporation - Basel III (1)</b>						
Common Equity Tier 1 ratio	1	18.3%	19.2%	18.2%	22.1%	22.4%
Tier 1 ratio	2	18.3%	19.2%	18.2%	22.1%	22.4%
Total capital ratio	3	18.3%	19.2%	18.2%	22.2%	22.5%
<b>BMO Harris Bank N.A. - Basel III (2)</b>						
Tier 1 ratio	4	11.5%	11.8%	11.8%	13.5%	13.4%
Total capital ratio	5	12.6%	13.0%	13.1%	14.8%	14.8%

(1) Q3 2021 and Q4 2021 capital ratios include the value of instruments which no longer qualify as regulatory capital under Basel III rules and were phased out at a rate of 10% per year from January 1, 2013 through January 1, 2022.

(2) Calculated using U.S. Basel III guidelines currently in effect for U.S. regulatory purposes and based on BMO Harris N.A.'s calendar quarter ends: June 2022, March 2022, December 2021, September 2021 and June 2021.



**KM2 - KEY METRICS – TLAC REQUIREMENTS (1) (2)**

(\$ millions except as noted)

		Q3 2022	Q2 2022	Q1 2022	Q4 2021	Q3 2021
		a	b	c	d	e
1	Total loss-absorbing capacity (TLAC) available	112,534	105,140	96,889	90,353	84,036
1a	Total loss-absorbing capacity (TLAC) available with transitional arrangements for ECL provisioning not applied	112,534	105,140	96,889	90,353	84,036
2	Total RWA at the level of the resolution group	351,711	342,287	337,652	325,433	322,529
3	TLAC ratio: TLAC as a percentage of RWA (row 1 / row 2) (%)	32.0 %	30.7 %	28.7 %	27.8 %	26.1 %
3a	TLAC ratio: TLAC as a percentage of RWA (row 1a / row 2) (%) available with transitional arrangements for ECL provisioning not applied	32.0 %	30.7 %	28.7 %	27.8 %	26.1 %
4	Leverage ratio exposure measure at the level of the resolution group	1,144,101	1,111,094	1,115,676	976,690	969,824
5	TLAC Leverage Ratio: TLAC as a percentage of leverage ratio exposure measure (row 1 / row 4) (%)	9.8 %	9.5 %	8.7 %	9.3 %	8.7 %
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 %	9.5 %	8.7 %	9.3 %	8.7 %
6a	Does the subordination exemption in the antepenultimate paragraph of Section 11 of the FSB TLAC Term Sheet apply?	Yes	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	No
6c	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.	n.a.

(1) BMO Financial Group uses the Single Point of Entry approach whereby the parent bank is the single resolution entity on which the resolution measures are applied. KM2 is reported on a consolidated basis excluding insurance subsidiaries.

(2) Lines 1, 3 and 5 incorporate transitional arrangements for the capital treatment of ECL provisioning announced by OSFI in March 2020 applying a scaling factor. The scaling factor is set at 50% in fiscal 2021 and 25% in fiscal 2022. Lines 1a, 3a and 5a represent TLAC available with transitional arrangements for ECL provisioning not applied.

**TLAC1 - TLAC COMPOSITION (1)**

(\$ millions except as noted)

	Q3 2022	Q2 2022	Q1 2022	Q4 2021	Q3 2021
	a	b	c	d	e
<b>Regulatory capital elements of TLAC and adjustments</b>					
1 Common Equity Tier 1 capital (CET1)	55,464	54,775	47,610	44,491	43,349
2 Additional Tier 1 capital (AT1) before TLAC adjustments	5,220	5,124	4,871	5,475	5,477
3 AT1 ineligible as TLAC as issued out of subsidiaries to third parties	—	—	—	—	—
4 Other adjustments	—	—	—	—	—
5 AT1 instruments eligible under the TLAC framework	5,220	5,124	4,871	5,475	5,477
6 Tier 2 capital (T2) before TLAC adjustments	7,449	7,439	8,569	7,235	7,377
7 Amortized portion of T2 instruments where remaining maturity > 1 year	—	—	—	5	5
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	7,449	7,439	8,569	7,240	7,382
11 TLAC arising from regulatory capital	68,133	67,338	61,050	57,206	56,208
<b>Non-regulatory capital elements of TLAC</b>					
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	44,568	37,889	35,909	33,238	27,905
14 Of which: amount eligible as TLAC after application of the caps	—	—	—	—	—
15 External TLAC instruments issued by funding vehicles prior to January 1, 2022	—	—	—	—	—
16 Eligible ex ante commitments to recapitalize a G-SIB in resolution	—	—	—	—	—
17 TLAC arising from non-regulatory capital instruments before adjustments	44,568	37,889	35,909	33,238	27,905
<b>Non-regulatory capital elements of TLAC: adjustments</b>					
18 TLAC before deductions	112,701	105,227	96,959	90,444	84,113
19 Deductions of exposures between MPE resolution groups that correspond to items eligible for TLAC (not applicable to SPE G-SIBs and D-SIBs)	—	—	—	—	—
20 Deduction of investments in own other TLAC liabilities	(167)	(87)	(70)	(91)	(77)
21 Other adjustments to TLAC	—	—	—	—	—
22 TLAC available after deductions	112,534	105,140	96,889	90,353	84,036
<b>Risk-weighted assets and leverage exposure measure for TLAC purposes</b>					
23 Total risk-weighted assets adjusted as permitted under the TLAC regime	351,711	342,287	337,652	325,433	322,529
24 Leverage exposure measure	1,144,101	1,111,094	1,115,676	976,690	969,824
<b>TLAC ratios and buffers</b>					
25 TLAC Ratio (as a percentage of risk-weighted assets adjusted as permitted under the TLAC regime)	32.0 %	30.7 %	28.7 %	27.8 %	26.1 %
26 TLAC Leverage Ratio (as a percentage of leverage exposure)	9.8 %	9.5 %	8.7 %	9.3 %	8.7 %
27 CET1 (as a percentage of risk-weighted assets) available after meeting the resolution group's minimum capital and TLAC requirements (2)	11.3 %	11.5 %	9.5 %	n.a.	n.a.
28 Institution-specific buffer (capital conservation buffer plus countercyclical buffer plus higher loss absorbency, expressed as a percentage of risk-weighted assets)	3.5 %	3.5 %	3.5 %	3.5 %	3.5 %
29 Of which: capital conservation buffer	2.5 %	2.5 %	2.5 %	2.5 %	2.5 %
30 Of which: bank specific countercyclical buffer	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
31 Of which: D-SIB / G-SIB buffer	1.0 %	1.0 %	1.0 %	1.0 %	1.0 %

(1) BMO Financial Group uses the Single Point of Entry approach whereby the parent bank is the single resolution entity on which the resolution measures are applied.

TLAC1 is reported on a consolidated basis excluding insurance subsidiaries.

(2) Effective Q1 2022 onward.

**TLAC3 - RESOLUTION ENTITY - CREDITOR RANKING AT  
LEGAL ENTITY LEVEL (1)**

(\$ millions)

Q3 2022							
	Creditor ranking						Sum 1 to 6
	1 (most junior)	2	3	4	5	6 (most senior)	
1 Description of creditor ranking	Common shares	Preferred shares	Additional Tier 1 Instruments	Subordinated debt	Bail-in debt (2)	Other liabilities (3)	
2 Total capital and liabilities net of credit risk mitigation	17,392	2,650	2,658	7,692	50,308	—	80,700
3 Subset of row 2 that are excluded liabilities	—	9	—	150	161	—	320
4 Total capital and liabilities less excluded liabilities (row 2 minus row 3)	17,392	2,641	2,658	7,542	50,147	—	80,380
5 Subset of row 4 that are potentially eligible as TLAC	17,392	2,641	2,658	7,542	46,977	—	77,210
6 Subset of row 5 with 1 year ≤ residual maturity < 2 years	—	—	—	—	17,618	—	17,618
7 Subset of row 5 with 2 years ≤ residual maturity < 5 years	—	—	—	—	23,192	—	23,192
8 Subset of row 5 with 5 years ≤ residual maturity < 10 years	—	—	—	4,339	994	—	5,333
9 Subset of row 5 with residual maturity ≥ 10 years, but excluding perpetual securities	—	—	2,000	3,203	5,173	—	10,376
10 Subset of row 5 that is perpetual securities	17,392	2,641	658	—	—	—	20,691

(1) Instruments are reported at nominal values.

(2) Under the Bail-in Regime, Bail-in Debt, which would ordinarily rank equally to Other Liabilities in liquidation, is subject to conversion, in whole or in part, into common shares under statutory resolution powers whereas Other Liabilities are not subject to such conversion.

(3) Completion of this column is not required by OSFI at this time.

**LR1 - SUMMARY COMPARISON OF ACCOUNTING ASSETS VS. LEVERAGE RATIO EXPOSURE MEASURE**

(\$ millions)		Q3 2022	Q2 2022	Q1 2022	Q4 2021	Q3 2021
1	Total consolidated assets as per published financial statements	1,068,338	1,041,565	1,023,172	988,175	971,358
2	Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation	(11,840)	(11,749)	(12,952)	(13,173)	(13,360)
3	Adjustment for securitized exposures that meet the operational requirements for the recognition of risk transference	(6,974)	(7,015)	(6,486)	(7,451)	(5,899)
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	1,567	3,681	15,570	10,393	10,900
6	Adjustment for securities financing transactions (i.e. repo assets and similar secured lending)	9,381	10,874	8,022	6,060	7,867
7	Adjustment for off-balance sheet items (i.e. credit equivalent amounts of off-balance sheet exposures)	153,708	145,033	141,557	137,983	133,529
8	Other adjustments (1)	(70,079)	(71,295)	(53,207)	(145,297)	(134,571)
9	<b>Leverage Ratio Exposure Measure</b>	<b>1,144,101</b>	<b>1,111,094</b>	<b>1,115,676</b>	<b>976,690</b>	<b>969,824</b>

**LR2 - LEVERAGE RATIO COMMON DISCLOSURE**

(\$ millions except as noted)		Leverage ratio framework				
		Q3 2022	Q2 2022	Q1 2022	Q4 2021	Q3 2021
<b>On-balance sheet exposures</b>						
1	On-balance sheet items (excluding derivatives, SFTs and grandfathered securitization exposures but including collateral) (1)	836,519	803,792	805,333	686,364	685,770
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 derivative transactions)	(6,570)	(5,689)	(4,130)	(3,487)	(3,800)
4	(Asset amounts deducted in determining transitional Tier 1 capital)	(5,179)	(4,907)	(7,076)	(8,203)	(9,310)
5	<b>Total on-balance sheet exposures (excluding derivatives and SFTs) (sum of lines 1 to 4)</b>	<b>824,770</b>	<b>793,196</b>	<b>794,127</b>	<b>674,674</b>	<b>672,660</b>
<b>Derivative exposures</b>						
6	Replacement cost associated with all derivative transactions (2)	28,818	35,460	29,546	27,565	25,961
7	Add-on amounts for potential future exposure associated with all derivative transactions (3)	23,600	25,331	26,491	25,165	26,612
8	(Exempted central counterparty-leg of client cleared trade exposures)	(4,712)	(5,712)	(1,677)	(2,230)	(1,662)
9	Adjusted effective notional amount of written credit derivatives	36,745	34,886	28,784	27,415	23,217
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	(36,600)	(34,775)	(28,618)	(27,324)	(23,099)
11	<b>Total derivative exposures (sum of lines 6 to 10)</b>	<b>47,851</b>	<b>55,190</b>	<b>54,526</b>	<b>50,591</b>	<b>51,029</b>
<b>Securities financing transaction exposures</b>						
12	Gross SFT assets recognized for accounting purposes (with no recognition of netting), after adjusting for sale accounting transactions	111,014	108,757	120,697	108,800	108,787
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	(6,458)	(5,863)	(7,836)	(6,753)	(7,811)
14	Counterparty credit risk (CCR) exposure for SFTs	13,216	14,781	12,605	11,395	11,630
15	Agent transaction exposures	—	—	—	—	—
16	<b>Total securities financing transaction exposures (sum of lines 12 to 15)</b>	<b>117,772</b>	<b>117,675</b>	<b>125,466</b>	<b>113,442</b>	<b>112,606</b>
<b>Other off-balance sheet exposures</b>						
17	Off-balance sheet exposure at gross notional amount	464,540	445,368	437,673	429,219	417,296
18	(Adjustments for conversion to credit equivalent amounts)	(310,832)	(300,335)	(296,116)	(291,236)	(283,767)
19	<b>Off-balance sheet items (sum of lines 17 and 18)</b>	<b>153,708</b>	<b>145,033</b>	<b>141,557</b>	<b>137,983</b>	<b>133,529</b>
<b>Capital and Total Exposures</b>						
20	<b>Tier 1 capital</b>	<b>60,684</b>	<b>59,899</b>	<b>52,481</b>	<b>49,966</b>	<b>48,826</b>
20a	<b>Tier 1 Capital with transitional arrangements for ECL provisioning not applied</b>	<b>60,534</b>	<b>59,766</b>	<b>52,329</b>	<b>49,640</b>	<b>48,425</b>
21	<b>Total Exposures (sum of lines 5, 11, 16 and 19)</b>	<b>1,144,101</b>	<b>1,111,094</b>	<b>1,115,676</b>	<b>976,690</b>	<b>969,824</b>
<b>Leverage Ratios</b>						
22	<b>Basel III leverage ratio</b>	<b>5.3%</b>	<b>5.4%</b>	<b>4.7%</b>	<b>5.1%</b>	<b>5.0%</b>
22a	<b>Leverage ratio with transitional arrangements for ECL provisioning not applied</b>	<b>5.3%</b>	<b>5.4%</b>	<b>4.7%</b>	<b>5.1%</b>	<b>5.0%</b>

(1) The original temporary exclusions announced by OSFI in April 2020 were updated in August 2021 to limit the exclusions to central bank reserves effective Q1 2022.

(2) Represents replacement cost after applying alpha equal to 1.4.

(3) Represents potential future exposure after applying alpha equal to 1.4.

## OV1 - OVERVIEW OF RWA (1)

(\$ millions)		RWA (2)					Minimum capital requirements
		Q3 2022	Q2 2022	Q1 2022	Q4 2021	Q3 2021	Q3 2022
		a	b	c	d	e	f
1	<b>Credit risk (excluding counterparty credit risk (CCR))</b>	254,484	240,477	248,112	237,703	236,012	20,359
2	Of which standardized approach (SA)	27,285	25,820	26,561	37,388	35,554	2,183
3	Of which internal rating-based (IRB) approach	227,199	214,657	221,551	200,315	200,458	18,176
4	<b>Counterparty credit risk</b>	17,144	19,344	18,941	18,047	19,865	1,372
5	Of which standardized approach for counterparty credit risk (SA-CCR)	8,428	9,584	9,521	9,703	11,159	674
6	Of which internal model method (IMM)	—	—	—	—	—	—
6a	Of which comprehensive approach for credit risk mitigation (for SFTs)	3,844	4,179	3,989	4,247	4,078	308
6b	Of which CVA capital charge	4,077	4,804	4,378	3,317	3,795	326
6c	Of which exposures to QCCP	795	777	1,053	780	833	64
7	<b>Equity positions in banking book under market-based approach</b>	—	—	—	—	—	—
8	<b>Equity investments in funds – look-through approach</b>	1,989	2,365	1,407	499	567	159
9	<b>Equity investments in funds – mandate-based approach</b>	2,420	2,303	2,063	1,828	1,711	194
10	<b>Equity investments in funds – fall-back approach</b>	—	—	—	188	151	—
11	<b>Settlement risk</b>	3	2	17	—	5	—
12	<b>Securitization exposures in banking book</b>	7,136	6,717	4,340	4,570	4,304	571
13	Of which securitization internal ratings-based approach (SEC-IRBA)	5,753	5,544	3,333	3,394	3,241	460
14	Of which securitization external ratings-based approach (SEC-ERBA), including internal assessment approach (IAA)	144	145	136	140	135	12
15	Of which securitization standardized approach (SEC-SA)	1,239	1,028	871	1,036	928	99
16	<b>Market risk</b>	14,551	12,736	12,859	12,066	10,395	1,164
17	Of which standardized approach (SA) (3)	679	531	369	345	340	54
18	Of which internal model approaches (IMM)	13,872	12,205	12,490	11,721	10,055	1,110
19	<b>Operational risk</b>	41,827	41,221	40,157	40,509	40,036	3,346
20	Of which Basic Indicator Approach	—	—	—	—	—	—
21	Of which Standardized Approach	41,827	41,221	40,157	40,509	40,036	3,346
22	Of which Advanced Measurement Approach	—	—	—	—	—	—
23	<b>Amounts below the thresholds for deduction (subject to 250% risk weight)</b>	9,613	9,274	9,756	10,023	9,483	769
24	<b>Floor adjustment (4)</b>	2,544	7,848	—	—	—	204
25	<b>Total</b>	351,711	342,287	337,652	325,433	322,529	28,138

(1) RWA were \$351.7 billion as at July 31, 2022, an increase from \$342.3 billion as at April 30, 2022. RWA were higher, primarily from increased asset size driven by growth in commercial lending.

(2) The 1.06 AIRB scaling factor is applied to the RWA amounts as applicable.

(3) Standardized Approach market risk RWA reflects specific risk on securitization positions in the trading book.

(4) The Bank is subject to a capital floor as prescribed in OSFI's CAR Guideline. In calculating regulatory capital ratios, there is a requirement to increase total RWA when a capital floor amount calculated under the Standardized Approach is higher than a similar calculation using the more risk-sensitive advanced approach rules. At July 31, 2022, a Basel Capital Floor adjustment of \$2,544 million (\$7,848 million at April 30, 2022, \$nil at January 31, 2022, \$nil at October 31, 2021, and \$nil at July 31, 2021) was applied to the Bank's RWA.

## RISK-WEIGHTED ASSETS BY OPERATING GROUPS

(\$ millions)	LINE					
	#	Q3 2022	Q2 2022	Q1 2022	Q4 2021	Q3 2021
Canadian Personal and Commercial Banking	1	110,496	105,059	105,089	101,418	100,879
U.S. Personal and Commercial Banking	2	95,168	92,188	95,790	93,717	92,458
BMO Wealth Management	3	26,475	26,058	24,994	24,354	23,476
BMO Capital Markets	4	102,632	98,215	97,964	91,445	91,983
Corporate Services, including Technology and Operations	5	16,940	20,767	13,815	14,499	13,733
<b>Total Risk-Weighted Assets</b>	6	351,711	342,287	337,652	325,433	322,529

**L1 - DIFFERENCES BETWEEN ACCOUNTING AND REGULATORY SCOPES OF CONSOLIDATION AND MAPPING OF FINANCIAL STATEMENTS WITH REGULATORY RISK CATEGORIES**

(\$ millions)		Q3 2022						
		Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation (1)	Carrying values of items:				
				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
LINE	#	a	b	c	d	e	f	g
<b>Assets</b>								
Cash and Cash Equivalents	1	69,586	69,476	69,476	—	—	—	—
Interest Bearing Deposits with Banks	2	7,317	7,312	7,304	—	—	8	—
Securities	3	265,614	256,585	146,239	—	1,180	108,938	228
Securities Borrowed or Purchased Under Resale Agreements	4	108,391	108,391	—	108,391	—	—	—
<b>Loans</b>								
Residential mortgages	5	144,076	144,076	144,076	—	—	—	—
Consumer instalment and other personal	6	84,337	84,337	80,667	—	64	—	3,606
Credit cards	7	9,132	9,132	3,963	—	1,890	—	3,279
Business and government	8	287,669	287,375	264,652	2,763	19,407	3,829	—
Allowance for credit losses	9	(2,412)	(2,411)	(22)	—	(1)	—	(2,388)
<b>Other Assets</b>								
Derivative instruments	10	39,717	39,714	—	39,714	—	37,356	—
Customers' liability under acceptances	11	12,615	12,615	12,615	—	—	—	—
Premises and equipment	12	4,604	4,508	4,508	—	—	—	—
Goodwill	13	4,995	4,995	—	—	—	—	4,995
Intangible assets	14	2,130	2,130	—	—	—	—	2,130
Current tax assets	15	1,545	1,545	1,545	—	—	—	—
Deferred tax assets	16	794	797	792	—	—	—	5
Other	17	28,228	25,871	10,820	10,406	—	3,387	1,258
<b>Total assets</b>	<b>18</b>	<b>1,068,338</b>	<b>1,056,448</b>	<b>746,635</b>	<b>161,274</b>	<b>22,540</b>	<b>153,518</b>	<b>13,113</b>
<b>Liabilities</b>								
Deposits	19	729,385	729,385	—	—	—	25,766	703,619
<b>Other Liabilities</b>								
Derivative instruments	20	43,643	43,450	—	43,450	—	34,961	—
Acceptances	21	12,615	12,615	—	—	—	—	12,615
Securities sold but not yet purchased	22	41,187	41,187	—	—	—	41,187	—
Securities lent or sold under repurchase agreements	23	100,646	100,646	—	100,646	—	—	—
Securitization and structured entities' liabilities	24	25,020	25,020	—	—	—	—	25,020
Current tax liabilities	25	232	218	—	—	—	—	218
Deferred tax liabilities	26	81	81	—	—	—	—	81
Other	27	41,092	29,409	—	—	—	—	29,409
<b>Subordinated Debt</b>	<b>28</b>	<b>7,443</b>	<b>7,443</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>7,443</b>
<b>Total liabilities</b>	<b>29</b>	<b>1,001,344</b>	<b>989,454</b>	<b>—</b>	<b>144,096</b>	<b>—</b>	<b>101,914</b>	<b>778,405</b>

(1) Balance sheet under regulatory scope does not include the following entities: BMO Life Insurance Company and BMO Reinsurance Limited. BMO Life Insurance Company (\$13,295 million assets and \$1,495 million equity) covers the development and marketing of individual life, critical illness and annuity products as well as segregated funds. It also offers group creditor and travel insurance to bank customers in Canada. BMO Reinsurance Limited (\$258 million assets and \$117 million equity) covers the reinsurance of life, health and disability insurance risks. The business reinsured is written by insurers and reinsurers principally in North America and Europe.

**LI2 - MAIN SOURCES OF DIFFERENCES BETWEEN REGULATORY EXPOSURE AMOUNTS AND CARRYING VALUES IN FINANCIAL STATEMENTS**

(\$ millions)		Q3 2022				
		Total	Items subject to:			
			Credit risk framework	Counterparty credit risk framework	Securitization framework	Market risk framework
		a	b	c	d	e
1	Asset carrying value amount under scope of regulatory consolidation (as per template L11) (1)	1,043,335	746,635	161,274	22,540	153,518
2	Liabilities carrying value amount under regulatory scope of consolidation (as per template L11) (1)	211,049	—	144,096	—	101,914
3	<b>Total net amount under regulatory scope of consolidation</b>	<b>832,286</b>	<b>746,635</b>	<b>17,178</b>	<b>22,540</b>	<b>51,604</b>
4	Off-balance sheet amounts	296,151	216,760	52,499	26,892	—
5	Differences due to different netting rules and other adjustments for derivatives, other than those already included in row 2	23,279	893	22,386	—	—
6	Differences due to consideration of provisions	450	450	—	—	—
7	Exposures related to liability repo-style transactions	201,292	—	201,292	—	—
8	Potential future exposure on derivatives	26,580	—	26,580	—	—
9	Differences due to consideration of CRM	(229,780)	—	(227,622)	(2,158)	—
10	<b>Exposure amounts considered for regulatory purposes (2)</b>	<b>1,150,258</b>	<b>964,738</b>	<b>92,313</b>	<b>47,274</b>	<b>51,604</b>

(1) Carrying value under scope of regulatory consolidation (column b from L11) less amounts not subject to capital requirements or subject to deduction from capital (column g from L11).

(2) Exposure amounts considered for regulatory purposes represent the exposure at default amounts post-CRM and post-CCF, with the exception of the Market Risk framework that is reported at accounting carrying value.

**Explanations of differences between accounting and regulatory exposure amounts**

The table above illustrates the main sources of differences between the financial statements' carrying value amounts and the exposure at default post-CRM and post-CCF used for regulatory purposes.

**Off-balance sheet amounts** include credit exposures on committed undrawn amounts of loans and other off-balance sheet arrangements, certain repo-style transactions, off-balance sheet securitization exposures, and other off-balance sheet items.

**Differences due to different netting rules and other adjustments for derivatives** under the credit risk framework relate to the grossing up of deferred tax assets for regulatory exposure amount.

Under the counterparty credit risk framework, the difference relates to the grossing up of derivatives for differences in netting rules allowed under IFRS and SA-CCR, inclusion of 1.4 alpha in replacement cost, and also the application of financial collateral in the calculation of regulatory exposure amount.

**Differences due to consideration of provisions** relates to the grossing up of AIRB exposures for the amount related to partial write-offs.

**Exposures related to liability repo-style transactions** relate to the grossing up of liability repo-style transactions.

**Potential future exposure on derivatives** consists of the add-on factors for the expected volatility of the price, rate or index underlying derivative instruments, after applying alpha equal to 1.4.

**Differences due to consideration of CRM** consist of the application of credit risk mitigation techniques to arrive at the net exposure at default in accordance with OSFI's CAR Guideline, Chapter 5, Credit Risk Mitigation.

CR 1 - CREDIT QUALITY OF ASSETS (1) (2)		Q3 2022						
		Gross carrying values of			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) (4)	Non-defaulted exposures		
		LINE #		a	b	c	d	e
(\$ millions)								
Loans	1	1,996	503,977	2,158	22	79	2,057	503,815
Debt securities	2	—	139,329	6	—	—	6	139,323
Off-balance sheet exposures	3	400	203,723	354	6	12	336	203,769
Total	4	2,396	847,029	2,518	28	91	2,399	846,907

CR1 - CREDIT QUALITY OF ASSETS (1) (2)		Q2 2022						
		Gross carrying values of			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) (4)	Non-defaulted exposures	Allowances / impairments (5)	Allocated in regulatory category of Specific	Allocated in regulatory category of General		
		a	b	c	d	e	f	g
LINE #	(\$ millions)							
Loans	1	2,171	484,098	2,140	26	72	2,042	484,129
Debt securities	2	—	139,072	3	—	—	3	139,069
Off-balance sheet exposures	3	443	191,669	372	7	11	354	191,740
Total	4	2,614	814,839	2,515	33	83	2,399	814,938

CR1 - CREDIT QUALITY OF ASSETS (1) (2)		Q1 2022						
		Gross carrying values of		Allowances / impairments (5)	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) (4)	Non-defaulted exposures		
		LINE #	(\$ millions)	a	b	c	d	e
Loans	1	2,285	477,776	2,219	23	59	2,137	477,842
Debt securities	2	—	139,725	3	—	—	3	139,722
Off-balance sheet exposures	3	508	196,058	371	7	10	354	196,195
Total	4	2,793	813,559	2,593	30	69	2,494	813,759

CR1 - CREDIT QUALITY OF ASSETS (1) (2)		Q4 2021						
		Gross carrying values of		Allowances / impairments (5)	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) (4)	Non-defaulted exposures		
		LINE #		a	b	c	d	e
(\$ millions)								
Loans	1	2,204	453,167	2,332	41	106	2,185	453,039
Debt securities	2	—	111,686	3	—	—	3	111,683
Off-balance sheet exposures	3	682	191,755	382	7	36	339	192,055
Total	4	2,886	756,608	2,717	48	142	2,527	756,777

CR1 - CREDIT QUALITY OF ASSETS (1) (2)		Q3 2021						
		Gross carrying values of		Allowances / impairments (5)	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) (4)	Non-defaulted exposures		
		LINE	#	a	b	c	d	e
(\$ millions)								
Loans	1	2,475	447,468	2,563	46	157	2,360	447,380
Debt securities	2	—	112,123	3	—	—	3	112,120
Off-balance sheet exposures	3	792	191,081	402	9	38	355	191,471
Total	4	3,267	750,672	2,968	55	195	2,718	750,971

(1) Excludes positions subject to Counterparty Credit Risk and Securitization regulatory frameworks.

(2) The carrying value of our renegotiated loans was \$574 million as at July 31, 2022 (\$586 million as at April 30, 2022, \$618 million as at January 31, 2022, \$659 million as at October 31, 2021, and \$731 million as at July 31, 2021). Renegotiated loans of \$331 million were classified as performing as at July 31, 2022 (\$321 million as at April 30, 2022, \$293 million as at January 31, 2022, \$278 million as at October 31, 2021, and \$331 million as at July 31, 2021).

(3) Exposures are considered to be in default when they are 90 days past due with the following exceptions: (i) credit card loans which are immediately written off when principal or interest payments are 180 days past due; and (ii) residential mortgages guaranteed by the Government of Canada that are less than one year past due.

(4) There were no defaulted debt securities.

(5) The approach for establishing and maintaining allowance for credit losses is based on IFRS requirements. Under capital reporting, general allowance refers to allowances on performing loans (Stage 1 and Stage 2), and specific allowance refers to allowances on impaired loans (Stage 3).



**CR2 - CHANGES IN STOCK OF DEFAULTED LOANS AND DEBT SECURITIES (1) (2)**

(\$ millions)

**Q3 2022****a**

1	<b>Defaulted loans and debt securities at end of the previous financial reporting period</b>	2,171
2	Loans and debt securities that have defaulted since the last reporting period	327
3	Returned to non-defaulted status	(155)
4	Amounts written off	(93)
5	Other charges	(254)
6	<b>Defaulted loans and debt securities at end of the reporting period</b>	1,996

**CR2 - CHANGES IN STOCK OF DEFAULTED LOANS AND DEBT SECURITIES (1) (2)**

(\$ millions)

**Q2 2022****a**

1	<b>Defaulted loans and debt securities at end of the previous financial reporting period</b>	2,285
2	Loans and debt securities that have defaulted since the last reporting period	325
3	Returned to non-defaulted status	(133)
4	Amounts written off	(74)
5	Other charges	(232)
6	<b>Defaulted loans and debt securities at end of the reporting period</b>	2,171

**CR2 - CHANGES IN STOCK OF DEFAULTED LOANS AND DEBT SECURITIES (1) (2)**

(\$ millions)

**Q1 2022****a**

1	<b>Defaulted loans and debt securities at end of the previous financial reporting period</b>	2,204
2	Loans and debt securities that have defaulted since the last reporting period	452
3	Returned to non-defaulted status	(136)
4	Amounts written off	(79)
5	Other charges	(156)
6	<b>Defaulted loans and debt securities at end of the reporting period</b>	2,285

**CR2 - CHANGES IN STOCK OF DEFAULTED LOANS AND DEBT SECURITIES (1) (2)**

(\$ millions)

**Q4 2021****a**

1	<b>Defaulted loans and debt securities at end of the previous financial reporting period</b>	2,475
2	Loans and debt securities that have defaulted since the last reporting period	281
3	Returned to non-defaulted status	(153)
4	Amounts written off	(105)
5	Other charges	(294)
6	<b>Defaulted loans and debt securities at end of the reporting period</b>	2,204

**CR2 - CHANGES IN STOCK OF DEFAULTED LOANS AND DEBT SECURITIES (1) (2)**

(\$ millions)

**Q3 2021****a**

1	<b>Defaulted loans and debt securities at end of the previous financial reporting period</b>	2,989
2	Loans and debt securities that have defaulted since the last reporting period	370
3	Returned to non-defaulted status	(274)
4	Amounts written off	(159)
5	Other charges	(451)
6	<b>Defaulted loans and debt securities at end of the reporting period</b>	2,475

(1) There were no defaulted debt securities.

(2) Defaulted balances exclude off-balance sheet exposures.

CR3 - CREDIT RISK MITIGATION TECHNIQUES - OVERVIEW (1) (2) (3) (4) (5) (\$ millions)		Q3 2022				
		Unsecured exposures: carrying amount	Exposures to be secured	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
		a	b1	b	d	f
1	Loans	453,450	50,365	—	45,692	—
2	Debt securities	139,323	—	—	—	—
3	<b>Total</b>	592,773	50,365	—	45,692	—
4	Of which: defaulted	1,419	131	—	111	—

  

CR3 - CREDIT RISK MITIGATION TECHNIQUES - OVERVIEW (1) (2) (3) (4) (5) (\$ millions)		Q2 2022				
		Unsecured exposures: carrying amount	Exposures to be secured	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
		a	b1	b	d	f
1	Loans	439,143	44,986	—	44,775	—
2	Debt securities	139,069	—	—	—	—
3	<b>Total</b>	578,212	44,986	—	44,775	—
4	Of which: defaulted	1,507	198	—	120	—

  

CR3 - CREDIT RISK MITIGATION TECHNIQUES - OVERVIEW (1) (2) (3) (4) (5) (\$ millions)		Q1 2022				
		Unsecured exposures: carrying amount	Exposures to be secured	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
		a	b1	b	d	f
1	Loans	427,094	50,748	—	46,114	—
2	Debt securities	139,722	—	—	—	—
3	<b>Total</b>	566,816	50,748	—	46,114	—
4	Of which: defaulted	1,637	208	—	129	—

  

CR3 - CREDIT RISK MITIGATION TECHNIQUES - OVERVIEW (1) (2) (3) (4) (5) (\$ millions)		Q4 2021				
		Unsecured exposures: carrying amount	Exposures to be secured	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
		a	b1	b	d	f
1	Loans	401,066	51,973	—	47,669	—
2	Debt securities	111,683	—	—	—	—
3	<b>Total</b>	512,749	51,973	—	47,669	—
4	Of which: defaulted	1,538	215	—	140	—

  

CR3 - CREDIT RISK MITIGATION TECHNIQUES - OVERVIEW (1) (2) (3) (4) (5) (\$ millions)		Q3 2021				
		Unsecured exposures: carrying amount	Exposures to be secured	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
		a	b1	b	d	f
1	Loans	394,635	52,745	—	47,905	—
2	Debt securities	112,120	—	—	—	—
3	<b>Total</b>	506,755	52,745	—	47,905	—
4	Of which: defaulted	1,752	232	—	152	—

(1) Excludes positions subject to Counterparty Credit Risk and Securitization regulatory frameworks.

(2) There were no defaulted debt securities.

(3) Secured exposures include exposures where credit risk mitigation techniques are used to reduce capital requirements in accordance with OSFI's CAR Guideline, Chapter 5, Credit Risk Mitigation. Where collateral is reflected in the risk parameters (PDs and LGDs) for AIRB exposures and risk weights for exposures under Standardized Approach, the carrying amount is reported as an unsecured exposure.

(4) Loans and Debt securities balances are net of allowance for credit losses on performing loans and impaired loans (excluding those related to off-balance sheet instruments and undrawn commitments).

(5) Defaulted balances are net of allowance for credit losses on impaired loans, excluding off-balance sheet instruments and undrawn commitments.

**CR4 - STANDARDIZED APPROACH - CREDIT RISK EXPOSURE AND CREDIT RISK****MITIGATION (CRM) EFFECTS (1) (2)**

(\$ millions except as noted)

Asset classes		Q3 2022					
		Exposures before CCF and CRM		Exposures post CCF and CRM		RWA and RWA density	
		On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA	RWA density
		a	b	c	d	e	f
1	Sovereigns and their central banks	—	—	—	—	—	—
2	Non-central government public sector entities	1	2	1	—	—	20.00%
3	Multilateral development banks	—	—	—	—	—	—
4	Banks	—	37	—	19	4	20.00%
5	Securities firms	—	698	—	18	4	20.00%
6	Corporates	7,144	2,712	7,144	186	7,247	98.88%
7	Regulatory retail portfolios	5,703	3,114	5,703	355	4,296	70.90%
8	Secured by residential property	469	54	469	33	207	41.03%
9	Secured by commercial real estate	5	—	5	—	5	100.00%
10	Equity	2,257	608	2,257	304	1,951	76.19%
11	Defaulted exposures	80	4	80	—	99	129.28%
12	Higher-risk categories (3)	89	132	89	63	230	150.00%
13	Other assets	11,197	—	11,197	—	13,242	118.26%
14	<b>Total</b>	<b>26,945</b>	<b>7,361</b>	<b>26,945</b>	<b>978</b>	<b>27,285</b>	<b>97.71%</b>

**CR4 - STANDARDIZED APPROACH - CREDIT RISK EXPOSURE AND CREDIT RISK****MITIGATION (CRM) EFFECTS (1) (2)**

(\$ millions except as noted)

Asset classes		Q2 2022					
		Exposures before CCF and CRM		Exposures post CCF and CRM		RWA and RWA density	
		On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA	RWA density
		a	b	c	d	e	f
1	Sovereigns and their central banks	—	—	—	—	—	—
2	Non-central government public sector entities	1	4	1	—	—	20.00%
3	Multilateral development banks	—	—	—	—	—	—
4	Banks	1	35	1	19	4	20.00%
5	Securities firms	16	645	16	10	5	20.00%
6	Corporates	6,804	2,800	6,804	187	6,902	98.73%
7	Regulatory retail portfolios	5,747	4,038	5,747	382	4,363	71.17%
8	Secured by residential property	508	75	507	36	224	41.25%
9	Secured by commercial real estate	5	—	6	—	6	100.00%
10	Equity	2,093	546	2,094	272	1,867	78.91%
11	Defaulted exposures	76	15	74	—	93	128.04%
12	Higher-risk categories (3)	99	106	99	51	225	150.00%
13	Other assets	9,722	—	9,722	—	12,131	124.78%
14	<b>Total</b>	<b>25,072</b>	<b>8,264</b>	<b>25,071</b>	<b>957</b>	<b>25,820</b>	<b>99.20%</b>

(1) Credit Risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement Risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Exposure amounts are net of Stage 3 allowance for credit losses.

(3) Non-defaulted exposures with risk weights equal to 150% (e.g. rated BB- or lower).

**CR4 - STANDARDIZED APPROACH - CREDIT RISK EXPOSURE AND CREDIT RISK****MITIGATION (CRM) EFFECTS (1) (2)**

(\$ millions except as noted)

Asset classes		Q1 2022					
		Exposures before CCF and CRM		Exposures post CCF and CRM		RWA and RWA density	
		On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA	RWA density
		a	b	c	d	e	f
1	Sovereigns and their central banks	—	—	—	—	—	—
2	Non-central government public sector entities	1	5	1	—	—	20.00%
3	Multilateral development banks	—	—	—	—	—	—
4	Banks	1	34	1	19	4	20.00%
5	Securities firms	—	654	—	10	2	20.00%
6	Corporates	7,541	3,728	7,542	504	7,928	98.55%
7	Regulatory retail portfolios	5,382	3,753	5,383	339	4,056	70.92%
8	Secured by residential property	553	92	552	36	244	41.42%
9	Secured by commercial real estate	9	2	9	—	9	100.00%
10	Equity	1,963	498	1,963	249	1,711	77.34%
11	Defaulted exposures	97	16	95	—	123	129.01%
12	Higher-risk categories (3)	78	115	79	54	199	150.00%
13	Other assets	10,406	—	10,406	—	12,285	118.06%
14	<b>Total</b>	<b>26,031</b>	<b>8,897</b>	<b>26,031</b>	<b>1,211</b>	<b>26,561</b>	<b>97.51%</b>

**CR4 - STANDARDIZED APPROACH - CREDIT RISK EXPOSURE AND CREDIT RISK****MITIGATION (CRM) EFFECTS (1) (2)**

(\$ millions except as noted)

Asset classes		Q4 2021					
		Exposures before CCF and CRM		Exposures post CCF and CRM		RWA and RWA density	
		On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA	RWA density
		a	b	c	d	e	f
1	Sovereigns and their central banks	—	—	—	—	—	—
2	Non-central government public sector entities	232	8	232	2	69	29.66%
3	Multilateral development banks	—	—	—	—	—	—
4	Banks	8	436	8	260	54	20.00%
5	Securities firms	10	676	10	20	6	20.00%
6	Corporates	13,757	13,175	13,757	4,529	17,816	97.43%
7	Regulatory retail portfolios	5,472	6,110	5,472	327	4,121	71.05%
8	Secured by residential property	574	101	574	38	255	41.67%
9	Secured by commercial real estate	270	34	270	20	290	100.00%
10	Equity	1,612	432	1,612	216	1,451	79.38%
11	Defaulted exposures	255	36	255	5	360	138.84%
12	Higher-risk categories (3)	164	241	164	104	402	150.00%
13	Other assets	10,978	—	10,978	—	12,564	114.44%
14	<b>Total</b>	<b>33,332</b>	<b>21,249</b>	<b>33,332</b>	<b>5,521</b>	<b>37,388</b>	<b>96.23%</b>

**CR4 - STANDARDIZED APPROACH - CREDIT RISK EXPOSURE AND CREDIT RISK****MITIGATION (CRM) EFFECTS (1) (2)**

(\$ millions except as noted)

Asset classes		Q3 2021					
		Exposures before CCF and CRM		Exposures post CCF and CRM		RWA and RWA density	
		On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA	RWA density
		a	b	c	d	e	f
1	Sovereigns and their central banks	11	—	11	—	—	—
2	Non-central government public sector entities	241	7	241	2	71	29.36%
3	Multilateral development banks	—	—	—	—	—	—
4	Banks	2	449	2	268	54	20.00%
5	Securities firms	14	672	14	16	6	20.00%
6	Corporates	13,816	13,051	13,816	4,390	17,495	96.09%
7	Regulatory retail portfolios	5,285	6,050	5,285	314	3,958	70.68%
8	Secured by residential property	640	113	640	41	285	41.85%
9	Secured by commercial real estate	302	31	302	20	322	100.00%
10	Equity	1,623	446	1,623	223	1,465	79.35%
11	Defaulted exposures	283	36	283	4	391	136.64%
12	Higher-risk categories (3)	108	252	108	109	325	150.00%
13	Other assets	9,497	—	9,497	—	11,182	117.74%
14	<b>Total</b>	<b>31,822</b>	<b>21,107</b>	<b>31,822</b>	<b>5,387</b>	<b>35,554</b>	<b>95.55%</b>

(1) Credit Risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement Risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Exposure amounts are net of Stage 3 allowance for credit losses.

(3) Non-defaulted exposures with risk weights equal to 150% (e.g. rated BB- or lower).

**CR5 - STANDARDIZED APPROACH - EXPOSURES BY ASSET CLASSES AND RISK WEIGHTS (1) (2) (3)**

(\$ millions)		Q3 2022									
		Risk Weight								Total credit exposures amount (post-CCF and post-CRM)	
		0%	10%	20%	35%	50%	75%	100%	150%	Others	
Asset classes		a	b	c	d	e	f	g	h	i	j
1	Sovereigns and their central banks	—	—	—	—	—	—	—	—	—	—
2	Non-central government public sector entities	—	—	1	—	—	—	—	—	—	1
3	Multilateral development banks	—	—	—	—	—	—	—	—	—	—
4	Banks	—	—	19	—	—	—	—	—	—	19
5	Securities firms	—	—	18	—	—	—	—	—	—	18
6	Corporates	2	—	31	—	112	—	7,185	—	—	7,330
7	Regulatory retail portfolios	448	—	—	—	—	5,258	352	—	—	6,058
8	Secured by residential property	—	—	—	427	—	75	—	—	—	502
9	Secured by commercial real estate	—	—	—	—	—	—	5	—	—	5
10	Equity	463	—	322	—	—	—	1,776	—	—	2,561
11	Defaulted exposures	1	—	—	—	—	—	30	49	—	80
12	Higher-risk categories (4)	—	—	—	—	—	—	—	152	—	152
13	Other assets	1,484	—	1,671	—	—	—	7,619	—	423	11,197
14	Total	2,398	—	2,062	427	112	5,333	16,967	201	423	27,923

**CR5 - STANDARDIZED APPROACH - EXPOSURES BY ASSET CLASSES AND RISK WEIGHTS (1) (2) (3)**

(\$ millions)		Q2 2022									
		Risk Weight								Total credit exposures amount (post-CCF and post-CRM)	
		0%	10%	20%	35%	50%	75%	100%	150%	Others	
Asset classes	a	b	c	d	e	f	g	h	i	j	
1	Sovereigns and their central banks	—	—	—	—	—	—	—	—	—	—
2	Non-central government public sector entities	—	—	1	—	—	—	—	—	—	1
3	Multilateral development banks	—	—	—	—	—	—	—	—	—	—
4	Banks	—	—	20	—	—	—	—	—	—	20
5	Securities firms	—	—	26	—	—	—	—	—	—	26
6	Corporates	4	—	36	—	112	—	6,839	—	—	6,991
7	Regulatory retail portfolios	472	—	—	—	—	5,181	476	—	—	6,129
8	Secured by residential property	—	—	—	458	—	85	—	—	—	543
9	Secured by commercial real estate	—	—	—	—	—	—	6	—	—	6
10	Equity	464	—	176	—	—	—	1,726	—	—	2,366
11	Defaulted exposures	—	—	—	—	—	—	30	44	—	74
12	Higher-risk categories (4)	—	—	—	—	—	—	—	150	—	150
13	Other assets	1,421	—	1,129	—	—	—	6,760	—	412	9,722
14	Total	2,361	—	1,388	458	112	5,266	15,837	194	412	26,028

(1) Credit Risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement Risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Exposure amounts are net of Stage 3 allowance for credit losses.

(3) Credit assessments by external credit rating agencies, including S&amp;P, Moody's and DBRS, are used to determine standardized risk weights based on guidelines issued by OSFI.

(4) Non-defaulted exposures with risk weights equal to 150% (e.g. rated BB- or lower).

## CR5 - STANDARDIZED APPROACH - EXPOSURES BY ASSET CLASSES AND RISK WEIGHTS (1) (2) (3)

(\$ millions)		Q1 2022									
		Risk Weight									Total credit exposures amount (post-CCF and post-CRM)
		0%	10%	20%	35%	50%	75%	100%	150%	Others	
Asset classes		a	b	c	d	e	f	g	h	i	j
1	Sovereigns and their central banks	—	—	—	—	—	—	—	—	—	—
2	Non-central government public sector entities	—	—	1	—	—	—	—	—	—	1
3	Multilateral development banks	—	—	—	—	—	—	—	—	—	—
4	Banks	—	—	20	—	—	—	—	—	—	20
5	Securities firms	—	—	10	—	—	—	—	—	—	10
6	Corporates	11	—	61	—	113	—	7,861	—	—	8,046
7	Regulatory retail portfolios	462	—	—	—	—	4,808	452	—	—	5,722
8	Secured by residential property	—	—	—	494	—	94	—	—	—	588
9	Secured by commercial real estate	—	—	—	—	—	—	9	—	—	9
10	Equity	459	—	174	—	—	—	1,579	—	—	2,212
11	Defaulted exposures	—	—	—	—	—	—	37	58	—	95
12	Higher-risk categories (4)	—	—	—	—	—	—	—	133	—	133
13	Other assets	1,407	—	1,703	—	—	—	6,892	—	404	10,406
14	Total	2,339	—	1,969	494	113	4,902	16,830	191	404	27,242

## CR5 - STANDARDIZED APPROACH - EXPOSURES BY ASSET CLASSES AND RISK WEIGHTS (1) (2) (3)

(\$ millions)		Q4 2021									
		Risk Weight									Total credit exposures amount (post-CCF and post-CRM)
		0%	10%	20%	35%	50%	75%	100%	150%	Others	
Asset classes		a	b	c	d	e	f	g	h	i	j
1	Sovereigns and their central banks	—	—	—	—	—	—	—	—	—	—
2	Non-central government public sector entities	—	—	159	—	75	—	—	—	—	234
3	Multilateral development banks	—	—	—	—	—	—	—	—	—	—
4	Banks	—	—	268	—	—	—	—	—	—	268
5	Securities firms	—	—	30	—	—	—	—	—	—	30
6	Corporates	201	—	246	—	145	—	17,694	—	—	18,286
7	Regulatory retail portfolios	444	—	—	—	—	4,940	415	—	—	5,799
8	Secured by residential property	—	—	—	510	—	102	—	—	—	612
9	Secured by commercial real estate	—	—	—	—	—	—	290	—	—	290
10	Equity	447	—	15	—	—	—	1,366	—	—	1,828
11	Defaulted exposures	—	—	—	—	—	—	44	216	—	260
12	Higher-risk categories (4)	—	—	—	—	—	—	—	268	—	268
13	Other assets	1,525	—	1,781	—	—	—	7,278	—	394	10,978
14	Total	2,617	—	2,499	510	220	5,042	27,087	484	394	38,853

## CR5 - STANDARDIZED APPROACH - EXPOSURES BY ASSET CLASSES AND RISK WEIGHTS (1) (2) (3)

(\$ millions)		Q3 2021									Total credit exposures amount (post-CCF and post-CRM)
		Risk Weight									
		0%	10%	20%	35%	50%	75%	100%	150%	Others	
		a	b	c	d	e	f	g	h	i	
Asset classes											j
1	Sovereigns and their central banks	11	—	—	—	—	—	—	—	—	11
2	Non-central government public sector entities	—	—	167	—	76	—	—	—	—	243
3	Multilateral development banks	—	—	—	—	—	—	—	—	—	—
4	Banks	—	—	270	—	—	—	—	—	—	270
5	Securities firms	—	—	30	—	—	—	—	—	—	30
6	Corporates	406	—	271	—	178	—	17,351	—	—	18,206
7	Regulatory retail portfolios	460	—	—	—	—	4,727	412	—	—	5,599
8	Secured by residential property	—	—	—	564	—	117	—	—	—	681
9	Secured by commercial real estate	—	—	—	—	—	—	322	—	—	322
10	Equity	451	—	17	—	—	—	1,378	—	—	1,846
11	Defaulted exposures	8	—	—	—	—	—	53	226	—	287
12	Higher-risk categories (4)	—	—	—	—	—	—	—	217	—	217
13	Other assets	1,136	—	1,381	—	—	—	6,639	—	341	9,497
14	Total	2,472	—	2,136	564	254	4,844	26,155	443	341	37,209

(1) Credit Risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement Risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Exposure amounts are net of Stage 3 allowance for credit losses.

(3) Credit assessments by external credit rating agencies, including S&P, Moody's and DBRS, are used to determine standardized risk weights based on guidelines issued by OSFI.

(4) Non-defaulted exposures with risk weights equal to 150% (e.g. rated BB- or lower).

## CR6 - IRB - CREDIT RISK EXPOSURE BY PORTFOLIO AND PD RANGE - RETAIL (1) (2) (3)

(\$ millions except as noted)

						Q3 2022											
Risk Profile	BMO Rating	PD Scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent	LINE #	Original on- balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Average CCF (4)	EAD post- CRM and post-CCF	Average PD (5)	Number of obligors (6)	Average LGD (7)	Average maturity (years)	RWA	RWA density	EL	Provisions
						a	b	c	d	e	f	g	h	i	j	k	l
<b>Canadian insured residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			1	30,339	—	—	40,674	0.01 %	128,913	30.79 %		346	0.85 %	1	
Very low to Low		0.15 to <0.25			2	—	—	—	—	—	—	—		—	—	—	
Low		0.25 to <0.50			3	—	—	—	—	—	—	—		—	—	—	
Low		0.50 to <0.75			4	6,844	—	—	271	0.61 %	14,031	41.25 %		96	35.59 %	1	
Medium		0.75 to <2.50			5	2,058	—	—	2	1.32 %	5,382	41.63 %		1	66.21 %	—	
Medium to High		2.50 to <10.00			6	1,498	—	—	—	—	4,510	—		—	—	—	
High		10.00 to <100.00			7	123	—	—	—	—	547	—		—	—	—	
Default		100.00 (Default)			8	85	—	—	—	—	448	—		—	—	—	
Sub-total					9	40,947	—	—	40,947	—	153,831	—		443	—	2	5
<b>Canadian uninsured residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			10	76,190	35,155	43.48 %	91,476	0.09 %	469,927	17.39 %		3,572	3.90 %	14	
Very low to Low		0.15 to <0.25			11	9,328	1,761	28.05 %	9,823	0.22 %	50,546	20.12 %		901	9.16 %	4	
Low		0.25 to <0.50			12	—	—	—	—	—	—	—		—	—	—	
Low		0.50 to <0.75			13	15,096	35	80.57 %	15,126	0.61 %	39,157	18.77 %		2,674	17.68 %	17	
Medium		0.75 to <2.50			14	8,075	642	23.89 %	8,228	1.17 %	31,100	19.00 %		2,277	27.67 %	18	
Medium to High		2.50 to <10.00			15	4,679	124	34.50 %	4,721	6.64 %	13,212	15.85 %		2,968	62.86 %	49	
High		10.00 to <100.00			16	289	20	21.76 %	293	41.98 %	1,709	14.35 %		231	78.66 %	17	
Default		100.00 (Default)			17	121	16	18.94 %	124	100.00 %	931	12.45 %		168	135.42 %	7	
Sub-total					18	113,778	37,753	—	129,791	—	606,582	—		12,791	—	126	65
<b>Non-Canadian residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			19	1,402	5,841	58.92 %	4,843	0.04 %	42,603	43.28 %		273	5.64 %	1	
Very low to Low		0.15 to <0.25			20	6,261	108	100.00 %	6,370	0.17 %	12,245	21.44 %		504	7.92 %	2	
Low		0.25 to <0.50			21	529	199	49.91 %	5,879	0.37 %	5,879	45.00 %		190	30.26 %	1	
Low		0.50 to <0.75			22	1,164	23	100.00 %	1,187	0.72 %	5,826	30.00 %		371	31.25 %	2	
Medium		0.75 to <2.50			23	337	28	45.56 %	349	1.24 %	4,486	46.81 %		267	76.39 %	2	
Medium to High		2.50 to <10.00			24	388	1	88.62 %	389	3.69 %	2,516	30.96 %		356	91.45 %	5	
High		10.00 to <100.00			25	122	96	62.07 %	182	23.88 %	1,565	29.05 %		303	166.19 %	13	
Default		100.00 (Default)			26	214	—	—	214	100.00 %	4,729	38.23 %		569	264.97 %	60	
Sub-total					27	10,417	6,296	—	14,162	—	79,849	—		2,833	—	86	102
<b>Qualifying revolving retail</b>																	
Exceptionally low to Very low		0.00 to <0.15			28	1,232	40,714	57.57 %	24,670	0.04 %	3,240,763	77.87 %		613	2.48 %	8	
Very low to Low		0.15 to <0.25			29	563	2,438	71.59 %	2,309	0.23 %	312,610	83.23 %		241	10.45 %	4	
Low		0.25 to <0.50			30	2,419	12,618	37.15 %	7,107	0.29 %	643,747	61.82 %		672	9.46 %	13	
Low		0.50 to <0.75			31	464	1,036	83.52 %	1,329	0.69 %	203,085	87.66 %		354	26.66 %	8	
Medium		0.75 to <2.50			32	3,297	3,510	44.69 %	4,866	1.23 %	404,403	74.56 %		1,761	36.20 %	46	
Medium to High		2.50 to <10.00			33	2,075	1,314	79.35 %	3,118	4.47 %	426,359	83.99 %		3,009	96.51 %	116	
High		10.00 to <100.00			34	484	224	62.83 %	625	24.22 %	85,466	73.61 %		1,180	188.80 %	114	
Default		100.00 (Default)			35	56	25	40.70 %	66	100.00 %	4,448	58.45 %		203	305.50 %	32	
Sub-total					36	10,590	61,879	—	44,090	—	5,320,881	—		8,033	—	341	430
<b>Retail small-and-medium-sized entities</b>																	
Exceptionally low to Very low		0.00 to <0.15			37	445	2,356	73.36 %	2,511	0.06 %	55,738	59.92 %		291	11.60 %	1	
Very low to Low		0.15 to <0.25			38	158	776	68.00 %	686	0.19 %	42,066	87.75 %		246	35.82 %	1	
Low		0.25 to <0.50			39	1,500	2,480	75.86 %	3,324	0.43 %	38,001	63.75 %		1,356	40.80 %	8	
Low		0.50 to <0.75			40	1,918	235	71.02 %	2,016	0.68 %	14,364	53.94 %		979	48.54 %	7	
Medium		0.75 to <2.50			41	3,063	743	53.28 %	3,366	1.81 %	47,080	58.09 %		2,563	76.15 %	35	
Medium to High		2.50 to <10.00			42	3,286	291	46.35 %	3,338	4.37 %	24,761	58.78 %		3,027	90.69 %	90	
High		10.00 to <100.00			43	714	46	77.74 %	726	18.97 %	5,438	54.91 %		835	115.08 %	78	
Default		100.00 (Default)			44	188	26	85.81 %	200	100.00 %	5,116	58.93 %		1,009	504.32 %	58	
Sub-total					45	11,272	6,953	—	16,167	—	232,564	—		10,306	—	278	208
<b>Other retail</b>																	
Exceptionally low to Very low		0.00 to <0.15			46	19,153	4,150	50.00 %	21,477	0.09 %	354,866	26.18 %		1,369	6.38 %	5	
Very low to Low		0.15 to <0.25			47	4,310	1,085	72.99 %	5,102	0.20 %	177,026	74.01 %		1,571	30.80 %	7	
Low		0.25 to <0.50			48	4,807	2,374	27.89 %	5,469	0.30 %	762,659	42.29 %		1,289	23.56 %	7	
Low		0.50 to <0.75			49	6,687	16	55.94 %	6,522	0.63 %	125,774	34.51 %		1,944	29.81 %	14	
Medium		0.75 to <2.50			50	7,444	704	41.34 %	7,691	1.25 %	386,713	44.68 %		4,123	53.61 %	46	
Medium to High		2.50 to <10.00			51	3,017	40	36.60 %	3,003	4.69 %	177,543	44.27 %		2,070	68.93 %	60	
High		10.00 to <100.00			52	971	293	34.78 %	1,072	22.85 %	221,278	50.96 %		1,177	109.76 %	122	
Default		100.00 (Default)			53	129	2	25.36 %	128	100.00 %	50,022	46.20 %		391	305.81 %	45	
Sub-total					54	46,518	8,664	—	50,464	—	2,255,881	—		13,934	—	306	244
Total (all retail portfolios)					55	233,522	121,545	—	295,621	—	8,649,588	—		48,340	—	1,139	1,054

(1) Credit Risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement Risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Columns "a" and "b" are grouped by the obligor's PD and columns "d" onwards are grouped by the guarantor, where applicable.

(3) PD bands in the table are as prescribed in revised Pillar 3 guidance and used for comparative purposes across banks.

(4) Calculated as EAD post-conversion factor for off-balance sheet exposure divided by total off-balance sheet exposure pre-conversion factor.

(5) Calculated as the obligor PD or guarantor PD, where applicable, weighted by EAD.

(6) Obligor count for Retail portfolios is at the account level.

(7) Calculated as the obligor LGD or guarantor LGD, where applicable, weighted by EAD.

CR6 - IRB - CREDIT RISK EXPOSURE BY PORTFOLIO AND PD RANGE - WHOLESALE (1) (2) (3) (\$ millions except as noted)						Q3 2022												
						Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Average CCF (4)	EAD post-CRM and post-CCF	Average PD (5)	Number of obligors (6)	Average LGD (7)	Average maturity (years) (8)	RWA	RWA density	EL	Provisions	
Risk Profile	BMO Rating	PD Scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied	LINE #	a	b	c	d	e	f	g	h	i	j	k	l	
Corporate																		
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	56	64,522	112,730	49.45 %	129,998	0.08 %	6,558	33.90 %	2.12	25,335	19.49 %	37		
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	57	44,874	58,817	46.59 %	69,952	0.19 %	6,731	35.30 %	2.14	23,007	32.89 %	47		
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	58	52,940	43,062	46.73 %	70,639	0.32 %	10,056	34.52 %	2.26	29,622	41.93 %	78		
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	59	41,359	35,361	50.30 %	56,920	0.55 %	7,918	33.63 %	2.25	30,008	52.72 %	106		
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	60	44,902	28,791	51.10 %	57,412	1.20 %	10,732	34.33 %	2.46	42,609	74.22 %	230		
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	61	9,293	7,542	51.69 %	12,717	3.83 %	3,329	34.41 %	2.05	12,848	101.03 %	167		
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	62	2,088	630	49.45 %	2,345	16.26 %	900	35.81 %	1.70	3,849	164.15 %	137		
Default	Default	100.00 (Default)	C	C to D	63	1,376	451	100.00 %	1,792	100.00 %	492	37.89 %	2.69	4,128	230.33 %	614		
Sub-total					64	261,354	287,384		401,775		46,716			171,406		1,416	1,795	
Sovereign																		
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	65	199,516	7,177	60.73 %	203,931	0.01 %	1,766	4.41 %	3.05	4,320	2.12 %	4		
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	66	296	144	67.55 %	373	0.19 %	122	23.81 %	2.37	90	24.14 %	—		
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	67	344	285	41.01 %	445	0.32 %	97	23.88 %	1.76	120	26.88 %	—		
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	68	224	103	34.05 %	255	0.57 %	62	33.79 %	1.88	92	36.18 %	—		
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	69	70	22	35.22 %	63	1.30 %	85	29.47 %	1.27	36	56.61 %	—		
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	70	220	61	34.98 %	240	2.83 %	116	35.38 %	1.32	171	70.96 %	2		
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	71	4	—	—	4	15.30 %	2	49.13 %	1.00	8	238.88 %	—		
Default	Default	100.00 (Default)	C	C to D	72	1	—	—	1	100.00 %	1	20.00 %	5.00	4	265.00 %	—		
Sub-total					73	200,675	7,792		205,312		2,251			4,841		6	17	
Bank																		
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	74	11,657	5,588	69.97 %	16,317	0.07 %	220	16.30 %	1.39	1,242	7.62 %	2		
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	75	4,168	4,303	60.77 %	6,602	0.19 %	107	14.08 %	1.23	198	3.00 %	1		
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	76	1,235	1,583	61.30 %	2,007	0.32 %	73	13.16 %	0.97	320	15.95 %	1		
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	77	511	637	60.79 %	868	0.54 %	39	12.22 %	1.79	153	17.60 %	1		
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	78	1,894	38	80.04 %	1,597	1.45 %	41	17.30 %	0.48	578	36.20 %	4		
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	79	108	8	90.81 %	104	5.10 %	20	14.48 %	0.41	97	93.40 %	1		
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	80	11	—	—	11	15.28 %	1	45.00 %	1.00	24	218.72 %	1		
Default	Default	100.00 (Default)	C	C to D	81	—	—	—	—	—	—	—	—	—	—	—		
Sub-total					82	19,584	12,157		27,506		501			2,612		11	4	
Total (all wholesale portfolios)						83	481,613	307,333		634,593		49,468			178,859		1,433	1,816

(1) Credit Risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement Risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Columns "a" and "b" are grouped by the obligor's PD and columns "d" onwards are grouped by the guarantor, where applicable.

(3) PD bands in the table are as prescribed in revised Pillar 3 guidance and used for comparative purposes across banks.

(4) Calculated as EAD post-conversion factor for off-balance sheet exposure divided by total off-balance sheet exposure pre-conversion factor.

(5) Calculated as the obligor PD or guarantor PD, where applicable, weighted by EAD.

(6) Obligor count for Wholesale portfolios is at the borrower level.

(7) Calculated as the obligor LGD or guarantor LGD, where applicable, weighted by EAD.

(8) Calculated as the effective maturity in years weighted by EAD.



## CR6 - IRB - CREDIT RISK EXPOSURE BY PORTFOLIO AND PD RANGE - RETAIL (1) (2) (3)

(\$ millions except as noted)

						Q2 2022											
						Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Average CCF (4)	EAD post-CRM and post-CCF	Average PD (5)	Number of obligors (6)	Average LGD (7)	Average maturity (years)	RWA	RWA density	EL	Provisions
Risk Profile	BMO Rating	PD Scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent	LINE #	a	b	c	d	e	f	g	h	i	j	k	l
<b>Canadian insured residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			1	29,456	—	—	39,678	0.01 %	126,751	30.14 %		364	0.92 %	1	
Very low to Low		0.15 to <0.25			2	—	—	—	—	—	—	—		—	—	—	
Low		0.25 to <0.50			3	—	—	—	—	—	—	—		—	—	—	
Low		0.50 to <0.75			4	6,680	—	—	261	0.61 %	13,906	39.93 %		99	38.04 %	1	
Medium		0.75 to <2.50			5	2,032	—	—	2	1.32 %	5,443	39.70 %		1	63.14 %	—	
Medium to High		2.50 to <10.00			6	1,555	—	—	—	—	4,745	—		—	—	—	
High		10.00 to <100.00			7	116	—	—	—	—	521	—		—	—	—	
Default		100.00 (Default)			8	101	—	—	—	—	475	—		—	—	—	
Sub-total					9	39,940	—	—	39,941	—	151,841	—		464	—	2	5
<b>Canadian uninsured residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			10	74,512	34,248	43.51 %	89,414	0.09 %	469,546	16.95 %		3,396	3.80 %	13	
Very low to Low		0.15 to <0.25			11	8,964	1,651	27.18 %	9,413	0.22 %	49,310	19.48 %		835	8.86 %	4	
Low		0.25 to <0.50			12	—	—	—	—	—	—	—		—	—	—	
Low		0.50 to <0.75			13	14,581	28	76.60 %	14,603	0.61 %	39,061	17.61 %		2,460	16.84 %	16	
Medium		0.75 to <2.50			14	7,872	544	22.52 %	7,994	1.18 %	30,610	18.00 %		2,106	26.34 %	17	
Medium to High		2.50 to <10.00			15	4,606	95	36.34 %	4,641	6.65 %	13,142	14.83 %		2,733	58.90 %	45	
High		10.00 to <100.00			16	263	24	20.08 %	267	42.58 %	1,534	13.44 %		197	73.53 %	15	
Default		100.00 (Default)			17	126	14	19.55 %	128	100.00 %	976	12.08 %		163	126.84 %	7	
Sub-total					18	110,924	36,604	—	126,460	—	604,179	—		11,890	—	117	61
<b>Non-Canadian residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			19	1,332	5,732	59.01 %	4,715	0.04 %	42,018	67.39 %		414	8.78 %	1	
Very low to Low		0.15 to <0.25			20	5,853	90	100.00 %	5,943	0.17 %	12,199	21.15 %		464	7.81 %	2	
Low		0.25 to <0.50			21	525	192	50.29 %	621	0.37 %	5,797	69.43 %		290	46.69 %	2	
Low		0.50 to <0.75			22	1,083	18	100.00 %	1,100	0.72 %	5,891	28.98 %		331	30.10 %	2	
Medium		0.75 to <2.50			23	414	30	44.53 %	427	1.24 %	4,442	70.33 %		453	105.98 %	4	
Medium to High		2.50 to <10.00			24	381	2	88.70 %	383	3.70 %	2,573	36.70 %		435	113.64 %	6	
High		10.00 to <100.00			25	123	88	62.74 %	178	23.70 %	1,575	33.62 %		342	192.34 %	14	
Default		100.00 (Default)			26	225	—	—	225	100.00 %	5,377	42.83 %		695	308.98 %	64	
Sub-total					27	9,936	6,152	—	13,592	—	79,872	—		3,424	—	95	110
<b>Qualifying revolving retail</b>																	
Exceptionally low to Very low		0.00 to <0.15			28	1,062	40,317	57.02 %	24,050	0.04 %	3,214,382	77.65 %		591	2.46 %	8	
Very low to Low		0.15 to <0.25			29	506	2,320	70.91 %	2,151	0.23 %	300,110	82.35 %		222	10.34 %	4	
Low		0.25 to <0.50			30	2,194	12,268	37.58 %	6,804	0.29 %	617,846	61.32 %		638	9.38 %	12	
Low		0.50 to <0.75			31	417	982	82.37 %	1,226	0.69 %	196,069	86.10 %		321	26.21 %	7	
Medium		0.75 to <2.50			32	3,073	3,496	46.10 %	4,684	1.23 %	391,648	74.30 %		1,688	36.03 %	44	
Medium to High		2.50 to <10.00			33	1,939	1,345	79.39 %	3,007	4.44 %	419,245	83.47 %		2,872	95.50 %	112	
High		10.00 to <100.00			34	434	213	63.23 %	569	23.67 %	80,896	73.78 %		1,069	187.90 %	102	
Default		100.00 (Default)			35	54	24	41.61 %	64	100.00 %	4,109	57.52 %		212	331.13 %	29	
Sub-total					36	9,679	60,965	—	42,555	—	5,224,305	—		7,613	—	318	402
<b>Retail small-and-medium-sized entities</b>																	
Exceptionally low to Very low		0.00 to <0.15			37	1,454	2,990	76.09 %	4,060	0.08 %	60,978	58.96 %		575	14.16 %	2	
Very low to Low		0.15 to <0.25			38	134	571	65.99 %	511	0.19 %	37,792	88.14 %		184	36.03 %	1	
Low		0.25 to <0.50			39	114	377	68.30 %	372	0.44 %	22,863	87.02 %		229	61.56 %	1	
Low		0.50 to <0.75			40	2,057	437	86.62 %	2,334	0.58 %	13,585	55.13 %		1,062	45.52 %	7	
Medium		0.75 to <2.50			41	2,227	631	55.61 %	2,470	1.54 %	43,120	58.42 %		1,801	72.90 %	22	
Medium to High		2.50 to <10.00			42	3,300	267	49.44 %	3,321	4.15 %	25,103	58.53 %		2,980	89.74 %	85	
High		10.00 to <100.00			43	642	19	81.08 %	651	15.94 %	4,988	54.39 %		720	110.64 %	58	
Default		100.00 (Default)			44	154	3	97.66 %	152	100.00 %	4,526	58.09 %		627	411.57 %	57	
Sub-total					45	10,082	5,295	—	13,871	—	212,955	—		8,178	—	233	175
<b>Other retail</b>																	
Exceptionally low to Very low		0.00 to <0.15			46	17,973	4,014	49.79 %	20,218	0.09 %	355,720	25.65 %		1,252	6.19 %	5	
Very low to Low		0.15 to <0.25			47	4,352	1,089	73.26 %	5,150	0.20 %	179,073	75.35 %		1,613	31.32 %	7	
Low		0.25 to <0.50			48	4,919	2,348	27.87 %	5,573	0.30 %	758,633	42.36 %		1,314	23.57 %	7	
Low		0.50 to <0.75			49	6,248	18	56.08 %	6,089	0.63 %	125,883	33.97 %		1,788	29.36 %	13	
Medium		0.75 to <2.50			50	6,963	696	42.79 %	7,216	1.24 %	383,512	44.27 %		3,747	51.93 %	41	
Medium to High		2.50 to <10.00			51	2,859	32	40.77 %	2,843	4.70 %	168,556	43.76 %		1,939	68.21 %	56	
High		10.00 to <100.00			52	924	277	34.52 %	1,019	22.14 %	220,890	51.38 %		1,481	145.44 %	145	
Default		100.00 (Default)			53	128	2	31.59 %	126	100.00 %	51,339	46.09 %		428	339.74 %	40	
Sub-total					54	44,366	8,476	—	48,234	—	2,243,606	—		13,562	—	314	222
Total (all retail portfolios)					55	224,927	117,492	—	284,653	—	8,516,758	—		45,131	—	1,079	975

(1) Credit Risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement Risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Columns "a" and "b" are grouped by the obligor's PD and columns "d" onwards are grouped by the guarantor, where applicable.

(3) PD bands in the table are as prescribed in revised Pillar 3 guidance and used for comparative purposes across banks.

(4) Calculated as EAD post-conversion factor for off-balance sheet exposure divided by total off-balance sheet exposure pre-conversion factor.

(5) Calculated as the obligor PD or guarantor PD, where applicable, weighted by EAD.

(6) Obligor count for Retail portfolios is at the account level.

(7) Calculated as the obligor LGD or guarantor LGD, where applicable, weighted by EAD.

## CR6 - IRB - CREDIT RISK EXPOSURE BY PORTFOLIO AND PD RANGE - WHOLESALE (1) (2) (3)

(\$ millions except as noted)

CR6 - IRB - CREDIT RISK EXPOSURE BY PORTFOLIO AND PD RANGE - WHOLESALE (1) (2) (3) (\$ millions except as noted)						Q2 2022											
						Original on- balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Average CCF (4)	EAD post- CRM and post-CCF	Average PD (5)	Number of obligors (6)	Average LGD (7)	Average maturity (years) (8)	RWA	RWA density	EL	Provisions
Risk Profile	BMO Rating	PD Scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied	LINE #	a	b	c	d	e	f	g	h	i	j	k	l
Corporate																	
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	56	68,002	105,710	49.55 %	129,699	0.08 %	6,686	34.12 %	2.08	24,085	18.57 %	37	
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	57	41,482	54,895	46.99 %	65,869	0.19 %	7,267	35.42 %	2.13	21,687	32.93 %	44	
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	58	49,405	45,115	47.00 %	68,069	0.32 %	10,827	34.79 %	2.18	28,325	41.61 %	76	
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	59	40,888	33,640	50.24 %	55,151	0.55 %	8,314	33.22 %	2.22	28,505	51.69 %	101	
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	60	40,968	26,970	51.06 %	52,717	1.21 %	11,133	33.84 %	2.44	37,916	71.92 %	209	
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	61	9,246	6,435	53.09 %	12,101	3.94 %	3,663	34.48 %	2.02	11,943	98.69 %	162	
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	62	2,196	839	59.68 %	2,597	16.04 %	951	35.82 %	1.73	4,293	165.32 %	149	
Default	Default	100.00 (Default)	C	C to D	63	1,563	512	100.00 %	2,024	100.00 %	516	37.32 %	2.51	4,763	235.38 %	640	
Sub-total					64	253,750	274,116		388,227		49,357			161,517		1,418	1,856
Sovereign																	
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	65	197,117	7,436	60.37 %	201,670	0.01 %	1,799	4.65 %	3.08	4,174	2.07 %	4	
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	66	302	131	71.45 %	374	0.19 %	130	22.97 %	2.06	82	21.89 %	—	
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	67	260	367	40.75 %	390	0.32 %	105	24.02 %	1.84	143	36.74 %	—	
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	68	100	40	34.75 %	109	0.57 %	63	34.75 %	2.58	54	49.77 %	—	
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	69	61	32	34.22 %	56	1.19 %	90	38.44 %	1.41	42	75.46 %	—	
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	70	285	58	38.81 %	307	2.74 %	109	34.09 %	1.28	212	68.95 %	3	
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	71	1	—	—	—	15.30 %	3	32.84 %	1.00	—	159.67 %	—	
Default	Default	100.00 (Default)	C	C to D	72	4	—	—	4	100.00 %	4	39.37 %	2.55	19	519.85 %	—	
Sub-total					73	198,130	8,064		202,910		2,303			4,726		7	8
Bank																	
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	74	10,201	5,631	70.32 %	14,974	0.07 %	216	16.99 %	1.26	1,222	8.16 %	2	
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	75	3,146	4,131	63.32 %	5,510	0.19 %	101	13.98 %	1.20	523	9.50 %	1	
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	76	4,429	1,555	60.87 %	5,157	0.32 %	75	13.74 %	1.20	581	11.26 %	2	
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	77	911	629	61.08 %	1,257	0.54 %	40	12.19 %	2.11	357	28.42 %	1	
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	78	1,770	12	86.62 %	1,481	1.45 %	40	15.00 %	0.45	457	30.90 %	2	
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	79	158	16	52.93 %	161	4.43 %	24	20.43 %	0.46	119	73.78 %	2	
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	80	11	—	—	11	15.28 %	1	45.00 %	1.00	24	218.72 %	1	
Default	Default	100.00 (Default)	C	C to D	81	—	—	—	—	—	—	—	—	—	—	—	
Sub-total					82	20,626	11,974		28,551		497			3,283		11	9
Total (all wholesale portfolios)						83	472,506	294,154		619,688		52,157		169,526		1,436	1,873

(1) Credit Risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement Risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Columns "a" and "b" are grouped by the obligor's PD and columns "d" onwards are grouped by the guarantor, where applicable.

(3) PD bands in the table are as prescribed in revised Pillar 3 guidance and used for comparative purposes across banks.

(4) Calculated as EAD post-conversion factor for off-balance sheet exposure divided by total off-balance sheet exposure pre-conversion factor.

(5) Calculated as the obligor PD or guarantor PD, where applicable, weighted by EAD.

(6) Obligor count for Wholesale portfolios is at the borrower level.

(7) Calculated as the obligor LGD or guarantor LGD, where applicable, weighted by EAD.

(8) Calculated as the effective maturity in years weighted by EAD.

## CR6 - IRB - CREDIT RISK EXPOSURE BY PORTFOLIO AND PD RANGE - RETAIL (1) (2) (3)

(\$ millions except as noted)

						Q1 2022										EL	Provisions
Risk Profile	BMO Rating	PD Scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent	LINE #	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Average CCF (4)	EAD post-CRM and post-CCF	Average PD (5)	Number of obligors (6)	Average LGD (7)	Average maturity (years)	RWA	RWA density		
						a	b	c	d	e	f	g	h	i	j	k	l
<b>Canadian insured residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			1	30,506	—	—	40,889	0.01 %	129,635	26.20 %		451	1.08 %	—	
Very low to Low		0.15 to <0.25			2	—	—	—	—	—	—	—		—	—	—	
Low		0.25 to <0.50			3	—	—	—	—	—	—	—		—	—	—	
Low		0.50 to <0.75			4	6,443	—	—	—	—	14,299	—		—	—	—	
Medium		0.75 to <2.50			5	2,117	—	—	—	—	5,602	—		—	—	—	
Medium to High		2.50 to <10.00			6	1,594	—	—	—	—	4,798	—		—	—	—	
High		10.00 to <100.00			7	118	—	—	—	—	563	—		—	—	—	
Default		100.00 (Default)			8	109	—	—	—	—	509	—		—	—	—	
Sub-total					9	40,887	—		40,889		155,406			451		—	7
<b>Canadian uninsured residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			10	72,346	33,456	43.36 %	86,853	0.09 %	462,395	16.54 %		3,214	3.70 %	12	
Very low to Low		0.15 to <0.25			11	9,343	1,467	26.31 %	9,729	0.22 %	49,633	18.85 %		835	8.58 %	4	
Low		0.25 to <0.50			12	—	—	—	—	—	—	—		—	—	—	
Low		0.50 to <0.75			13	14,166	27	76.39 %	14,187	0.61 %	39,312	16.78 %		2,270	16.00 %	15	
Medium		0.75 to <2.50			14	7,473	553	22.70 %	7,599	1.19 %	29,589	17.25 %		1,928	25.37 %	15	
Medium to High		2.50 to <10.00			15	4,428	92	35.65 %	4,461	6.73 %	12,750	14.17 %		2,527	56.64 %	42	
High		10.00 to <100.00			16	271	17	23.00 %	275	43.68 %	1,526	13.34 %		197	71.65 %	15	
Default		100.00 (Default)			17	138	15	19.54 %	141	100.00 %	1,036	11.85 %		194	137.21 %	9	
Sub-total					18	108,165	35,627		123,245		596,241			11,165		112	79
<b>Non-Canadian residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			19	1,273	5,577	59.03 %	4,565	0.04 %	41,763	67.72 %		403	8.82 %	1	
Very low to Low		0.15 to <0.25			20	5,411	66	100.00 %	5,477	0.17 %	12,206	20.43 %		413	7.54 %	2	
Low		0.25 to <0.50			21	514	210	51.09 %	621	0.37 %	5,814	69.94 %		292	47.03 %	2	
Low		0.50 to <0.75			22	1,099	15	100.00 %	1,114	0.71 %	6,208	29.33 %		339	30.40 %	2	
Medium		0.75 to <2.50			23	425	28	46.27 %	437	1.25 %	4,554	70.65 %		468	107.01 %	4	
Medium to High		2.50 to <10.00			24	409	2	98.14 %	411	3.72 %	2,704	37.08 %		473	115.12 %	6	
High		10.00 to <100.00			25	108	102	62.65 %	171	23.21 %	1,650	36.79 %		360	209.76 %	15	
Default		100.00 (Default)			26	233	—	64.05 %	233	100.00 %	5,383	42.61 %		709	304.15 %	67	
Sub-total					27	9,472	6,000		13,029		80,282			3,457		99	111
<b>Qualifying revolving retail</b>																	
Exceptionally low to Very low		0.00 to <0.15			28	1,545	40,051	57.16 %	24,439	0.04 %	3,184,569	78.86 %		609	2.49 %	8	
Very low to Low		0.15 to <0.25			29	675	2,323	70.08 %	2,303	0.23 %	304,216	83.58 %		242	10.49 %	4	
Low		0.25 to <0.50			30	2,182	11,495	37.48 %	6,491	0.29 %	599,917	61.17 %		610	9.39 %	12	
Low		0.50 to <0.75			31	614	957	81.56 %	1,394	0.69 %	198,670	86.89 %		369	26.47 %	8	
Medium		0.75 to <2.50			32	3,120	3,030	45.88 %	4,510	1.25 %	374,789	75.94 %		1,639	36.33 %	43	
Medium to High		2.50 to <10.00			33	2,152	1,125	79.69 %	3,049	4.40 %	386,764	84.85 %		2,942	96.49 %	113	
High		10.00 to <100.00			34	506	216	61.51 %	638	24.61 %	80,270	74.53 %		1,209	189.25 %	120	
Default		100.00 (Default)			35	51	25	41.66 %	62	100.00 %	4,035	56.79 %		194	314.02 %	29	
Sub-total					36	10,845	59,222		42,886		5,133,230			7,814		337	463
<b>Retail small-and-medium-sized entities</b>																	
Exceptionally low to Very low		0.00 to <0.15			37	1,494	3,062	75.89 %	4,267	0.08 %	61,954	58.95 %		605	14.18 %	2	
Very low to Low		0.15 to <0.25			38	127	574	66.46 %	508	0.19 %	36,833	88.99 %		185	36.38 %	1	
Low		0.25 to <0.50			39	84	306	70.60 %	300	0.44 %	18,846	88.20 %		187	62.39 %	1	
Low		0.50 to <0.75			40	2,021	439	86.49 %	2,306	0.58 %	13,808	56.08 %		1,068	46.32 %	7	
Medium		0.75 to <2.50			41	2,176	629	55.64 %	2,423	1.54 %	43,499	59.17 %		1,790	73.87 %	22	
Medium to High		2.50 to <10.00			42	3,466	234	47.93 %	3,336	4.10 %	25,568	58.28 %		2,975	89.19 %	83	
High		10.00 to <100.00			43	686	20	77.66 %	694	16.29 %	5,476	54.54 %		773	111.36 %	64	
Default		100.00 (Default)			44	161	3	96.51 %	161	100.00 %	4,618	59.55 %		676	419.23 %	58	
Sub-total					45	10,215	5,267		13,995		210,602			8,259		238	160
<b>Other retail</b>																	
Exceptionally low to Very low		0.00 to <0.15			46	14,583	3,761	49.95 %	16,725	0.08 %	174,223	21.12 %		725	4.34 %	3	
Very low to Low		0.15 to <0.25			47	5,624	1,148	74.69 %	6,482	0.20 %	254,548	72.23 %		1,973	30.44 %	9	
Low		0.25 to <0.50			48	6,416	2,326	28.01 %	7,067	0.33 %	830,224	44.98 %		1,918	27.14 %	11	
Low		0.50 to <0.75			49	3,570	23	55.19 %	3,400	0.62 %	12,863	19.50 %		567	16.69 %	4	
Medium		0.75 to <2.50			50	9,189	703	41.43 %	9,433	1.38 %	527,371	46.79 %		5,256	55.73 %	63	
Medium to High		2.50 to <10.00			51	2,022	35	44.55 %	2,009	5.20 %	176,028	41.39 %		1,291	64.28 %	41	
High		10.00 to <100.00			52	1,074	297	34.25 %	1,175	19.81 %	257,511	64.57 %		1,575	134.02 %	147	
Default		100.00 (Default)			53	127	3	33.36 %	125	100.00 %	51,647	46.49 %		401	319.98 %	43	
Sub-total					54	42,605	8,296		46,416		2,284,415			13,706		321	256
Total (all retail portfolios)					55	222,189	114,412		280,460		8,460,176			44,852		1,107	1,076

(1) Credit Risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement Risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Columns "a" and "b" are grouped by the obligor's PD and columns "d" onwards are grouped by the guarantor, where applicable.

(3) PD bands in the table are as prescribed in revised Pillar 3 guidance and used for comparative purposes across banks.

(4) Calculated as EAD post-conversion factor for off-balance sheet exposure divided by total off-balance sheet exposure pre-conversion factor.

(5) Calculated as the obligor PD or guarantor PD, where applicable, weighted by EAD.

(6) Obligor count for Retail portfolios is at the account level.

(7) Calculated as the obligor LGD or guarantor LGD, where applicable, weighted by EAD.

## CR6 - IRB - CREDIT RISK EXPOSURE BY PORTFOLIO AND PD RANGE - WHOLESALE (1) (2) (3)

(\$ millions except as noted)

CR6 - IRB - CREDIT RISK EXPOSURE BY PORTFOLIO AND PD RANGE - WHOLESALE (1) (2) (3) (\$ millions except as noted)						Q1 2022											
						Original on- balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Average CCF (4)	EAD post-CRM and post- CCF	Average PD (5)	Number of obligors (6)	Average LGD (7)	Average maturity (years) (8)	RWA	RWA density	EL	Provisions
Risk Profile	BMO Rating	PD Scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied	LINE #	a	b	c	d	e	f	g	h	i	j	k	l
Corporate																	
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	56	62,616	101,782	49.98 %	122,677	0.08 %	6,451	35.08 %	2.07	23,955	19.53 %	36	
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	57	39,408	55,253	46.41 %	63,641	0.20 %	6,947	35.52 %	2.26	22,148	34.80 %	45	
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	58	50,117	45,651	46.48 %	68,871	0.32 %	10,380	34.92 %	2.25	29,436	42.74 %	77	
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	59	40,717	34,128	50.33 %	55,470	0.59 %	8,164	33.42 %	2.36	30,597	55.16 %	111	
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	60	40,649	29,009	51.17 %	53,393	1.26 %	10,936	34.39 %	2.48	40,185	75.26 %	228	
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	61	9,205	6,560	53.40 %	12,062	3.77 %	3,714	33.94 %	2.09	11,790	97.75 %	155	
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	62	2,213	968	58.67 %	2,674	14.49 %	983	37.35 %	1.89	4,497	168.13 %	145	
Default	Default	100.00 (Default)	C	C to D	63	1,737	562	100.00 %	2,262	100.00 %	541	37.45 %	2.52	5,792	256.12 %	669	
Sub-total					64	246,662	273,913		381,050		48,116			168,400		1,466	1,912
Sovereign																	
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	65	181,707	7,306	60.75 %	186,214	0.01 %	1,852	3.92 %	3.08	4,511	2.42 %	3	
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	66	184	133	78.36 %	268	0.20 %	118	28.48 %	2.10	72	26.80 %	—	
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	67	431	343	40.07 %	548	0.32 %	100	26.03 %	1.99	171	31.22 %	—	
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	68	134	28	29.15 %	135	0.62 %	68	25.93 %	2.01	59	43.63 %	—	
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	69	87	32	39.52 %	81	1.13 %	79	42.24 %	1.31	64	79.04 %	—	
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	70	241	26	42.78 %	251	2.74 %	60	16.55 %	2.84	117	46.54 %	1	
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	71	1	—	—	—	13.95 %	3	32.84 %	1.00	—	154.71 %	—	
Default	Default	100.00 (Default)	C	C to D	72	4	—	—	4	100.00 %	5	39.37 %	2.50	19	499.04 %	—	
Sub-total					73	182,789	7,868		187,501		2,285			5,013		4	7
Bank																	
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	74	9,858	5,583	70.27 %	14,810	0.07 %	218	16.79 %	1.17	1,137	7.67 %	2	
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	75	2,325	3,872	62.17 %	4,505	0.19 %	101	16.03 %	1.09	528	11.72 %	1	
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	76	1,621	1,691	62.72 %	2,337	0.32 %	76	12.28 %	0.95	284	12.16 %	1	
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	77	3,268	159	63.94 %	3,357	0.54 %	39	10.86 %	2.32	605	18.03 %	2	
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	78	1,761	20	80.93 %	1,567	1.50 %	40	16.86 %	0.84	620	39.60 %	4	
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	79	389	33	50.28 %	169	2.75 %	22	22.43 %	0.51	94	55.77 %	1	
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	80	11	—	—	11	13.46 %	1	35.00 %	1.00	18	162.79 %	1	
Default	Default	100.00 (Default)	C	C to D	81	—	—	—	—	—	—	—	—	—	—	—	
Sub-total					82	19,233	11,358		26,756		497			3,286		12	7
Total (all wholesale portfolios)						83	448,684	293,139		595,307		50,898		176,699		1,482	1,926

(1) Credit Risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement Risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Columns "a" and "b" are grouped by the obligor's PD and columns "d" onwards are grouped by the guarantor, where applicable.

(3) PD bands in the table are as prescribed in revised Pillar 3 guidance and used for comparative purposes across banks.

(4) Calculated as EAD post-conversion factor for off-balance sheet exposure divided by total off-balance sheet exposure pre-conversion factor.

(5) Calculated as the obligor PD or guarantor PD, where applicable, weighted by EAD.

(6) Obligor count for Wholesale portfolios is at the borrower level.

(7) Calculated as the obligor LGD or guarantor LGD, where applicable, weighted by EAD.

(8) Calculated as the effective maturity in years weighted by EAD.

## CR6 - IRB - CREDIT RISK EXPOSURE BY PORTFOLIO AND PD RANGE - RETAIL (1) (2) (3)

(\$ millions except as noted)

						Q4 2021											
Risk Profile	BMO Rating	PD Scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent	LINE #	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Average CCF (4)	EAD post-CRM and post-CCF	Average PD (5)	Number of obligors (6)	Average LGD (7)	Average maturity (years)	RWA	RWA density	EL	Provisions
						a	b	c	d	e	f	g	h	i	j	k	l
<b>Canadian insured residential</b>																	
Exceptionally low to Very low		0.00 to <0.15	Exceptionally low to Very low		1	31,340	—	—	41,917	0.00 %	133,801	26.08 %		453	1.05 %	—	
Very low to Low		0.15 to <0.25			2	—	—	—	—	—	—	—		—	—	—	
Low		0.25 to <0.50			3	—	—	—	—	—	—	—		—	—	—	
Low		0.50 to <0.75			4	6,762	—	—	—	—	14,189	—		—	—	—	
Medium		0.75 to <2.50			5	2,068	—	—	—	—	5,389	—		—	—	—	
Medium to High		2.50 to <10.00			6	1,520	—	—	—	—	4,504	—		—	—	—	
High		10.00 to <100.00			7	118	—	—	—	—	509	—		—	—	—	
Default		100.00 (Default)			8	110	—	—	—	—	495	—		—	—	—	
Sub-total					9	41,918	—	—	41,917		158,887			453		—	5
<b>Canadian uninsured residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			10	69,954	32,429	43.12 %	83,937	0.09 %	454,484	16.21 %		3,048	3.63 %	12	
Very low to Low		0.15 to <0.25			11	8,687	1,552	26.95 %	9,105	0.22 %	48,678	18.60 %		771	8.46 %	4	
Low		0.25 to <0.50			12	—	—	—	—	—	—	—		—	—	—	
Low		0.50 to <0.75			13	14,088	23	73.93 %	14,105	0.62 %	39,247	16.52 %		2,230	15.81 %	14	
Medium		0.75 to <2.50			14	7,790	502	24.66 %	7,914	1.18 %	31,036	16.99 %		1,963	24.80 %	16	
Medium to High		2.50 to <10.00			15	4,494	91	37.02 %	4,527	6.65 %	13,277	13.91 %		2,499	55.20 %	41	
High		10.00 to <100.00			16	288	18	24.02 %	293	43.12 %	1,665	13.57 %		213	72.68 %	16	
Default		100.00 (Default)			17	131	15	19.06 %	134	100.00 %	1,017	10.99 %		168	124.95 %	9	
Sub-total					18	105,432	34,630		120,015		589,404			10,892		112	77
<b>Non-Canadian residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			19	1,258	5,376	59.02 %	4,431	0.04 %	41,701	67.27 %		388	8.76 %	1	
Very low to Low		0.15 to <0.25			20	5,449	49	100.00 %	5,499	0.17 %	12,941	20.92 %		425	7.72 %	2	
Low		0.25 to <0.50			21	492	189	51.42 %	590	0.37 %	5,836	69.55 %		276	46.77 %	2	
Low		0.50 to <0.75			22	1,063	10	100.00 %	1,073	0.71 %	6,628	30.23 %		335	31.24 %	2	
Medium		0.75 to <2.50			23	409	24	46.85 %	420	1.25 %	4,583	70.18 %		447	106.32 %	4	
Medium to High		2.50 to <10.00			24	388	3	95.65 %	391	3.75 %	2,807	38.09 %		465	118.73 %	6	
High		10.00 to <100.00			25	130	102	63.00 %	194	24.27 %	1,754	36.14 %		396	204.16 %	18	
Default		100.00 (Default)			26	243	—	56.71 %	243	100.00 %	5,805	42.05 %		732	301.26 %	68	
Sub-total					27	9,432	5,753		12,841		82,055			3,464		103	117
<b>Qualifying revolving retail</b>																	
Exceptionally low to Very low		0.00 to <0.15			28	1,433	38,624	56.71 %	23,339	0.04 %	3,103,445	78.52 %		568	2.43 %	8	
Very low to Low		0.15 to <0.25			29	605	2,361	68.65 %	2,225	0.23 %	314,606	83.20 %		232	10.44 %	4	
Low		0.25 to <0.50			30	1,963	9,342	37.68 %	5,483	0.29 %	433,980	54.68 %		464	8.46 %	9	
Low		0.50 to <0.75			31	535	954	79.82 %	1,296	0.69 %	200,963	86.11 %		340	26.22 %	8	
Medium		0.75 to <2.50			32	2,856	2,771	45.55 %	4,118	1.24 %	332,121	74.11 %		1,454	35.32 %	38	
Medium to High		2.50 to <10.00			33	1,905	1,037	79.13 %	2,726	4.37 %	359,431	83.60 %		2,576	94.52 %	99	
High		10.00 to <100.00			34	460	219	61.46 %	594	22.90 %	75,180	71.70 %		1,082	182.05 %	101	
Default		100.00 (Default)			35	54	28	42.34 %	66	100.00 %	4,208	56.47 %		190	287.19 %	33	
Sub-total					36	9,811	55,336		39,847		4,823,934			6,906		300	485
<b>Retail small-and-medium-sized entities</b>																	
Exceptionally low to Very low		0.00 to <0.15			37	1,502	2,999	75.97 %	4,542	0.08 %	60,325	56.61 %		623	13.72 %	2	
Very low to Low		0.15 to <0.25			38	129	539	65.17 %	480	0.19 %	36,089	89.01 %		175	36.39 %	1	
Low		0.25 to <0.50			39	88	285	69.93 %	287	0.44 %	17,520	88.21 %		179	62.40 %	1	
Low		0.50 to <0.75			40	1,973	436	85.56 %	2,269	0.58 %	13,875	58.34 %		1,092	48.13 %	8	
Medium		0.75 to <2.50			41	2,110	617	56.02 %	2,362	1.54 %	43,803	60.03 %		1,771	74.96 %	21	
Medium to High		2.50 to <10.00			42	3,731	215	48.28 %	3,270	4.06 %	25,181	58.18 %		2,907	88.91 %	80	
High		10.00 to <100.00			43	694	21	76.56 %	686	16.90 %	5,463	54.92 %		778	113.45 %	66	
Default		100.00 (Default)			44	156	3	96.15 %	158	100.00 %	6,052	62.04 %		1,166	738.77 %	12	
Sub-total					45	10,383	5,115		14,054		208,308			8,691		191	172
<b>Other retail</b>																	
Exceptionally low to Very low		0.00 to <0.15			46	13,730	3,644	49.36 %	15,793	0.08 %	191,000	20.46 %		655	4.15 %	2	
Very low to Low		0.15 to <0.25			47	5,795	1,119	74.69 %	6,631	0.20 %	258,092	73.18 %		2,045	30.83 %	9	
Low		0.25 to <0.50			48	6,276	2,185	27.60 %	6,879	0.33 %	836,390	44.88 %		1,865	27.11 %	11	
Low		0.50 to <0.75			49	3,301	25	55.38 %	3,134	0.62 %	12,442	19.04 %		511	16.32 %	4	
Medium		0.75 to <2.50			50	8,993	686	43.19 %	9,239	1.37 %	512,974	46.70 %		5,135	55.58 %	61	
Medium to High		2.50 to <10.00			51	1,949	33	47.91 %	1,937	5.15 %	153,215	41.54 %		1,246	64.35 %	39	
High		10.00 to <100.00			52	1,069	316	32.73 %	1,171	19.28 %	226,904	63.98 %		1,556	132.89 %	142	
Default		100.00 (Default)			53	122	3	54.61 %	121	100.00 %	67,748	45.13 %		372	306.84 %	41	
Sub-total					54	41,235	8,011		44,905		2,258,765			13,385		309	244
Total (all retail portfolios)					55	218,211	108,845		273,579		8,121,353			43,791		1,015	1,100

(1) Credit Risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement Risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Columns "a" and "b" are grouped by the obligor's PD and columns "d" onwards are grouped by the guarantor, where applicable.

(3) PD bands in the table are as prescribed in revised Pillar 3 guidance and used for comparative purposes across banks.

(4) Calculated as EAD post-conversion factor for off-balance sheet exposure divided by total off-balance sheet exposure pre-conversion factor.

(5) Calculated as the obligor PD or guarantor PD, where applicable, weighted by EAD.

(6) Obligor count for Retail portfolios is at the account level.

(7) Calculated as the obligor LGD or guarantor LGD, where applicable, weighted by EAD.

**CR6 - IRB - CREDIT RISK EXPOSURE BY PORTFOLIO AND PD RANGE - WHOLESALE (1) (2) (3)**

(\$ millions except as noted)

CR6 - IRB - CREDIT RISK EXPOSURE BY PORTFOLIO AND PD RANGE - WHOLESALE (1) (2) (3) (\$ millions except as noted)						Q4 2021												
						Original on- balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Average CCF (4)	EAD post- CRM and post-CCF	Average PD (5)	Number of obligors (6)	Average LGD (7)	Average maturity (years) (8)	RWA	RWA density	EL	Provisions	
Risk Profile	BMO Rating	PD Scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied	LINE #	a	b	c	d	e	f	g	h	i	j	k	l	
Corporate																		
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	56	52,796	98,172	48.47 %	108,938	0.08 %	5,930	34.51 %	2.02	20,710	19.01 %	31		
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	57	35,324	47,959	45.27 %	55,670	0.20 %	6,327	35.27 %	2.16	19,009	34.15 %	39		
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	58	45,062	44,215	44.99 %	62,880	0.32 %	9,951	35.19 %	2.22	26,874	42.74 %	71		
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	59	36,190	33,334	44.61 %	48,925	0.60 %	7,780	33.88 %	2.26	26,860	54.90 %	99		
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	60	37,943	27,041	45.44 %	48,155	1.27 %	10,843	34.35 %	2.34	35,373	73.46 %	208		
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	61	7,898	6,455	48.83 %	10,430	3.80 %	3,232	33.02 %	2.00	9,823	94.18 %	132		
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	62	2,490	978	51.24 %	2,857	14.26 %	958	37.29 %	1.95	4,873	170.56 %	152		
Default	Default	100.00 (Default)	C	C to D	63	1,432	728	100.00 %	2,014	100.00 %	452	36.70 %	2.36	4,510	223.92 %	633		
Sub-total					64	219,135	258,882		339,869		45,473			148,032		1,365	1,914	
Sovereign																		
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	65	196,638	7,268	60.93 %	201,145	0.01 %	1,798	3.93 %	2.41	4,965	2.47 %	4		
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	66	346	139	74.05 %	430	0.20 %	104	16.45 %	1.66	62	14.51 %	—		
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	67	305	190	39.86 %	356	0.31 %	89	24.98 %	1.99	107	30.03 %	—		
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	68	185	29	29.55 %	180	0.61 %	68	38.53 %	2.06	121	67.12 %	—		
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	69	136	106	39.40 %	158	1.12 %	102	27.38 %	1.43	79	49.58 %	—		
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	70	211	24	43.68 %	220	2.74 %	58	21.45 %	3.16	136	61.94 %	1		
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	71	1	—	—	—	13.95 %	4	32.84 %	1.00	—	154.71 %	—		
Default	Default	100.00 (Default)	C	C to D	72	5	—	—	5	100.00 %	3	44.99 %	2.14	30	596.15 %	—		
Sub-total					73	197,827	7,756		202,494		2,226			5,500		5	7	
Bank																		
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	74	10,155	4,579	72.98 %	14,565	0.07 %	175	17.42 %	1.20	1,109	7.62 %	2		
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	75	2,005	4,713	61.90 %	4,548	0.19 %	77	15.62 %	1.22	516	11.34 %	1		
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	76	1,309	1,766	61.97 %	2,070	0.32 %	74	12.77 %	1.12	283	13.66 %	1		
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	77	3,651	145	64.68 %	3,733	0.54 %	28	10.67 %	2.16	638	17.08 %	2		
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	78	1,321	37	60.57 %	1,188	1.46 %	40	14.95 %	0.45	369	31.08 %	3		
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	79	292	40	91.67 %	136	2.75 %	22	20.72 %	0.41	70	51.67 %	1		
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	80	11	—	—	11	13.46 %	1	13.46 %	1.00	7	62.61 %	—		
Default	Default	100.00 (Default)	C	C to D	81	—	—	—	—	—	—	—	—	—	—	—		
Sub-total					82	18,744	11,280		26,251		417			2,992		10	7	
Total (all wholesale portfolios)						83	435,706	277,918		568,614		48,116			156,524		1,380	1,928

(1) Credit Risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement Risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Columns "a" and "b" are grouped by the obligor's PD and columns "d" onwards are grouped by the guarantor, where applicable.

(3) PD bands in the table are as prescribed in revised Pillar 3 guidance and used for comparative purposes across banks.

(4) Calculated as EAD post-conversion factor for off-balance sheet exposure divided by total off-balance sheet exposure pre-conversion factor.

(5) Calculated as the obligor PD or guarantor PD, where applicable, weighted by EAD.

(6) Obligor count for Wholesale portfolios is at the borrower level.

(7) Calculated as the obligor LGD or guarantor LGD, where applicable, weighted by EAD.

(8) Calculated as the effective maturity in years weighted by EAD.

## CR6 - IRB - CREDIT RISK EXPOSURE BY PORTFOLIO AND PD RANGE - RETAIL (1) (2) (3)

(\$ millions except as noted)

						Q3 2021											
Risk Profile	BMO Rating	PD Scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent	LINE #	Original on- balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Average CCF (4)	EAD post- CRM and post-CCF	Average PD (5)	Number of obligors (6)	Average LGD (7)	Average maturity (years)	RWA	RWA density	EL	Provisions
						a	b	c	d	e	f	g	h	i	j	k	l
<b>Canadian insured residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			1	29,160	—	—	40,701	0.00 %	127,345	26.40 %		467	1.13 %	—	
Very low to Low		0.15 to <0.25			2	—	—	—	—	—	—	—		—	—	—	
Low		0.25 to <0.50			3	—	—	—	—	—	—	—		—	—	—	
Low		0.50 to <0.75			4	7,415	—	—	—	—	14,557	—		—	—	—	
Medium		0.75 to <2.50			5	2,197	—	—	—	—	5,663	—		—	—	—	
Medium to High		2.50 to <10.00			6	1,711	—	—	—	—	5,079	—		—	—	—	
High		10.00 to <100.00			7	104	—	—	—	—	467	—		—	—	—	
Default		100.00 (Default)			8	115	—	—	—	—	524	—		—	—	—	
Sub-total					9	40,702	—		40,701		153,635			467		—	5
<b>Canadian uninsured residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			10	69,547	31,820	42.89 %	83,196	0.09 %	455,627	15.97 %		2,978	3.58 %	11	
Very low to Low		0.15 to <0.25			11	8,989	1,418	26.46 %	9,364	0.22 %	48,914	18.40 %		785	8.37 %	4	
Low		0.25 to <0.50			12	—	—	—	—	—	—	—		—	—	—	
Low		0.50 to <0.75			13	14,044	22	74.13 %	14,060	0.62 %	40,322	16.23 %		2,184	15.53 %	14	
Medium		0.75 to <2.50			14	7,502	508	23.42 %	7,621	1.19 %	30,089	16.68 %		1,864	24.46 %	15	
Medium to High		2.50 to <10.00			15	4,522	98	34.98 %	4,557	6.71 %	13,503	13.48 %		2,452	53.81 %	41	
High		10.00 to <100.00			16	280	17	22.60 %	284	42.51 %	1,632	13.94 %		213	74.97 %	16	
Default		100.00 (Default)			17	139	15	17.10 %	142	100.00 %	1,025	11.33 %		179	126.67 %	10	
Sub-total					18	105,023	33,898		119,224		591,112			10,655		111	76
<b>Non-Canadian residential</b>																	
Exceptionally low to Very low		0.00 to <0.15			19	1,255	5,399	59.10 %	4,446	0.04 %	41,952	67.43 %		390	8.78 %	1	
Very low to Low		0.15 to <0.25			20	5,419	46	100.00 %	5,465	0.17 %	13,076	21.44 %		433	7.92 %	2	
Low		0.25 to <0.50			21	486	190	50.94 %	582	0.37 %	5,816	69.37 %		272	46.65 %	2	
Low		0.50 to <0.75			22	1,072	6	100.00 %	1,079	0.71 %	6,950	31.63 %		352	32.61 %	2	
Medium		0.75 to <2.50			23	419	24	47.00 %	430	1.25 %	4,711	70.64 %		461	107.10 %	4	
Medium to High		2.50 to <10.00			24	403	4	96.51 %	406	3.81 %	2,976	38.13 %		485	119.24 %	6	
High		10.00 to <100.00			25	112	93	62.21 %	170	22.81 %	1,660	37.22 %		361	211.90 %	15	
Default		100.00 (Default)			26	268	—	61.37 %	268	100.00 %	5,875	42.78 %		855	318.64 %	72	
Sub-total					27	9,434	5,762		12,846		83,016			3,609		104	129
<b>Qualifying revolving retail</b>																	
Exceptionally low to Very low		0.00 to <0.15			28	1,630	39,707	56.96 %	24,246	0.05 %	3,072,598	74.73 %		585	2.41 %	8	
Very low to Low		0.15 to <0.25			29	355	2,242	68.29 %	1,885	0.23 %	306,744	92.95 %		220	11.66 %	4	
Low		0.25 to <0.50			30	105	399	74.45 %	402	0.37 %	67,867	93.35 %		71	17.52 %	1	
Low		0.50 to <0.75			31	3,547	11,508	39.15 %	8,052	0.58 %	679,440	59.96 %		1,293	16.05 %	28	
Medium		0.75 to <2.50			32	651	684	82.03 %	1,212	1.34 %	147,580	85.73 %		524	43.25 %	14	
Medium to High		2.50 to <10.00			33	2,487	1,386	65.96 %	3,402	3.55 %	396,789	80.95 %		2,752	80.90 %	98	
High		10.00 to <100.00			34	630	229	61.08 %	770	21.19 %	84,921	75.54 %		1,370	177.93 %	120	
Default		100.00 (Default)			35	60	23	42.65 %	70	100.00 %	4,215	57.43 %		210	298.55 %	36	
Sub-total					36	9,465	56,178		40,039		4,760,154			7,025		309	501
<b>Retail small-and-medium-sized entities</b>																	
Exceptionally low to Very low		0.00 to <0.15			37	1,501	2,985	75.74 %	5,008	0.07 %	59,860	50.22 %		608	12.15 %	2	
Very low to Low		0.15 to <0.25			38	120	512	64.92 %	453	0.19 %	34,091	88.90 %		164	36.35 %	1	
Low		0.25 to <0.50			39	86	301	69.37 %	295	0.44 %	18,444	88.00 %		183	62.25 %	1	
Low		0.50 to <0.75			40	1,904	415	85.96 %	2,199	0.58 %	13,708	57.16 %		1,037	47.18 %	7	
Medium		0.75 to <2.50			41	2,074	602	56.09 %	2,340	1.55 %	43,432	59.26 %		1,733	74.06 %	21	
Medium to High		2.50 to <10.00			42	4,357	214	47.68 %	3,349	4.06 %	25,531	57.76 %		2,956	88.27 %	82	
High		10.00 to <100.00			43	757	20	75.33 %	770	16.80 %	5,776	54.29 %		860	111.63 %	72	
Default		100.00 (Default)			44	172	5	100.00 %	175	100.00 %	6,568	59.87 %		1,150	655.50 %	21	
Sub-total					45	10,971	5,054		14,589		207,410			8,691		207	182
<b>Other retail</b>																	
Exceptionally low to Very low		0.00 to <0.15			46	13,087	3,635	49.74 %	15,157	0.08 %	193,506	19.87 %		617	4.07 %	2	
Very low to Low		0.15 to <0.25			47	6,007	1,068	76.74 %	6,826	0.20 %	261,197	73.97 %		2,130	31.20 %	10	
Low		0.25 to <0.50			48	5,788	1,140	23.72 %	6,058	0.35 %	815,330	42.86 %		1,624	26.80 %	9	
Low		0.50 to <0.75			49	4,211	1,122	33.69 %	4,417	0.60 %	16,871	34.27 %		1,250	28.31 %	9	
Medium		0.75 to <2.50			50	8,703	553	44.44 %	8,898	1.38 %	501,995	45.38 %		4,809	54.05 %	58	
Medium to High		2.50 to <10.00			51	2,051	52	37.51 %	2,037	4.99 %	149,563	42.87 %		1,342	65.87 %	40	
High		10.00 to <100.00			52	960	305	35.80 %	1,069	19.30 %	212,276	65.39 %		1,454	136.02 %	133	
Default		100.00 (Default)			53	130	4	69.66 %	129	100.00 %	67,775	46.17 %		341	265.21 %	50	
Sub-total					54	40,937	7,879		44,591		2,218,513			13,567		311	284
Total (all retail portfolios)					55	216,532	108,771		271,990		8,013,840			44,014		1,042	1,177

(1) Credit Risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement Risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Columns "a" and "b" are grouped by the obligor's PD and columns "d" onwards are grouped by the guarantor, where applicable.

(3) PD bands in the table are as prescribed in revised Pillar 3 guidance and used for comparative purposes across banks.

(4) Calculated as EAD post-conversion factor for off-balance sheet exposure divided by total off-balance sheet exposure pre-conversion factor.

(5) Calculated as the obligor PD or guarantor PD, where applicable, weighted by EAD.

(6) Obligor count for Retail portfolios is at the account level.

(7) Calculated as the obligor LGD or guarantor LGD, where applicable, weighted by EAD.

## CR6 - IRB - CREDIT RISK EXPOSURE BY PORTFOLIO AND PD RANGE - WHOLESALE (1) (2) (3)

(\$ millions except as noted)

CR6 - IRB - CREDIT RISK EXPOSURE BY PORTFOLIO AND PD RANGE - WHOLESALE (1) (2) (3) (\$ millions except as noted)						Q3 2021											
						Original on- balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Average CCF (4)	EAD post- CRM and post-CCF	Average PD (5)	Number of obligors (6)	Average LGD (7)	Average maturity (years) (8)	RWA	RWA density	EL	Provisions
Risk Profile	BMO Rating	PD Scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied	LINE #	a	b	c	d	e	f	g	h	i	j	k	l
Corporate																	
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	56	50,902	88,410	50.84 %	105,042	0.08 %	5,662	34.68 %	2.01	19,815	18.86 %	30	
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	57	34,211	46,200	45.41 %	53,550	0.20 %	6,094	35.42 %	2.10	18,011	33.63 %	38	
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	58	41,514	45,245	44.89 %	59,799	0.32 %	9,668	35.85 %	2.19	25,808	43.16 %	69	
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	59	36,720	32,444	44.89 %	49,279	0.60 %	7,881	33.93 %	2.18	26,637	54.05 %	100	
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	60	36,511	29,427	45.31 %	47,449	1.25 %	10,802	34.37 %	2.32	34,577	72.87 %	204	
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	61	10,696	7,892	46.15 %	13,439	3.84 %	3,410	31.81 %	1.89	12,131	90.27 %	166	
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	62	2,223	777	41.13 %	2,450	14.70 %	952	41.39 %	1.92	4,630	188.97 %	148	
Default	Default	100.00 (Default)	C	C to D	63	1,663	831	100.00 %	2,357	100.00 %	483	35.44 %	2.44	5,687	241.34 %	706	
Sub-total					64	214,440	251,226		333,365		44,952			147,296		1,461	2,043
Sovereign																	
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	65	190,234	7,318	60.47 %	194,745	0.02 %	1,783	4.47 %	2.46	5,449	2.80 %	4	
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	66	295	145	72.69 %	378	0.20 %	107	19.48 %	1.92	65	17.32 %	—	
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	67	81	189	38.51 %	134	0.27 %	77	43.87 %	0.96	62	46.45 %	—	
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	68	74	32	30.76 %	63	0.55 %	75	30.84 %	5.00	135	214.30 %	—	
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	69	154	110	42.20 %	180	1.21 %	102	43.86 %	1.43	154	85.98 %	1	
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	70	145	27	45.36 %	155	2.86 %	64	9.35 %	2.89	44	28.50 %	1	
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	71	1	—	—	—	—	5	—	—	—	—	—	
Default	Default	100.00 (Default)	C	C to D	72	5	—	—	5	100.00 %	3	42.38 %	1.00	29	580.00 %	—	
Sub-total					73	190,989	7,821		195,660		2,216			5,938		6	8
Bank																	
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	74	10,982	4,567	72.11 %	15,382	0.07 %	181	17.58 %	1.05	1,086	7.06 %	2	
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	75	1,961	4,357	61.83 %	4,284	0.19 %	76	15.41 %	1.30	492	11.49 %	1	
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	76	1,406	1,536	61.68 %	1,977	0.32 %	74	13.18 %	0.97	274	13.85 %	1	
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	77	281	373	61.55 %	493	0.55 %	33	12.00 %	0.90	75	15.17 %	1	
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	78	3,856	40	78.44 %	3,751	1.14 %	40	15.02 %	1.57	1,175	31.33 %	6	
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	79	350	96	72.57 %	214	3.55 %	20	18.60 %	1.10	108	50.71 %	1	
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	80	—	—	—	—	—	—	—	—	—	—	—	
Default	Default	100.00 (Default)	C	C to D	81	—	—	—	—	—	—	—	—	—	—	—	
Sub-total					82	18,836	10,969		26,101		424			3,210		12	9
Total (all wholesale portfolios)																	
					83	424,265	270,016		555,126		47,592			156,444		1,479	2,060

(1) Credit Risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement Risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Columns "a" and "b" are grouped by the obligor's PD and columns "d" onwards are grouped by the guarantor, where applicable.

(3) PD bands in the table are as prescribed in revised Pillar 3 guidance and used for comparative purposes across banks.

(4) Calculated as EAD post-conversion factor for off-balance sheet exposure divided by total off-balance sheet exposure pre-conversion factor.

(5) Calculated as the obligor PD or guarantor PD, where applicable, weighted by EAD.

(6) Obligor count for Wholesale portfolios is at the borrower level.

(7) Calculated as the obligor LGD or guarantor LGD, where applicable, weighted by EAD.

(8) Calculated as the effective maturity in years weighted by EAD.



**CR8 - RWA FLOW STATEMENTS OF CREDIT RISK  
AND COUNTERPARTY CREDIT RISK EXPOSURES (1)**

(\$ millions)

	Q3 2022			Q2 2022		
	Credit risk, of which		Counterparty credit risk (2)	Credit risk, of which		Counterparty credit risk (2)
	AIRB	Standardized		AIRB	Standardized	
	a	b	c	d	e	f
1 <b>RWA as at beginning of reporting period</b>	214,657	25,820	19,344	221,551	26,561	18,941
2 Asset size (3)	15,500	1,478	(1,808)	(1,850)	219	1,310
3 Asset quality (4)	(3,336)	3	(364)	(5,612)	(7)	(781)
4 Model updates (5)	619	—	—	(982)	—	—
5 Methodology and policy (6)	—	—	—	315	(1,060)	—
6 Acquisitions and disposals	—	—	—	—	—	—
7 Foreign exchange movements	(241)	(16)	(28)	1,235	107	(126)
8 Other	—	—	—	—	—	—
9 <b>RWA as at end of reporting period</b>	227,199	27,285	17,144	214,657	25,820	19,344

**CR8 - RWA FLOW STATEMENTS OF CREDIT RISK  
AND COUNTERPARTY CREDIT RISK EXPOSURES (1)**

(\$ millions)

	Q1 2022			Q4 2021		
	Credit risk, of which		Counterparty credit risk (2)	Credit risk, of which		Counterparty credit risk (2)
	AIRB	Standardized		AIRB	Standardized	
	a	b	c	d	e	f
1 <b>RWA as at beginning of reporting period</b>	200,315	37,388	18,047	200,458	35,554	19,865
2 Asset size (3)	13,317	1,583	1,012	5,245	1,986	(1,190)
3 Asset quality (4)	(2,823)	2	(29)	(4,208)	21	(548)
4 Model updates (5)	—	—	—	(280)	—	—
5 Methodology and policy (6)	8,055	(12,672)	—	—	—	—
6 Acquisitions and disposals	(34)	(291)	—	—	—	—
7 Foreign exchange movements	2,721	551	(89)	(900)	(173)	(80)
8 Other	—	—	—	—	—	—
9 <b>RWA as at end of reporting period</b>	221,551	26,561	18,941	200,315	37,388	18,047

**CR8 - RWA FLOW STATEMENTS OF CREDIT RISK  
AND COUNTERPARTY CREDIT RISK EXPOSURES (1)**

(\$ millions)

	Q3 2021		
	Credit risk, of which		Counterparty credit risk (2)
	AIRB	Standardized	
	a	b	c
1 <b>RWA as at beginning of reporting period</b>	200,165	34,637	20,748
2 Asset size (3)	4,238	597	(563)
3 Asset quality (4)	(5,642)	(11)	(233)
4 Model updates (5)	40	—	—
5 Methodology and policy (6)	—	—	—
6 Acquisitions and disposals	—	—	—
7 Foreign exchange movements	1,657	331	(87)
8 Other	—	—	—
9 <b>RWA as at end of reporting period</b>	200,458	35,554	19,865

(1) Credit Risk excludes RWA for Securitization, Equity Investment in Funds, Settlement Risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Counterparty Credit Risk includes RWA for derivatives, SFTs, trades cleared through central counterparties and CVA charge.

(3) Asset size includes organic changes in book size and composition (including new business and maturing loans).

(4) Asset quality captures the quality of book changes caused by experience such as underlying customer behaviour or demographics, including changes through model calibrations/realignments.

(5) Model updates include model implementation, change in model scope or any change to address model malfunctions.

(6) Methodology and policy include methodology changes to the calculations driven by regulatory policy changes, such as new or revised regulation.

EXPOSURE COVERED BY CREDIT RISK MITIGATION (1) (2) (3)		Q3 2022				Q2 2022			
		Standardized		AIRB		Standardized		AIRB	
		EAD post-CRM and post-CCF	Of which exposure amount covered by guarantees or credit derivatives	EAD post-CRM and post-CCF	Of which exposure amount covered by guarantees or credit derivatives	EAD post-CRM and post-CCF	Of which exposure amount covered by guarantees or credit derivatives	EAD post-CRM and post-CCF	Of which exposure amount covered by guarantees or credit derivatives
(\$ millions)	LINE #								
Corporate (incl specialized lending and SMEs treated as corporate)	1	7,491	81	401,775	13,261	7,147	105	388,227	12,335
Sovereign	2	1	—	205,312	179	1	—	202,910	259
Bank	3	37	—	27,506	924	47	—	28,551	1,085
Total Wholesale	4	7,529	81	634,593	14,364	7,195	105	619,688	13,679
Residential mortgages excluding home equity line of credits (HELOCs)	5	513	—	123,507	38,769	550	—	120,382	37,878
HELOCs	6	52	—	61,393	—	60	—	59,611	—
Other retail	7	4,201	448	50,464	1,154	4,225	472	48,234	1,176
Qualifying revolving retail	8	—	—	44,090	—	—	—	42,555	—
Retail SMEs	9	1,870	—	16,167	365	1,910	—	13,871	360
Total Retail	10	6,636	448	295,621	40,288	6,745	472	284,653	39,414
Other assets	11	11,197	—	—	—	9,722	—	—	—
Equity	12	2,561	—	—	—	2,366	—	—	—
Total Bank	13	27,923	529	930,214	54,652	26,028	577	904,341	53,093

EXPOSURE COVERED BY CREDIT RISK MITIGATION (1) (2) (3)		Q1 2022				Q4 2021			
		Standardized		AIRB		Standardized		AIRB	
		EAD post-CRM and post-CCF	Of which exposure amount covered by guarantees or credit derivatives	EAD post-CRM and post-CCF	Of which exposure amount covered by guarantees or credit derivatives	EAD post-CRM and post-CCF	Of which exposure amount covered by guarantees or credit derivatives	EAD post-CRM and post-CCF	Of which exposure amount covered by guarantees or credit derivatives
(\$ millions)	LINE #								
Corporate (incl specialized lending and SMEs treated as corporate)	1	8,201	171	381,050	12,272	19,009	1,002	339,869	11,322
Sovereign	2	1	—	187,501	262	234	—	202,494	136
Bank	3	31	—	26,756	1,045	297	—	26,251	1,069
Total Wholesale	4	8,233	171	595,307	13,579	19,540	1,002	568,614	12,527
Residential mortgages excluding home equity line of credits (HELOCs)	5	594	—	118,755	40,641	628	—	118,223	41,752
HELOCs	6	67	—	58,408	—	73	—	56,550	—
Other retail	7	3,943	462	46,416	1,234	4,101	443	44,905	1,276
Qualifying revolving retail	8	—	—	42,886	—	—	—	39,847	—
Retail SMEs	9	1,787	—	13,995	478	1,705	—	14,054	788
Total Retail	10	6,391	462	280,460	42,353	6,507	443	273,579	43,816
Other assets	11	10,406	—	—	—	10,978	—	—	—
Equity	12	2,212	—	—	—	1,828	—	—	—
Total Bank	13	27,242	633	875,767	55,932	38,853	1,445	842,193	56,343

EXPOSURE COVERED BY CREDIT RISK MITIGATION (1) (2) (3)		Q3 2021			
		Standardized		AIRB	
		EAD post-CRM and post-CCF	Of which exposure amount covered by guarantees or credit derivatives	EAD post-CRM and post-CCF	Of which exposure amount covered by guarantees or credit derivatives
(\$ millions)	LINE #				
Corporate (incl specialized lending and SMEs treated as corporate)	1	18,932	1,299	333,365	11,955
Sovereign	2	255	—	195,660	144
Bank	3	300	—	26,101	1,209
Total Wholesale	4	19,487	1,299	555,126	13,308
Residential mortgages excluding home equity line of credits (HELOCs)	5	692	—	117,269	40,544
HELOCs	6	83	—	55,502	—
Other retail	7	4,005	460	44,591	1,326
Qualifying revolving retail	8	—	—	40,039	—
Retail SMEs	9	1,599	—	14,589	1,272
Total Retail	10	6,379	460	271,990	43,142
Other assets	11	9,497	—	—	—
Equity	12	1,846	—	—	—
Total Bank	13	37,209	1,759	827,116	56,450

(1) Credit Risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement Risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) Credit risk mitigants herein include only credit derivatives and guarantees. Collateral is reflected in the risk parameters (PDs, LGDs) for AIRB exposures and risk weights for exposures under the Standardized Approach.

(3) As at July 31, 2022 the RWA impact of credit derivatives used as CRM techniques is a decrease of \$7 million (April 30, 2022 a decrease of \$7 million, January 31, 2022 a decrease of \$8 million, October 31, 2021 \$nil, July 31, 2021 \$nil).

CREDIT RISK EXPOSURE BY GEOGRAPHIC REGION (1)		Q3 2022				Q2 2022			
(\$ millions)	LINE #	Canada	U.S.	Other	Total	Canada	U.S.	Other	Total
Corporate (incl specialized lending and SMEs treated as corporate)	1	167,645	228,084	13,537	409,266	163,135	219,213	13,026	395,374
Sovereign	2	63,796	130,216	11,301	205,313	66,649	124,866	11,396	202,911
Bank	3	5,597	7,298	14,648	27,543	5,610	7,867	15,121	28,598
Total Wholesale	4	237,038	365,598	39,486	642,122	235,394	351,946	39,543	626,883
Residential mortgages excluding home equity line of credits (HELOCs)	5	115,549	8,471	—	124,020	112,844	8,088	—	120,932
HELOCs	6	55,189	6,256	—	61,445	53,556	6,115	—	59,671
Other retail	7	41,923	12,742	—	54,665	39,974	12,485	—	52,459
Qualifying revolving retail	8	42,583	1,507	—	44,090	41,100	1,455	—	42,555
Retail SMEs	9	11,403	6,569	65	18,037	9,055	6,716	10	15,781
Total Retail	10	266,647	35,545	65	302,257	256,529	34,859	10	291,398
Other assets	11	8,002	2,944	251	11,197	6,489	2,931	302	9,722
Equity	12	210	2,110	241	2,561	223	1,842	301	2,366
Total Bank	13	511,897	406,197	40,043	958,137	498,635	391,578	40,156	930,369

CREDIT RISK EXPOSURE BY GEOGRAPHIC REGION (1)		Q1 2022				Q4 2021			
(\$ millions)	LINE #	Canada	U.S.	Other	Total	Canada	U.S.	Other	Total
Corporate (incl specialized lending and SMEs treated as corporate)	1	157,720	218,761	12,770	389,251	153,324	194,360	11,194	358,878
Sovereign	2	46,832	131,120	9,550	187,502	70,831	119,297	12,600	202,728
Bank	3	5,065	6,355	15,367	26,787	5,106	6,625	14,817	26,548
Total Wholesale	4	209,617	356,236	37,687	603,540	229,261	320,282	38,611	588,154
Residential mortgages excluding home equity line of credits (HELOCs)	5	111,649	7,700	—	119,349	111,127	7,724	—	118,851
HELOCs	6	52,484	5,991	—	58,475	50,805	5,818	—	56,623
Other retail	7	38,093	12,266	—	50,359	36,903	12,103	—	49,006
Qualifying revolving retail	8	41,504	1,382	—	42,886	39,847	—	—	39,847
Retail SMEs	9	8,830	6,943	9	15,782	8,619	7,132	8	15,759
Total Retail	10	252,560	34,282	9	286,851	247,301	32,777	8	280,086
Other assets	11	7,350	2,823	233	10,406	7,582	2,906	490	10,978
Equity	12	177	1,760	275	2,212	163	1,461	204	1,828
Total Bank	13	469,704	395,101	38,204	903,009	484,307	357,426	39,313	881,046

CREDIT RISK EXPOSURE BY GEOGRAPHIC REGION (1)		Q3 2021			
(\$ millions)	LINE #	Canada	U.S.	Other	Total
Corporate (incl specialized lending and SMEs treated as corporate)	1	150,218	190,947	11,132	352,297
Sovereign	2	63,606	118,095	14,214	195,915
Bank	3	3,486	6,333	16,582	26,401
Total Wholesale	4	217,310	315,375	41,928	574,613
Residential mortgages excluding home equity line of credits (HELOCs)	5	110,192	7,769	—	117,961
HELOCs	6	49,733	5,852	—	55,585
Other retail	7	36,540	12,056	—	48,596
Qualifying revolving retail	8	40,039	—	—	40,039
Retail SMEs	9	8,407	7,773	8	16,188
Total Retail	10	244,911	33,450	8	278,369
Other assets	11	6,203	2,833	461	9,497
Equity	12	146	1,444	256	1,846
Total Bank	13	468,570	353,102	42,653	864,325

(1) Credit Risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement Risk and amounts below the thresholds for deduction subject to 250% risk weight.

**CREDIT RISK EXPOSURE BY MAJOR ASSET CLASS (1)**

(\$ millions)	LINE #	Q3 2022				Q2 2022				Q1 2022	Q4 2021	Q3 2021
		Drawn	Commitments (undrawn) (2)	Other off-balance sheet items (3)	Total	Drawn	Commitments (undrawn) (2)	Other off-balance sheet items (3)	Total	Total	Total	Total
Corporate (incl specialized lending and SMEs treated as corporate)	1	268,597	117,867	22,802	409,266	260,666	112,695	22,013	395,374	389,251	358,878	352,297
Sovereign	2	200,676	3,063	1,574	205,313	198,131	3,423	1,357	202,911	187,502	202,728	195,915
Bank	3	19,585	6,205	1,753	27,543	20,643	6,040	1,915	28,598	26,787	26,548	26,401
Total Wholesale	4	488,858	127,135	26,129	642,122	479,440	122,158	25,285	626,883	603,540	588,154	574,613
Residential mortgages excluding home equity line of credits (HELOCs)	5	123,851	132	37	124,020	120,783	109	40	120,932	119,349	118,851	117,961
HELOCs	6	41,820	19,625	—	61,445	40,588	19,083	—	59,671	58,475	56,623	55,585
Other retail	7	50,571	4,094	—	54,665	48,411	4,048	—	52,459	50,359	49,006	48,596
Qualifying revolving retail	8	10,591	33,499	—	44,090	9,679	32,876	—	42,555	42,886	39,847	40,039
Retail SMEs	9	12,935	5,059	43	18,037	11,789	3,953	39	15,781	15,782	15,759	16,188
Total Retail	10	239,768	62,409	80	302,257	231,250	60,069	79	291,398	286,851	280,086	278,369
Other assets	11	11,197	—	—	11,197	9,722	—	—	9,722	10,406	10,978	9,497
Equity	12	2,257	304	—	2,561	2,093	273	—	2,366	2,212	1,828	1,846
Total Bank	13	742,080	189,848	26,209	958,137	722,505	182,500	25,364	930,369	903,009	881,046	864,325

**CREDIT RISK BY RESIDUAL CONTRACT MATURITY BREAKDOWN (1)**

(\$ millions)	LINE #	Q3 2022				Q2 2022				Q1 2022	Q4 2021	Q3 2021
		Drawn	Commitments (undrawn) (2)	Other off-balance sheet items (3)	Total	Drawn	Commitments (undrawn) (2)	Other off-balance sheet items (3)	Total	Total	Total	Total
Up to 1 year	1	262,489	105,521	20,071	388,081	257,403	101,762	19,234	378,399	351,449	380,906	370,329
1 to 5 years	2	377,809	77,492	6,063	461,364	364,410	74,174	6,045	444,629	438,112	400,351	394,245
Greater than 5 years	3	101,782	6,835	75	108,692	100,692	6,564	85	107,341	113,448	99,789	99,751
Total Bank	4	742,080	189,848	26,209	958,137	722,505	182,500	25,364	930,369	903,009	881,046	864,325

**CREDIT RISK EXPOSURE BY INDUSTRY (1)**

(\$ millions)	LINE #	Q3 2022				Q2 2022				Q1 2022	Q4 2021	Q3 2021
		Drawn	Commitments (undrawn) (2)	Other off-balance sheet items (3)	Total	Drawn	Commitments (undrawn) (2)	Other off-balance sheet items (3)	Total	Total	Total	Total
Agriculture	1	12,994	2,302	72	15,368	12,967	2,053	82	15,102	14,935	14,752	14,902
Communications	2	940	1,903	308	3,151	1,039	1,877	305	3,221	3,801	4,115	3,994
Construction	3	4,947	3,510	1,146	9,603	4,526	3,691	1,086	9,303	9,049	8,876	8,679
Financial	4	159,884	29,681	7,473	197,038	156,466	27,068	7,291	190,825	185,069	220,904	210,229
Forest products	5	904	840	204	1,948	848	654	201	1,703	1,598	1,487	1,739
Government	6	95,880	1,512	434	97,826	94,822	1,706	422	96,950	99,019	69,213	69,878
Individual	7	239,768	62,408	80	302,256	231,251	60,069	79	291,399	286,851	280,087	278,368
Manufacturing	8	33,987	19,533	1,900	55,420	32,375	18,005	1,790	52,170	50,498	45,348	44,441
Mining	9	3,185	4,463	1,436	9,084	3,122	4,595	1,470	9,187	8,968	7,559	8,166
Oil and Gas	10	3,836	5,129	1,262	10,227	4,905	5,307	1,324	11,536	11,957	12,922	14,184
Other	11	22,222	796	329	23,347	25,988	768	298	27,054	18,534	18,471	17,419
Real estate	12	53,347	12,010	1,310	66,667	50,297	11,726	1,240	63,263	62,319	57,019	54,666
Retail trade	13	21,142	5,197	578	26,917	20,252	5,597	559	26,408	24,192	21,515	21,654
Service industries	14	52,088	18,226	2,997	73,311	48,301	17,514	3,075	68,890	67,545	63,519	62,640
Transportation	15	9,505	3,281	1,490	14,276	9,397	2,987	1,348	13,732	12,912	13,711	11,992
Utilities	16	8,921	12,249	4,084	25,254	7,978	12,528	3,826	24,332	22,263	21,250	21,081
Wholesale trade	17	18,530	6,808	1,106	26,444	17,971	6,355	968	25,294	23,499	20,298	20,293
Total Bank	18	742,080	189,848	26,209	958,137	722,505	182,500	25,364	930,369	903,009	881,046	864,325

(1) Credit Risk excludes Counterparty Credit Risk, Securitization, Equity Investment in Funds, Settlement Risk and amounts below the thresholds for deduction subject to 250% risk weight.

(2) The EAD on the difference between the authorized and drawn amounts (e.g. the unused portion of a line of credit).

(3) Includes items such as standby letters of credit and documentary credits.

**CCR1 - ANALYSIS OF COUNTERPARTY CREDIT RISK (CCR) EXPOSURE BY APPROACH (1)**

(\$ millions except as noted)

		Q3 2022				
		Replacement cost	Potential future exposure	Effective Expected Positive Exposure (EEPE)	Alpha used for computing regulatory EAD	EAD post-CRM
		a	b	c	d	e
1	SA-CCR (for derivatives)	11,088	16,374		1.4	38,275
2	Internal Model Method (for derivatives and SFTs)			—	—	—
3	Simple Approach for credit risk mitigation (for SFTs)					—
4	Comprehensive Approach for credit risk mitigation (for SFTs)					31,578
5	VaR for SFTs					—
6	Total					12,272

**CCR1 - ANALYSIS OF COUNTERPARTY CREDIT RISK (CCR) EXPOSURE BY APPROACH (1)**

(\$ millions except as noted)

		Q2 2022				
		Replacement cost	Potential future exposure	Effective Expected Positive Exposure (EEPE)	Alpha used for computing regulatory EAD	EAD post-CRM
		a	b	c	d	e
1	SA-CCR (for derivatives)	13,591	17,000		1.4	42,827
2	Internal Model Method (for derivatives and SFTs)			—	—	—
3	Simple Approach for credit risk mitigation (for SFTs)					—
4	Comprehensive Approach for credit risk mitigation (for SFTs)					33,036
5	VaR for SFTs					—
6	Total					13,763

**CCR1 - ANALYSIS OF COUNTERPARTY CREDIT RISK (CCR) EXPOSURE BY APPROACH (1)**

(\$ millions except as noted)

		Q1 2022				
		Replacement cost	Potential future exposure	Effective Expected Positive Exposure (EEPE)	Alpha used for computing regulatory EAD	EAD post-CRM
		a	b	c	d	e
1	SA-CCR (for derivatives)	9,178	17,864		1.4	37,722
2	Internal Model Method (for derivatives and SFTs)			—	—	—
3	Simple Approach for credit risk mitigation (for SFTs)					—
4	Comprehensive Approach for credit risk mitigation (for SFTs)					32,527
5	VaR for SFTs					—
6	Total					13,510

**CCR1 - ANALYSIS OF COUNTERPARTY CREDIT RISK (CCR) EXPOSURE BY APPROACH (1)**

(\$ millions except as noted)

		Q4 2021				
		Replacement cost	Potential future exposure	Effective Expected Positive Exposure (EEPE)	Alpha used for computing regulatory EAD	EAD post-CRM
		a	b	c	d	e
1	SA-CCR (for derivatives)	9,617	17,595		1.4	37,972
2	Internal Model Method (for derivatives and SFTs)			—	—	—
3	Simple Approach for credit risk mitigation (for SFTs)					—
4	Comprehensive Approach for credit risk mitigation (for SFTs)					32,194
5	VaR for SFTs					—
6	Total					13,950

**CCR1 - ANALYSIS OF COUNTERPARTY CREDIT RISK (CCR) EXPOSURE BY APPROACH (1)**

(\$ millions except as noted)

		Q3 2021				
		Replacement cost	Potential future exposure	Effective Expected Positive Exposure (EEPE)	Alpha used for computing regulatory EAD	EAD post-CRM
		a	b	c	d	e
1	SA-CCR (for derivatives)	10,132	18,294		1.4	39,722
2	Internal Model Method (for derivatives and SFTs)			—	—	—
3	Simple Approach for credit risk mitigation (for SFTs)					—
4	Comprehensive Approach for credit risk mitigation (for SFTs)					31,927
5	VaR for SFTs					—
6	Total					15,237

(1) Excludes credit valuation adjustment charge and exposures cleared through a central counterparty.

**CCR2 - CREDIT VALUATION ADJUSTMENT (CVA)  
CAPITAL CHARGE**

(\$ millions)

		Q3 2022		Q2 2022	
		EAD post-CRM	RWA	EAD post-CRM	RWA
		a	b	c	d
	Total portfolios subject to the Advanced CVA capital charge	—	—	—	—
1	(i) VaR component (including the 3×multiplier)		—		—
2	(ii) Stressed VaR component (including the 3×multiplier)		—		—
3	All portfolios subject to the Standardized CVA capital charge	26,913	4,077	29,979	4,804
4	Total subject to the CVA capital charge	26,913	4,077	29,979	4,804

**CCR2 - CREDIT VALUATION ADJUSTMENT (CVA)  
CAPITAL CHARGE**

(\$ millions)

		Q1 2022		Q4 2021	
		EAD post-CRM	RWA	EAD post-CRM	RWA
		a	b	c	d
	Total portfolios subject to the Advanced CVA capital charge	—	—	—	—
1	(i) VaR component (including the 3×multiplier)		—		—
2	(ii) Stressed VaR component (including the 3×multiplier)		—		—
3	All portfolios subject to the Standardized CVA capital charge	26,501	4,378	26,668	3,317
4	Total subject to the CVA capital charge	26,501	4,378	26,668	3,317

**CCR2 - CREDIT VALUATION ADJUSTMENT (CVA)  
CAPITAL CHARGE**

(\$ millions)

		Q3 2021	
		EAD post-CRM	RWA
		a	b
	Total portfolios subject to the Advanced CVA capital charge	—	—
1	(i) VaR component (including the 3×multiplier)		—
2	(ii) Stressed VaR component (including the 3×multiplier)		—
3	All portfolios subject to the Standardized CVA capital charge	27,857	3,795
4	Total subject to the CVA capital charge	27,857	3,795

**CCR3 - STANDARDIZED APPROACH – CCR EXPOSURES BY REGULATORY  
PORTFOLIO AND RISK WEIGHTS (1)**

(\$ millions)		Q3 2022								
		Risk Weight								Total credit exposure
		0%	10%	20%	50%	75%	100%	150%	Others	
Regulatory portfolio	LINE #	a	b	c	d	e	f	g	h	i
Sovereigns	1	—	—	—	—	—	—	—	—	—
Non-central government public sector entities (PSEs)	2	—	—	2	—	—	—	—	—	2
Multilateral development banks (MDBs)	3	—	—	—	—	—	—	—	—	—
Banks	4	—	—	76	—	—	5	—	—	81
Securities firms	5	—	—	377	—	—	—	—	—	377
Corporates	6	—	—	—	78	—	212	—	—	290
Regulatory retail portfolios	7	—	—	—	—	—	—	—	—	—
Secured by residential property	8	—	—	—	—	—	—	—	—	—
Secured by commercial real estate	9	—	—	—	—	—	—	—	—	—
Equity	10	—	—	—	—	—	—	—	—	—
Defaulted exposures	11	—	—	—	—	—	—	—	—	—
Higher-risk categories (2)	12	—	—	—	—	—	—	—	—	—
Other assets	13	—	—	—	—	—	—	—	—	—
Total	14	—	—	455	78	—	217	—	—	750

**CCR3 - STANDARDIZED APPROACH – CCR EXPOSURES BY REGULATORY  
PORTFOLIO AND RISK WEIGHTS (1)**

(\$ millions)		Q2 2022								
		Risk Weight								Total credit exposure
		0%	10%	20%	50%	75%	100%	150%	Others	
Regulatory portfolio	LINE #	a	b	c	d	e	f	g	h	i
Sovereigns	1	—	—	—	—	—	—	—	—	—
Non-central government public sector entities (PSEs)	2	—	—	—	—	—	—	—	—	—
Multilateral development banks (MDBs)	3	—	—	—	—	—	—	—	—	—
Banks	4	—	—	53	—	—	—	—	—	53
Securities firms	5	—	—	345	—	—	—	—	—	345
Corporates	6	—	—	—	2	—	147	—	—	149
Regulatory retail portfolios	7	—	—	—	—	—	—	—	—	—
Secured by residential property	8	—	—	—	—	—	—	—	—	—
Secured by commercial real estate	9	—	—	—	—	—	—	—	—	—
Equity	10	—	—	—	—	—	—	—	—	—
Defaulted exposures	11	—	—	—	—	—	—	—	—	—
Higher-risk categories (2)	12	—	—	—	—	—	—	—	—	—
Other assets	13	—	—	—	—	—	—	—	—	—
Total	14	—	—	398	2	—	147	—	—	547

(1) Excludes credit valuation adjustment charge and exposures cleared through a central counterparty.

(2) Non-defaulted exposures with risk weights equal to 150% (e.g. rated BB- or lower).

## CCR3 - STANDARDIZED APPROACH – CCR EXPOSURES BY REGULATORY

## PORTFOLIO AND RISK WEIGHTS (1)

(\$ millions)	LINE	Risk Weight								Total credit exposure
		0%	10%	20%	50%	75%	100%	150%	Others	
Regulatory portfolio	#	a	b	c	d	e	f	g	h	i
Sovereigns	1	—	—	—	—	—	—	—	—	—
Non-central government public sector entities (PSEs)	2	—	—	1	—	—	—	—	—	1
Multilateral development banks (MDBs)	3	—	—	—	—	—	—	—	—	—
Banks	4	—	—	57	—	—	—	—	—	57
Securities firms	5	—	—	308	—	—	—	—	—	308
Corporates	6	—	—	—	1	—	125	—	—	126
Regulatory retail portfolios	7	—	—	—	—	—	—	—	—	—
Secured by residential property	8	—	—	—	—	—	—	—	—	—
Secured by commercial real estate	9	—	—	—	—	—	—	—	—	—
Equity	10	—	—	—	—	—	—	—	—	—
Defaulted exposures	11	—	—	—	—	—	—	—	—	—
Higher-risk categories (2)	12	—	—	—	—	—	—	—	—	—
Other assets	13	—	—	—	—	—	—	—	—	—
Total	14	—	—	366	1	—	125	—	—	492

## CCR3 - STANDARDIZED APPROACH – CCR EXPOSURES BY REGULATORY

## PORTFOLIO AND RISK WEIGHTS (1)

(\$ millions)	LINE	Risk Weight								Total credit exposure
		0%	10%	20%	50%	75%	100%	150%	Others	
Regulatory portfolio	#	a	b	c	d	e	f	g	h	i
Sovereigns	1	—	—	—	—	—	—	—	—	—
Non-central government public sector entities (PSEs)	2	—	—	4	—	—	—	—	—	4
Multilateral development banks (MDBs)	3	—	—	—	—	—	—	—	—	—
Banks	4	—	—	559	—	—	—	—	—	559
Securities firms	5	—	—	311	—	—	—	—	—	311
Corporates	6	—	—	—	—	—	327	—	—	327
Regulatory retail portfolios	7	—	—	—	—	—	—	—	—	—
Secured by residential property	8	—	—	—	—	—	—	—	—	—
Secured by commercial real estate	9	—	—	—	—	—	—	—	—	—
Equity	10	—	—	—	—	—	—	—	—	—
Defaulted exposures	11	—	—	—	—	—	—	—	—	—
Higher-risk categories (2)	12	—	—	—	—	—	—	3	—	3
Other assets	13	—	—	—	—	—	—	—	—	—
Total	14	—	—	874	—	—	327	3	—	1,204

## CCR3 - STANDARDIZED APPROACH – CCR EXPOSURES BY REGULATORY

## PORTFOLIO AND RISK WEIGHTS (1)

(\$ millions)	LINE	Risk Weight								Total credit exposure
		0%	10%	20%	50%	75%	100%	150%	Others	
		a	b	c	d	e	f	g	h	
Regulatory portfolio	#									
Sovereigns	1	—	—	—	—	—	—	—	—	—
Non-central government public sector entities (PSEs)	2	—	—	2	—	—	—	—	—	2
Multilateral development banks (MDBs)	3	—	—	—	—	—	—	—	—	—
Banks	4	—	—	540	—	—	—	—	—	540
Securities firms	5	—	—	366	—	—	—	—	—	366
Corporates	6	—	—	—	—	—	420	—	—	420
Regulatory retail portfolios	7	—	—	—	—	—	—	—	—	—
Secured by residential property	8	—	—	—	—	—	—	—	—	—
Secured by commercial real estate	9	—	—	—	—	—	—	—	—	—
Equity	10	—	—	—	—	—	—	—	—	—
Defaulted exposures	11	—	—	—	—	—	—	—	—	—
Higher-risk categories (2)	12	—	—	—	—	—	—	8	—	8
Other assets	13	—	—	—	—	—	—	—	—	—
Total	14	—	—	908	—	—	420	8	—	1,336

(1) Excludes credit valuation adjustment charge and exposures cleared through a central counterparty.

(2) Non-defaulted exposures with risk weights equal to 150% (e.g. rated BB- or lower).



## CCR4 - IRB - CCR EXPOSURES BY PORTFOLIO AND PD SCALE

(\$ millions except as noted)

CCR4 - IRB - CCR EXPOSURES BY PORTFOLIO AND PD SCALE (\$ millions except as noted)						Q3 2022						
						EAD post- CRM	Average PD (1)	Number of obligors (2)	Average LGD (3)	Average maturity (years) (4)	RWA	RWA density
Risk Profile	BMO Rating	PD scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent	LINE #							
Corporate												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	1	15,435	0.06%	3,681	29.78%	1.01	1,789	11.59%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	2	3,577	0.19%	635	33.96%	1.49	1,018	28.45%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	3	8,305	0.32%	522	22.44%	1.12	1,909	22.98%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	4	2,905	0.54%	461	36.59%	0.92	1,525	52.50%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	5	1,689	1.24%	602	40.02%	1.05	1,417	83.87%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	6	361	2.97%	280	43.94%	1.83	446	123.56%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	7	12	15.45%	11	40.32%	1.32	24	193.85%
Default	Default	100.00 (Default)	C	C to D	8	1	100.00%	4	42.07%	1.21	4	557.40%
Sub-total					9	32,285		6,196			8,132	
Sovereign												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	10	17,002	0.02%	175	5.73%	1.46	308	1.81%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	11	563	0.19%	17	39.43%	0.20	114	20.17%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	12	23	0.32%	7	32.19%	0.57	6	27.66%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	13	1	0.54%	2	30.53%	0.40	—	32.49%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	14	7	1.02%	9	47.06%	0.51	5	73.82%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	15	1	9.70%	7	40.00%	1.00	1	163.52%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	16	—	—	—	—	—	—	—
Default	Default	100.00 (Default)	C	C to D	17	—	—	—	—	—	—	—
Sub-total					18	17,597		217			434	
Bank												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	19	16,977	0.06%	332	34.58%	1.21	2,559	15.07%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	20	1,335	0.19%	182	39.71%	0.86	417	31.21%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	21	750	0.32%	51	35.08%	0.48	244	32.58%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	22	81	0.54%	20	38.32%	0.50	43	53.05%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	23	78	1.55%	10	54.21%	0.34	97	123.74%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	24	—	2.74%	3	35.00%	1.00	—	87.85%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	25	—	—	—	—	—	—	—
Default	Default	100.00 (Default)	C	C to D	26	—	—	—	—	—	—	—
Sub-total					27	19,221		598			3,360	
Total (all wholesale portfolios)					28	69,103		7,011			11,926	

(1) Calculated as obligor PD weighted by EAD.

(2) Obligor count for Wholesale portfolios is at the borrower level.

(3) Calculated as the obligor LGD weighted by EAD.

(4) Calculated as the obligor effective maturity in years weighted by EAD.

## CCR4 - IRB - CCR EXPOSURES BY PORTFOLIO AND PD SCALE

(\$ millions except as noted)

CCR4 - IRB - CCR EXPOSURES BY PORTFOLIO AND PD SCALE (\$ millions except as noted)						Q2 2022						
						EAD post- CRM	Average PD (1)	Number of obligors (2)	Average LGD (3)	Average maturity (years) (4)	RWA	RWA density
Risk Profile	BMO Rating	PD scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent	LINE #	a	b	c	d	e	f	g
Corporate												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	1	17,546	0.06%	3,701	29.72%	0.89	1,814	10.34%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	2	2,611	0.19%	514	38.29%	1.50	826	31.61%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	3	8,135	0.32%	615	25.09%	1.13	2,082	25.60%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	4	5,066	0.54%	604	32.99%	1.11	2,419	47.75%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	5	2,161	1.17%	464	34.62%	1.03	1,508	69.77%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	6	1,035	2.97%	271	25.34%	1.33	724	69.99%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	7	14	15.41%	13	41.10%	1.54	29	201.67%
Default	Default	100.00 (Default)	C	C to D	8	2	100.00%	6	36.82%	2.28	9	487.82%
Sub-total					9	36,570		6,188			9,411	
Sovereign												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	10	17,717	0.03%	193	10.56%	1.62	404	2.28%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	11	1,027	0.19%	16	39.99%	0.12	203	19.75%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	12	6	0.32%	7	31.70%	0.11	1	23.54%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	13	—	0.54%	2	15.00%	1.00	—	19.21%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	14	3	1.11%	8	51.86%	0.13	2	78.64%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	15	1	9.70%	7	40.00%	1.00	1	163.52%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	16	—	—	—	—	—	—	—
Default	Default	100.00 (Default)	C	C to D	17	—	—	—	—	—	—	—
Sub-total					18	18,754		233			611	
Bank												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	19	17,273	0.07%	334	34.81%	1.31	2,757	15.96%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	20	1,916	0.19%	117	34.68%	0.52	428	22.37%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	21	584	0.32%	103	33.84%	0.41	160	27.49%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	22	159	0.56%	16	42.31%	1.25	98	61.98%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	23	53	1.47%	13	51.40%	0.19	59	110.15%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	24	7	2.74%	3	55.55%	0.14	9	125.48%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	25	—	—	—	—	—	—	—
Default	Default	100.00 (Default)	C	C to D	26	—	—	—	—	—	—	—
Sub-total					27	19,992		586			3,511	
Total (all wholesale portfolios)					28	75,316		7,007			13,533	

(1) Calculated as obligor PD weighted by EAD.

(2) Obligor count for Wholesale portfolios is at the borrower level.

(3) Calculated as the obligor LGD weighted by EAD.

(4) Calculated as the obligor effective maturity in years weighted by EAD.

**CCR4 - IRB - CCR EXPOSURES BY PORTFOLIO AND PD SCALE**

(\$ millions except as noted)

Risk Profile	BMO Rating	PD scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent	LINE #	Q1 2022						
						EAD post-CRM	Average PD (1)	Number of obligors (2)	Average LGD (3)	Average maturity (years) (4)	RWA	RWA density
						a	b	c	e	e	f	g
<b>Corporate</b>												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	1	17,070	0.06%	3,412	28.97%	0.87	1,707	10.00%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	2	1,584	0.19%	490	37.39%	1.60	491	31.03%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	3	3,837	0.32%	501	35.59%	1.59	1,585	41.31%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	4	6,092	0.57%	712	27.25%	1.24	2,509	41.19%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	5	3,209	1.23%	458	32.78%	1.21	2,184	68.04%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	6	1,048	2.98%	269	32.37%	1.62	964	91.94%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	7	6	14.37%	15	46.18%	2.34	12	208.98%
Default	Default	100.00 (Default)	C	C to D	8	8	100.00%	7	37.74%	2.33	38	500.00%
Sub-total					9	32,854		5,864			9,490	
<b>Sovereign</b>												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	10	17,395	0.03%	195	8.89%	1.37	436	2.51%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	11	123	0.19%	6	24.43%	0.45	19	15.48%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	12	11	0.32%	5	36.60%	0.09	3	26.51%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	13	17	0.55%	5	38.55%	0.54	7	42.98%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	14	3	1.49%	5	55.00%	0.02	3	93.62%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	15	—	9.70%	1	40.00%	1.00	—	163.52%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	16	—	—	—	—	—	—	—
Default	Default	100.00 (Default)	C	C to D	17	—	—	—	—	—	—	—
Sub-total					18	17,549		217			468	
<b>Bank</b>												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	19	16,268	0.06%	347	34.82%	1.31	2,421	14.88%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	20	1,808	0.19%	117	33.26%	0.72	426	23.57%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	21	1,024	0.32%	57	35.30%	0.64	313	30.54%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	22	145	0.54%	73	35.57%	0.54	70	48.41%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	23	43	1.59%	13	50.49%	0.44	47	109.93%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	24	66	2.74%	10	45.19%	1.00	75	113.42%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	25	—	—	—	—	—	—	—
Default	Default	100.00 (Default)	C	C to D	26	—	—	—	—	—	—	—
Sub-total					27	19,354		617			3,352	
<b>Total (all wholesale portfolios)</b>					28	69,757		6,698			13,310	

(1) Calculated as obligor PD weighted by EAD.

(2) Obligor count for Wholesale portfolios is at the borrower level.

(3) Calculated as the obligor LGD weighted by EAD.

(4) Calculated as the obligor effective maturity in years weighted by EAD.

## CCR4 - IRB - CCR EXPOSURES BY PORTFOLIO AND PD SCALE

(\$ millions except as noted)

Risk Profile	BMO Rating	PD scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent	LINE #	Q4 2021						
						EAD post-CRM	Average PD (1)	Number of obligors (2)	Average LGD (3)	Average maturity (years) (4)	RWA	RWA density
						a	b	c	d	e	f	g
<b>Corporate</b>												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	1	15,784	0.06%	3,471	29.59%	0.86	1,685	10.68%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	2	1,866	0.19%	413	39.55%	1.66	614	32.91%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	3	3,694	0.32%	506	36.53%	1.31	1,451	39.27%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	4	7,160	0.57%	555	27.78%	1.34	3,112	43.47%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	5	4,233	1.20%	615	30.48%	1.29	2,648	62.55%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	6	1,118	3.40%	276	24.58%	1.36	773	69.12%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	7	18	13.51%	22	41.31%	1.88	36	196.01%
Default	Default	100.00 (Default)	C	C to D	8	10	100.00%	8	42.07%	1.69	56	557.41%
Sub-total					9	33,883		5,866			10,375	
<b>Sovereign</b>												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	10	15,960	0.03%	209	8.67%	1.34	376	2.36%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	11	108	0.19%	7	28.70%	0.53	20	18.38%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	12	19	0.32%	6	27.85%	0.43	4	21.21%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	13	6	0.56%	6	33.70%	1.11	2	40.70%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	14	1	1.32%	6	54.99%	0.03	1	88.44%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	15	—	7.56%	2	40.00%	1.00	—	145.72%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	16	—	—	—	—	—	—	—
Default	Default	100.00 (Default)	C	C to D	17	—	—	—	—	—	—	—
Sub-total					18	16,094		236			403	
<b>Bank</b>												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	19	16,018	0.07%	289	34.61%	1.13	1,807	11.28%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	20	1,863	0.19%	84	35.00%	0.47	415	22.27%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	21	878	0.33%	48	34.44%	0.55	259	29.54%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	22	109	0.54%	74	37.04%	0.96	52	47.72%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	23	2	1.17%	11	43.25%	0.84	2	78.43%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	24	115	2.74%	6	44.99%	1.00	129	112.93%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	25	—	—	—	—	—	—	—
Default	Default	100.00 (Default)	C	C to D	26	—	—	—	—	—	—	—
Sub-total					27	18,985		512			2,664	
<b>Total (all wholesale portfolios)</b>					28	68,962		6,614			13,442	

(1) Calculated as obligor PD weighted by EAD.

(2) Obligor count for Wholesale portfolios is at the borrower level.

(3) Calculated as the obligor LGD weighted by EAD.

(4) Calculated as the obligor effective maturity in years weighted by EAD.

## CCR4 - IRB - CCR EXPOSURES BY PORTFOLIO AND PD SCALE

(\$ millions except as noted)

Risk Profile	BMO Rating	PD scale (%)	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent	LINE #	EAD post-CRM	Average PD (1)	Number of obligors (2)	Average LGD (3)	maturity (years) (4)	RWA	RWA density
						a	b	c	d	e	f	g
Corporate												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	1	14,423	0.06%	3,138	29.51%	0.96	1,608	11.15%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	2	2,954	0.19%	423	31.76%	1.38	782	26.48%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	3	3,895	0.32%	512	39.22%	1.54	1,725	44.27%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	4	5,204	0.57%	459	30.17%	1.27	2,421	46.52%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	5	5,561	1.17%	737	29.37%	1.59	3,423	61.55%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	6	1,202	4.57%	276	23.98%	1.45	868	72.22%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	7	46	13.53%	18	29.82%	1.29	64	139.29%
Default	Default	100.00 (Default)	C	C to D	8	40	100.00%	13	37.36%	1.37	197	494.96%
Sub-total					9	33,325		5,576			11,088	
Sovereign												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	10	16,068	0.03%	214	8.68%	1.35	393	2.45%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	11	76	0.19%	6	43.31%	0.96	22	29.45%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	12	86	0.32%	10	10.78%	0.12	7	8.01%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	13	2	0.61%	2	18.71%	3.97	1	42.63%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	14	10	1.63%	4	28.38%	0.43	5	55.52%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	15	1	9.70%	1	40.00%	1.00	2	163.52%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	16	—	—	—	—	—	—	—
Default	Default	100.00 (Default)	C	C to D	17	—	—	—	—	—	—	—
Sub-total					18	16,243		237			430	
Bank												
Investment grade	I-1, I-2, I-3, I-4, I-5	0.00 to <0.15	Aaa to Baa1	AAA to BBB+	19	17,398	0.07%	286	34.88%	1.11	1,963	11.29%
Investment grade	I-5, I-6	0.15 to <0.25	Baa1 to Baa2	BBB+ to BBB	20	1,811	0.19%	97	34.98%	0.47	400	22.09%
Investment grade	I-6, I-7	0.25 to <0.50	Baa2 to Baa3	BBB to BBB-	21	600	0.32%	48	34.38%	0.63	181	30.15%
Investment grade to Non-investment grade	I-7, S-1	0.50 to <0.75	Baa3 to Ba1	BBB- to BB+	22	352	0.54%	13	35.40%	0.17	153	59.01%
Non-investment grade	S-1, S-2, S-3	0.75 to <2.50	Ba1 to Ba3	BB+ to BB-	23	529	0.92%	70	34.68%	1.82	348	45.77%
Non-investment grade to Watchlist	S-3, S-4, P-1, P-2	2.50 to <10.00	Ba3 to Caa1	BB- to B-	24	55	2.74%	2	45.00%	1.00	62	112.94%
Watchlist	P-2, P-3	10.00 to <100.00	Caa1 to Ca	B- to CC	25	—	—	—	—	—	—	—
Default	Default	100.00 (Default)	C	C to D	26	—	—	—	—	—	—	—
Sub-total					27	20,745		516			3,107	
Total (all wholesale portfolios)					28	70,313		6,329			14,625	

(1) Calculated as obligor PD weighted by EAD.

(2) Obligor count for Wholesale portfolios is at the borrower level.

(3) Calculated as the obligor LGD weighted by EAD.

(4) Calculated as the obligor effective maturity in years weighted by EAD.

**CCR5 - COMPOSITION OF COLLATERAL  
FOR CCR EXPOSURE (1) (2)**

LINE #	(\$ millions)	Q3 2022					
		Collateral used in derivative transactions				Collateral used in SFTs	
		Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
		Segregated	Unsegregated	Segregated	Unsegregated		
		a	b	c	d	e	f
Cash – domestic currency	1	—	824	—	2,442	35,301	44,016
Cash – other currencies	2	—	3,802	—	5,207	77,917	78,642
Domestic sovereign debt	3	738	4,197	813	1,279	45,884	38,118
Other sovereign debt	4	2,252	734	501	356	49,137	47,579
Government agency debt	5	5	847	—	254	7,757	23,972
Corporate bonds	6	484	99	398	73	22,269	9,859
Equity securities	7	1,158	3,141	4,032	8,699	45,866	54,243
Other collateral	8	—	—	—	—	—	—
Total	9	4,637	13,644	5,744	18,310	284,131	296,429

**CCR5 - COMPOSITION OF COLLATERAL  
FOR CCR EXPOSURE (1) (2)**

LINE #	(\$ millions)	Q2 2022					
		Collateral used in derivative transactions				Collateral used in SFTs	
		Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
		Segregated	Unsegregated	Segregated	Unsegregated		
		a	b	c	d	e	f
Cash – domestic currency	1	—	3,217	—	2,050	35,782	43,836
Cash – other currencies	2	—	4,347	—	4,941	72,635	76,136
Domestic sovereign debt	3	1,280	1,762	1400	872	44,329	37,684
Other sovereign debt	4	3,023	558	478	569	46,700	44,918
Government agency debt	5	—	1,858	—	179	5,104	19,974
Corporate bonds	6	289	817	98	35	23,277	11,240
Equity securities	7	978	360	5,333	5,654	47,968	57,420
Other collateral	8	—	—	—	—	—	—
Total	9	5,570	12,919	7,309	14,300	275,795	291,208

**CCR5 - COMPOSITION OF COLLATERAL  
FOR CCR EXPOSURE (1) (2)**

LINE #	(\$ millions)	Q1 2022					
		Collateral used in derivative transactions				Collateral used in SFTs	
		Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
		Segregated	Unsegregated	Segregated	Unsegregated		
		a	b	c	d	e	f
Cash – domestic currency	1	—	826	—	2,159	30,742	49,401
Cash – other currencies	2	—	3,534	—	3,402	90,136	80,867
Domestic sovereign debt	3	592	1,603	715	2,549	47,706	34,601
Other sovereign debt	4	1,887	294	884	477	52,994	50,342
Government agency debt	5	145	2,024	—	322	7,633	28,313
Corporate bonds	6	91	133	400	15	25,390	12,450
Equity securities	7	2,143	438	3,955	5,931	49,300	61,510
Other collateral	8	—	—	—	—	—	—
Total	9	4,858	8,852	5,954	14,855	303,901	317,484

**CCR5 - COMPOSITION OF COLLATERAL  
FOR CCR EXPOSURE (1) (2)**

LINE #	(\$ millions)	Q4 2021					
		Collateral used in derivative transactions				Collateral used in SFTs	
		Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
		Segregated	Unsegregated	Segregated	Unsegregated		
		a	b	c	d	e	f
Cash – domestic currency	1	—	3,116	—	1,254	29,188	40,880
Cash – other currencies	2	—	3,754	—	2,503	82,529	76,825
Domestic sovereign debt	3	41	903	595	2,500	40,846	32,663
Other sovereign debt	4	1,501	372	740	398	50,833	56,403
Government agency debt	5	512	2,095	—	478	7,541	25,074
Corporate bonds	6	208	—	279	7	24,234	12,045
Equity securities	7	1,249	400	2,711	4,997	48,931	55,294
Other collateral	8	—	—	—	—	22	5
Total	9	3,511	10,640	4,325	12,137	284,124	299,189

**CCR5 - COMPOSITION OF COLLATERAL  
FOR CCR EXPOSURE (1) (2)**

LINE #	(\$ millions)	Q3 2021					
		Collateral used in derivative transactions				Collateral used in SFTs	
		Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
		Segregated	Unsegregated	Segregated	Unsegregated		
		a	b	c	d	e	f
Cash – domestic currency	1	—	3,032	—	1,258	29,239	41,939
Cash – other currencies	2	—	4,824	—	2,840	80,145	75,398
Domestic sovereign debt	3	68	1,044	177	2,548	41,287	34,582
Other sovereign debt	4	1,737	271	879	480	47,962	45,219
Government agency debt	5	283	1,964	—	507	7,986	23,796
Corporate bonds	6	256	—	255	10	24,831	20,929
Equity securities	7	270	337	1,795	4,308	48,925	53,942
Other collateral	8	—	—	—	—	7	8
Total	9	2,614	11,472	3,106	11,951	280,382	295,813

(1) Segregated refers to collateral which is held in a bankruptcy-remote manner whereas unsegregated refers to collateral that is not held in a bankruptcy-remote manner.

(2) Debt issued by Multilaterals and Supranationals is included under other sovereign debt while debt issued by Fannie Mae and Freddie Mac is included under government agency debt.

## CCR6 - CREDIT DERIVATIVES EXPOSURES

CCR6 - CREDIT DERIVATIVES EXPOSURES	LINE	Q3 2022		Q2 2022	
		Protection bought	Protection sold	Protection bought	Protection sold
		a	b	c	d
(\$ millions)	#				
Notionals					
Single-name credit default swaps	1	609	1,316	654	81
Index credit default swaps	2	14,331	8,630	15,118	9,719
Total return swaps	3	3,838	9	3,957	9
Credit options	4	3,425	—	1,861	—
Other credit derivatives	5	—	—	—	—
Total notionals	6	22,203	9,955	21,590	9,809
Fair values					
Positive fair value (asset)	7	287	1	122	6
Negative fair value (liability)	8	13	41	21	1

## CCR6 - CREDIT DERIVATIVES EXPOSURES

CCR6 - CREDIT DERIVATIVES EXPOSURES	LINE	Q1 2022		Q4 2021	
		Protection bought	Protection sold	Protection bought	Protection sold
		a	b	c	d
(\$ millions)	#				
Notionals					
Single-name credit default swaps	1	646	93	778	179
Index credit default swaps	2	11,507	4,968	11,579	4,979
Total return swaps	3	3,079	9	4,342	3
Credit options	4	3,085	—	—	—
Other credit derivatives	5	—	—	—	—
Total notionals	6	18,317	5,070	16,699	5,161
Fair values					
Positive fair value (asset)	7	65	3	41	120
Negative fair value (liability)	8	45	5	356	4

## CCR6 - CREDIT DERIVATIVES EXPOSURES

CCR6 - CREDIT DERIVATIVES EXPOSURES	LINE	Q3 2021	
		Protection bought	Protection sold
		a	b
(\$ millions)	#		
<b>Notionals</b>			
Single-name credit default swaps	1	691	208
Index credit default swaps	2	8,534	2,496
Total return swaps	3	3,563	48
Credit options	4	1,878	225
Other credit derivatives	5	—	—
<b>Total notionals</b>	6	14,666	2,977
<b>Fair values</b>			
Positive fair value (asset)	7	57	69
Negative fair value (liability)	8	284	4

## CCR8 - EXPOSURES TO CENTRAL COUNTERPARTIES

(\$ millions)

		Q3 2022		Q2 2022		Q1 2022		Q4 2021		Q3 2021	
		EAD (post-CRM)	RWA	EAD (post-CRM)	RWA	EAD (post-CRM)	RWA	EAD (post-CRM)	RWA	EAD (post-CRM)	RWA
		a	b	c	d	e	f	g	h	i	j
1	<b>Exposures to QCCPs (total)</b>		795		777		1,053		780		833
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which:	14,775	308	17,803	362	23,207	474	18,440	380	16,929	348
3	(i) OTC derivatives	4,223	97	4,478	96	4,684	104	3,701	85	3,175	73
4	(ii) Exchange-traded derivatives	9,301	186	12,355	247	16,658	333	13,902	278	12,263	245
5	(iii) Securities financing transactions	1,251	25	970	19	1,865	37	837	17	1,491	30
6	(iv) Netting sets where cross-product netting has been approved	—	—	—	—	—	—	—	—	—	—
7	Segregated initial margin	—		—		—		—		—	
8	Non-segregated initial margin	6,587		7,404		6,974		5,423		5,173	
9	Pre-funded default fund contributions	1,098	487	835	415	1,105	579	894	400	1,083	485
10	Unfunded default fund contributions	—	—	—	—	—	—	—	—	—	—
11	<b>Exposures to non-QCCPs (total)</b>		—		—		—		—		—
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	—	—	—	—	—	—	—	—	—	—



DERIVATIVE INSTRUMENTS		Q3 2022				Q2 2022			
		Notional Amount	Replacement Cost	Credit Risk Equivalent	Risk-weighted Assets (1)	Notional Amount	Replacement Cost	Credit Risk Equivalent	Risk-weighted Assets (1)
(\$ millions)	LINE #								
Interest Rate Contracts									
Over-the-counter Swaps (2)	1	5,229,519	3,182	7,769	1,175	5,213,184	3,078	7,636	908
Forward rate agreements	2	22,120	641	1,644	420	12,664	973	2,046	359
Purchased options	3	87,437	56	182	52	79,337	201	368	240
Written options	4	79,247	17	156	88	71,896	7	129	74
	5	5,418,323	3,896	9,751	1,735	5,377,081	4,259	10,179	1,581
Exchange traded Futures	6	393,592	1,295	1,859	37	273,572	1,005	1,442	29
Purchased options	7	24,528	241	342	7	17,509	36	53	1
Written options	8	10,293	—	2	—	13,470	—	2	—
	9	428,413	1,536	2,203	44	304,551	1,041	1,497	30
Total Interest Rate Contracts	10	5,846,736	5,432	11,954	1,779	5,681,632	5,300	11,676	1,611
Foreign Exchange Contracts									
Over-the-counter Swaps	11	653,103	1,216	4,962	800	660,616	1,270	5,314	911
Forward foreign exchange contracts	12	467,058	915	6,491	1,058	484,045	1,684	8,038	1,267
Purchased options	13	56,156	151	385	100	55,737	705	1,117	392
Written options	14	58,768	5	100	33	56,844	4	98	31
	15	1,235,085	2,287	11,938	1,991	1,257,242	3,663	14,567	2,601
Exchange traded Futures	16	1,189	—	—	—	1,054	—	1	—
Purchased options	17	1,582	—	—	—	1,664	—	1	—
Written options	18	5,317	—	—	—	5,144	—	—	—
	19	8,088	—	—	—	7,862	—	2	—
Total Foreign Exchange Contracts	20	1,243,173	2,287	11,938	1,991	1,265,104	3,663	14,569	2,601
Commodity Contracts									
Over-the-counter Swaps	21	30,611	5,221	9,235	1,838	34,351	5,627	10,064	2,177
Purchased options	22	5,553	845	1,585	326	5,187	1,113	2,054	544
Written options	23	4,880	99	350	103	4,566	111	360	136
	24	41,044	6,165	11,170	2,267	44,104	6,851	12,478	2,857
Exchange traded Futures	25	48,800	1,292	2,374	47	47,649	1,193	2,402	48
Purchased options	26	29,251	79	157	3	19,911	196	350	7
Written options	27	29,022	38	95	2	19,068	29	116	2
	28	107,073	1,409	2,626	52	86,628	1,418	2,868	57
Total Commodity Contracts	29	148,117	7,574	13,796	2,319	130,732	8,269	15,346	2,914
Equity Contracts									
Over-the-counter	30	98,752	586	8,905	2,462	104,419	904	9,556	2,591
Exchange traded	31	120,888	2,011	4,472	89	118,460	4,025	7,987	160
Total Equity Contracts	32	219,640	2,597	13,377	2,551	222,879	4,929	17,543	2,751
Credit Contracts	33	28,311	247	734	71	27,435	74	526	50
Sub-total	34	7,485,977	18,137	51,799	8,711	7,327,782	22,235	59,660	9,927
Total	35	7,485,977	18,137	51,799	8,711	7,327,782	22,235	59,660	9,927

(1) Risk-weighted assets are reported after the impact of master netting agreements and application of 1.06 AIRB scaling factor, where applicable.

(2) Interest Rate Contracts include Interest Rate Total Return Swaps.

DERIVATIVE INSTRUMENTS (\$ millions)	LINE #	Q1 2022				Q4 2021				Q3 2021			
		Notional Amount	Replacement Cost	Credit Risk Equivalent	Risk-weighted Assets (1)	Notional Amount	Replacement Cost	Credit Risk Equivalent	Risk-weighted Assets (1)	Notional Amount	Replacement Cost	Credit Risk Equivalent	Risk-weighted Assets (1)
<b>Interest Rate Contracts</b>													
Over-the-counter													
Swaps (2)	1	4,671,446	2,785	7,556	1,209	4,151,291	2,636	6,936	1,422	4,183,654	3,859	8,640	2,392
Forward rate agreements	2	19,976	827	2,166	686	147,657	667	2,545	826	327,467	582	2,248	987
Purchased options	3	73,733	195	354	238	69,491	16	72	81	66,740	21	74	145
Written options	4	70,984	11	132	80	68,155	20	105	70	71,604	32	135	87
	5	4,836,139	3,818	10,208	2,213	4,436,594	3,339	9,658	2,399	4,649,465	4,494	11,097	3,611
Exchange traded													
Futures	6	267,790	1,250	1,801	36	232,972	71	141	3	219,076	104	195	4
Purchased options	7	16,096	58	83	2	10,611	2	4	—	16,104	12	18	—
Written options	8	4,494	—	1	—	3,621	2	4	—	3,769	8	12	—
	9	288,380	1,308	1,885	38	247,204	75	149	3	238,949	124	225	4
<b>Total Interest Rate Contracts</b>	10	5,124,519	5,126	12,093	2,251	4,683,798	3,414	9,807	2,402	4,888,414	4,618	11,322	3,615
<b>Foreign Exchange Contracts</b>													
Over-the-counter													
Swaps	11	620,902	1,095	4,981	960	599,333	1,087	4,609	987	628,112	1,081	4,861	1,089
Forward foreign exchange contracts	12	506,211	956	7,704	987	489,426	769	6,649	883	429,649	1,006	7,297	844
Purchased options	13	61,011	88	269	87	54,145	93	270	104	54,514	86	250	88
Written options	14	61,673	6	103	35	54,147	11	115	38	55,687	4	91	24
	15	1,249,797	2,145	13,057	2,069	1,197,051	1,960	11,643	2,012	1,167,962	2,177	12,499	2,045
Exchange traded													
Futures	16	322	—	—	—	222	1	2	—	373	1	3	—
Purchased options	17	1,577	—	1	—	1,762	15	22	—	1,482	23	33	1
Written options	18	4,925	—	1	—	4,735	26	37	1	3,788	43	63	1
	19	6,824	—	2	—	6,719	42	61	1	5,643	67	99	2
<b>Total Foreign Exchange Contracts</b>	20	1,256,621	2,145	13,059	2,069	1,203,770	2,002	11,704	2,013	1,173,605	2,244	12,598	2,047
<b>Commodity Contracts</b>													
Over-the-counter													
Swaps	21	27,986	4,064	7,700	2,149	28,892	4,357	8,183	2,148	29,686	3,338	6,877	2,093
Purchased options	22	4,198	654	1,352	455	4,526	1,537	2,601	457	5,090	654	1,489	441
Written options	23	2,979	25	200	84	3,132	6	175	51	3,412	12	236	70
	24	35,163	4,743	9,252	2,688	36,550	5,900	10,959	2,656	38,188	4,004	8,602	2,604
Exchange traded													
Futures	25	37,576	1,018	1,967	39	39,448	1,829	3,244	65	37,241	1,630	2,987	60
Purchased options	26	11,175	620	910	18	10,020	474	721	14	7,359	922	1,350	27
Written options	27	11,849	19	76	2	11,000	463	727	15	8,518	584	912	18
	28	60,600	1,657	2,953	59	60,468	2,766	4,692	94	53,118	3,136	5,249	105
<b>Total Commodity Contracts</b>	29	95,763	6,400	12,205	2,747	97,018	8,666	15,651	2,750	91,306	7,140	13,851	2,709
<b>Equity Contracts</b>													
Over-the-counter	30	93,410	374	9,250	2,616	99,478	467	9,754	2,663	82,223	452	10,020	2,907
Exchange traded	31	128,878	6,262	11,819	236	106,302	3,873	7,938	159	92,906	3,017	6,691	134
<b>Total Equity Contracts</b>	32	222,288	6,636	21,069	2,852	205,780	4,340	17,692	2,822	175,129	3,469	16,711	3,041
<b>Credit Contracts</b>	33	20,300	241	638	39	17,516	277	721	79	14,032	237	678	65
<b>Sub-total</b>	34	6,719,491	20,548	59,064	9,958	6,207,882	18,699	55,575	10,066	6,342,486	17,708	55,160	11,477
<b>Total</b>	35	6,719,491	20,548	59,064	9,958	6,207,882	18,699	55,575	10,066	6,342,486	17,708	55,160	11,477

(1) Risk-weighted assets are reported after the impact of master netting agreements and application of 1.06 AIRB scaling factor where applicable.

(2) Interest Rate Contracts include Interest Rate Total Return Swaps.

## SEC1 - SECURITIZATION EXPOSURES IN THE BANKING BOOK (1) (2)

(\$ millions)		Q3 2022								
		Bank acts as originator			Bank acts as sponsor			Bank acts as investor		
		Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total
		a	b	c	d	e	f	g	h	i
1	<b>Total retail, of which:</b>	2,099	—	2,099	16,298	—	16,298	180	—	180
2	Residential mortgage (3)	—	—	—	1,020	—	1,020	143	—	143
3	Credit card	1,890	—	1,890	1,115	—	1,115	—	—	—
4	Other retail exposures	209	—	209	14,163	—	14,163	37	—	37
5	Re-securitization	—	—	—	—	—	—	—	—	—
6	<b>Total wholesale, of which:</b>	643	24,550	25,193	5,755	—	5,755	43	—	43
7	Loans to corporates	545	24,550	25,095	216	—	216	—	—	—
8	Commercial mortgage	98	—	98	—	—	—	—	—	—
9	Lease and receivables	—	—	—	4,015	—	4,015	37	—	37
10	Other wholesale	—	—	—	1,524	—	1,524	6	—	6
11	Re-securitization	—	—	—	—	—	—	—	—	—

## SEC1 - SECURITIZATION EXPOSURES IN THE BANKING BOOK (1) (2)

(\$ millions)		Q2 2022								
		Bank acts as originator			Bank acts as sponsor			Bank acts as investor		
		Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Synthetic
		a	b	c	d	e	f	g	h	i
1	<b>Total retail, of which:</b>	2,129	—	2,129	13,538	—	13,538	194	—	194
2	Residential mortgage (3)	—	—	—	544	—	544	155	—	155
3	Credit card	1,890	—	1,890	1,065	—	1,065	—	—	—
4	Other retail exposures	239	—	239	11,929	—	11,929	39	—	39
5	Re-securitization	—	—	—	—	—	—	—	—	—
6	<b>Total wholesale, of which:</b>	190	24,438	24,628	5,631	—	5,631	57	—	57
7	Loans to corporates	115	24,438	24,553	218	—	218	—	—	—
8	Commercial mortgage	75	—	75	—	—	—	—	—	—
9	Lease and receivables	—	—	—	4,032	—	4,032	51	—	51
10	Other wholesale	—	—	—	1,381	—	1,381	6	—	6
11	Re-securitization	—	—	—	—	—	—	—	—	—

(1) The amounts disclosed represent the carrying value of securitization exposures in the banking book, including securitization exposures where the criteria for recognition of risk transference are not met and where capital is not calculated under OSFI's CAR guideline, Chapter 7, structured credit products. At July 31, 2022 \$135 million (\$163 million at April 30, 2022, \$287 million at October 31, 2021, \$115 million at July 31, 2021, and \$142 million at April 30, 2021) securitizations were capitalized under the Credit Risk framework.

(2) The table excludes securitization-related assets of \$6,974 million at July 31, 2022 (\$7,015 million at April 30, 2022, \$6,486 million at October 31, 2021 and \$7,451 at July 31, 2021, and \$5,899 million at April 30, 2021) that are not subject to capital requirements but consolidated on the balance sheet for accounting purposes.

(3) 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's CAR Guideline, Chapter 7, Structured Credit Products.

## SEC1 - SECURITIZATION EXPOSURES IN THE BANKING BOOK (1) (2)

(\$ millions)		Q1 2022								
		Bank acts as originator			Bank acts as sponsor			Bank acts as investor		
		Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total
		a	b	c	d	e	f	g	h	i
1	<b>Total retail, of which:</b>	349	—	349	12,279	—	12,279	137	—	137
2	Residential mortgage (3)	—	—	—	565	—	565	95	—	95
3	Credit card	—	—	—	959	—	959	—	—	—
4	Other retail exposures	349	—	349	10,755	—	10,755	42	—	42
5	Re-securitization	—	—	—	—	—	—	—	—	—
6	<b>Total wholesale, of which:</b>	134	12,713	12,847	5,429	—	5,429	66	—	66
7	Loans to corporates	117	12,713	12,830	216	—	216	—	—	—
8	Commercial mortgage	17	—	17	—	—	—	—	—	—
9	Lease and receivables	—	—	—	3,833	—	3,833	60	—	60
10	Other wholesale	—	—	—	1,380	—	1,380	6	—	6
11	Re-securitization	—	—	—	—	—	—	—	—	—

## SEC1 - SECURITIZATION EXPOSURES IN THE BANKING BOOK (1) (2)

(\$ millions)		Q4 2021								
		Bank acts as originator			Bank acts as sponsor			Bank acts as investor		
		Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total
		a	b	c	d	e	f	g	h	i
1	<b>Total retail, of which:</b>	193	—	193	11,942	—	11,942	136	—	136
2	Residential mortgage (3)	—	—	—	671	—	671	81	—	81
3	Credit card	—	—	—	939	—	939	—	—	—
4	Other retail exposures	193	—	193	10,332	—	10,332	55	—	55
5	Re-securitization	—	—	—	—	—	—	—	—	—
6	<b>Total wholesale, of which:</b>	111	12,359	12,470	5,382	—	5,382	25	—	25
7	Loans to corporates	104	12,359	12,463	210	—	210	—	—	—
8	Commercial mortgage	7	—	7	—	—	—	—	—	—
9	Lease and receivables	—	—	—	3,798	—	3,798	19	—	19
10	Other wholesale	—	—	—	1,374	—	1,374	6	—	6
11	Re-securitization	—	—	—	—	—	—	—	—	—

## SEC1 - SECURITIZATION EXPOSURES IN THE BANKING BOOK (1) (2)

(\$ millions)		Q3 2021								
		Bank acts as originator			Bank acts as sponsor			Bank acts as investor		
		Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total
		a	b	c	d	e	f	g	h	i
1	<b>Total retail, of which:</b>	199	—	199	13,282	—	13,282	55	—	55
2	Residential mortgage (3)	—	—	—	1,494	—	1,494	30	—	30
3	Credit card	—	—	—	946	—	946	—	—	—
4	Other retail exposures	199	—	199	10,842	—	10,842	25	—	25
5	Re-securitization	—	—	—	—	—	—	—	—	—
6	<b>Total wholesale, of which:</b>	87	12,338	12,425	4,697	—	4,697	25	—	25
7	Loans to corporates	87	12,338	12,425	212	—	212	—	—	—
8	Commercial mortgage	—	—	—	—	—	—	—	—	—
9	Lease and receivables	—	—	—	3,873	—	3,873	19	—	19
10	Other wholesale	—	—	—	612	—	612	6	—	6
11	Re-securitization	—	—	—	—	—	—	—	—	—

(1) The amounts disclosed represent the carrying value of securitization exposures in the banking book, including securitization exposures where the criteria for recognition of risk transferance are not met and where capital is not calculated under OSFI's CAR guideline, Chapter 7, structured credit products. At July 31, 2022 \$135 million (\$163 million at April 30, 2022, \$287 million at October 31, 2021, \$115 million at July 31, 2021, and \$142 million at April 30, 2021) securitizations were capitalized under the Credit Risk framework.

(2) The table excludes securitization-related assets of \$6,974 million at July 31, 2022 (\$7,015 million at April 30, 2022, \$6,486 million at October 31, 2021 and \$7,451 at July 31, 2021, and \$5,899 million at April 30, 2021). that are not subject to capital requirements but consolidated on the balance sheet for accounting purposes.

(3) 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's CAR Guideline, Chapter 7, Structured Credit Products.

## SEC2 - SECURITIZATION EXPOSURES IN THE TRADING BOOK (1)

(\$ millions)		Q3 2022								
		Bank acts as originator			Bank acts as sponsor			Bank acts as investor		
		Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total
		a	b	c	d	e	f	g	h	i
1	<b>Total retail, of which:</b>	—	—	—	—	—	—	150	—	150
2	Residential mortgage	—	—	—	—	—	—	91	—	91
3	Credit card	—	—	—	—	—	—	(1)	—	(1)
4	Auto loans/leases	—	—	—	—	—	—	44	—	44
5	Student loans	—	—	—	—	—	—	12	—	12
6	Other retail exposures	—	—	—	—	—	—	4	—	4
7	Re-securitization	—	—	—	—	—	—	—	—	—
8	<b>Total wholesale, of which:</b>	—	—	—	—	—	—	31	—	31
9	Loans to corporates	—	—	—	—	—	—	—	—	—
10	Commercial mortgage	—	—	—	—	—	—	25	—	25
11	Lease and receivables	—	—	—	—	—	—	6	—	6
12	Auto floorplan	—	—	—	—	—	—	—	—	—
13	Insurance premium	—	—	—	—	—	—	—	—	—
14	Other wholesale	—	—	—	—	—	—	—	—	—
15	Re-securitization	—	—	—	—	—	—	—	—	—

## SEC2 - SECURITIZATION EXPOSURES IN THE TRADING BOOK (1)

(\$ millions)		Q2 2022								
		Bank acts as originator			Bank acts as sponsor			Bank acts as investor		
		Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total
		a	b	c	d	e	f	g	h	i
1	<b>Total retail, of which:</b>	—	—	—	—	—	—	191	—	191
2	Residential mortgage	—	—	—	—	—	—	108	—	108
3	Credit card	—	—	—	—	—	—	(4)	—	(4)
4	Auto loans/leases	—	—	—	—	—	—	84	—	84
5	Student loans	—	—	—	—	—	—	2	—	2
6	Other retail exposures	—	—	—	—	—	—	1	—	1
7	Re-securitization	—	—	—	—	—	—	—	—	—
8	<b>Total wholesale, of which:</b>	—	—	—	—	—	—	66	—	66
9	Loans to corporates	—	—	—	—	—	—	—	—	—
10	Commercial mortgage	—	—	—	—	—	—	49	—	49
11	Lease and receivables	—	—	—	—	—	—	17	—	17
12	Auto floorplan	—	—	—	—	—	—	—	—	—
13	Insurance premium	—	—	—	—	—	—	—	—	—
14	Other wholesale	—	—	—	—	—	—	—	—	—
15	Re-securitization	—	—	—	—	—	—	—	—	—

(1) The amounts disclosed represent the net positions in the trading book.

## SEC2 - SECURITIZATION EXPOSURES IN THE TRADING BOOK (1)

(\$ millions)		Q1 2022								
		Bank acts as originator			Bank acts as sponsor			Bank acts as investor		
		Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total
		a	b	c	d	e	f	g	h	i
1	<b>Total retail, of which:</b>	—	—	—	—	—	—	133	—	133
2	Residential mortgage	—	—	—	—	—	—	84	—	84
3	Credit card	—	—	—	—	—	—	(27)	—	(27)
4	Auto loans/leases	—	—	—	—	—	—	67	—	67
5	Student loans	—	—	—	—	—	—	—	—	—
6	Other retail exposures	—	—	—	—	—	—	9	—	9
7	Re-securitization	—	—	—	—	—	—	—	—	—
8	<b>Total wholesale, of which:</b>	—	—	—	—	—	—	87	—	87
9	Loans to corporates	—	—	—	—	—	—	—	—	—
10	Commercial mortgage	—	—	—	—	—	—	76	—	76
11	Lease and receivables	—	—	—	—	—	—	11	—	11
12	Auto floorplan	—	—	—	—	—	—	—	—	—
13	Insurance premium	—	—	—	—	—	—	—	—	—
14	Other wholesale	—	—	—	—	—	—	—	—	—
15	Re-securitization	—	—	—	—	—	—	—	—	—

## SEC2 - SECURITIZATION EXPOSURES IN THE TRADING BOOK (1)

(\$ millions)		Q4 2021								
		Bank acts as originator			Bank acts as sponsor			Bank acts as investor		
		Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total
		a	b	c	d	e	f	g	h	i
1	<b>Total retail, of which:</b>	—	—	—	—	—	—	207	—	207
2	Residential mortgage	—	—	—	—	—	—	79	—	79
3	Credit card	—	—	—	—	—	—	(2)	—	(2)
4	Auto loans/leases	—	—	—	—	—	—	129	—	129
5	Student loans	—	—	—	—	—	—	—	—	—
6	Other retail exposures	—	—	—	—	—	—	1	—	1
7	Re-securitization	—	—	—	—	—	—	—	—	—
8	<b>Total wholesale, of which:</b>	—	—	—	—	—	—	99	—	99
9	Loans to corporates	—	—	—	—	—	—	5	—	5
10	Commercial mortgage	—	—	—	—	—	—	92	—	92
11	Lease and receivables	—	—	—	—	—	—	2	—	2
12	Auto floorplan	—	—	—	—	—	—	—	—	—
13	Insurance premium	—	—	—	—	—	—	—	—	—
14	Other wholesale	—	—	—	—	—	—	—	—	—
15	Re-securitization	—	—	—	—	—	—	—	—	—

## SEC2 - SECURITIZATION EXPOSURES IN THE TRADING BOOK (1)

(\$ millions)		Q3 2021								
		Bank acts as originator			Bank acts as sponsor			Bank acts as investor		
		Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total	Traditional	Synthetic	Sub-total
		a	b	c	d	e	f	g	h	i
1	<b>Total retail, of which:</b>	—	—	—	—	—	—	172	—	172
2	Residential mortgage	—	—	—	—	—	—	100	—	100
3	Credit card	—	—	—	—	—	—	20	—	20
4	Auto loans/leases	—	—	—	—	—	—	48	—	48
5	Student loans	—	—	—	—	—	—	—	—	—
6	Other retail exposures	—	—	—	—	—	—	4	—	4
7	Re-securitization	—	—	—	—	—	—	—	—	—
8	<b>Total wholesale, of which:</b>	—	—	—	—	—	—	65	—	65
9	Loans to corporates	—	—	—	—	—	—	4	—	4
10	Commercial mortgage	—	—	—	—	—	—	60	—	60
11	Lease and receivables	—	—	—	—	—	—	—	—	—
12	Auto floorplan	—	—	—	—	—	—	—	—	—
13	Insurance premium	—	—	—	—	—	—	1	—	1
14	Other wholesale	—	—	—	—	—	—	—	—	—
15	Re-securitization	—	—	—	—	—	—	—	—	—

(1) The amounts disclosed represent the net positions in the trading book.

**SEC3 - SECURITIZATION EXPOSURES IN THE BANKING BOOK AND ASSOCIATED CAPITAL REQUIREMENTS (BANK ACTING AS ORIGINATOR OR AS SPONSOR) (1)**

(\$ millions)		Q3 2022																
		Exposure values by RW bands (2)					Exposure values by regulatory approach (2)				RWA by regulatory approach (3)				Capital charge after cap			
		≤20%	>20% to 50%	>50% to 100%	>100% to <1250%	1250% RW	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
1	Total exposures	44,007	2,828	155	45	16	38,533	560	7,958	—	5,933	125	1,528	—	460	11	99	—
2	Traditional securitization	21,927	2,552	119	45	16	16,141	560	7,958	—	2,459	125	1,528	—	181	11	99	—
3	Of which securitization	21,927	2,552	119	45	16	16,141	560	7,958	—	2,459	125	1,528	—	181	11	99	—
4	Of which retail underlying	16,226	1,987	32	—	16	10,416	560	7,285	—	1,361	125	1,283	—	108	11	86	—
5	Of which wholesale	5,701	565	87	45	—	5,725	—	673	—	1,098	—	245	—	73	—	13	—
6	Of which re-securitization	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	Of which senior	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	Of which non-senior	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	Synthetic securitization	22,080	276	36	—	—	22,392	—	—	—	3,474	—	—	—	279	—	—	—
10	Of which securitization	22,080	276	36	—	—	22,392	—	—	—	3,474	—	—	—	279	—	—	—
11	Of which retail underlying	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12	Of which wholesale	22,080	276	36	—	—	22,392	—	—	—	3,474	—	—	—	279	—	—	—
13	Of which re-securitization	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
14	Of which senior	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15	Of which non-senior	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

**SEC3 - SECURITIZATION EXPOSURES IN THE BANKING BOOK AND ASSOCIATED CAPITAL REQUIREMENTS (BANK ACTING AS ORIGINATOR OR AS SPONSOR) (1)**

(\$ millions)		Q2 2022																
		Exposure values by RW bands (2)					Exposure values by regulatory approach (2)				RWA by regulatory approach (3)				Capital charge after cap			
		≤20%	>20% to 50%	>50% to 100%	>100% to <1250%	1250% RW	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
1	Total exposures	41,112	2,254	195	45	18	36,627	560	6,437	—	5,747	125	1,241	—	442	11	82	—
2	Traditional securitization	19,046	2,120	96	45	18	14,328	560	6,437	—	2,324	125	1,241	—	168	11	82	—
3	Of which securitization	19,046	2,120	96	45	18	14,328	560	6,437	—	2,324	125	1,241	—	168	11	82	—
4	Of which retail underlying	13,466	1,987	32	—	18	9,215	560	5,728	—	1,358	125	1,035	—	106	11	70	—
5	Of which wholesale	5,580	133	64	45	—	5,113	—	709	—	966	—	206	—	62	—	12	—
6	Of which re-securitization	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	Of which senior	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	Of which non-senior	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	Synthetic securitization	22,066	134	99	—	—	22,299	—	—	—	3,423	—	—	—	274	—	—	—
10	Of which securitization	22,066	134	99	—	—	22,299	—	—	—	3,423	—	—	—	274	—	—	—
11	Of which retail underlying	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12	Of which wholesale	22,066	134	99	—	—	22,299	—	—	—	3,423	—	—	—	274	—	—	—
13	Of which re-securitization	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
14	Of which senior	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15	Of which non-senior	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(1) Only includes securitization exposures where the risk transference recognition criteria are met in accordance with OSFI's CAR Guidelines, Chapter 7, Structured Credit Products.

(2) Exposure amounts are net of collateral.

(3) RWA before application of the KIRB cap.

## SEC3 - SECURITIZATION EXPOSURES IN THE BANKING BOOK AND ASSOCIATED CAPITAL REQUIREMENTS (BANK ACTING AS ORIGINATOR OR AS SPONSOR) (1)

(\$ millions)		Q1 2022																
		Exposure values by RW bands (2)					Exposure values by regulatory approach (2)				RWA by regulatory approach (3)				Capital charge after cap			
		≤20%	>20% to 50%	>50% to 100%	>100% to <1250%	1250% RW	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
1	Total exposures	29,005	247	54	32	19	23,140	560	5,657	—	3,422	125	994	—	265	10	70	—
2	Traditional securitization	17,586	211	54	32	19	11,685	560	5,657	—	1,653	125	994	—	124	10	70	—
3	Of which securitization	17,586	211	54	32	19	11,685	560	5,657	—	1,653	125	994	—	124	10	70	—
4	Of which retail underlying	12,208	81	32	—	19	6,791	560	4,989	—	836	125	865	—	67	10	61	—
5	Of which wholesale	5,378	130	22	32	—	4,894	—	668	—	817	—	129	—	57	—	9	—
6	Of which re-securitization	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	Of which senior	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	Of which non-senior	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	Synthetic securitization	11,419	36	—	—	—	11,455	—	—	—	1,769	—	—	—	141	—	—	—
10	Of which securitization	11,419	36	—	—	—	11,455	—	—	—	1,769	—	—	—	141	—	—	—
11	Of which retail underlying	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12	Of which wholesale	11,419	36	—	—	—	11,455	—	—	—	1,769	—	—	—	141	—	—	—
13	Of which re-securitization	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
14	Of which senior	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15	Of which non-senior	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

## SEC3 - SECURITIZATION EXPOSURES IN THE BANKING BOOK AND ASSOCIATED CAPITAL REQUIREMENTS (BANK ACTING AS ORIGINATOR OR AS SPONSOR) (1)

(\$ millions)		Q4 2021																
		Exposure values by RW bands (2)					Exposure values by regulatory approach (2)				RWA by regulatory approach (3)				Capital charge after cap			
		≤20%	>20% to 50%	>50% to 100%	>100% to <1250%	1250% RW	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
1	Total exposures	28,314	240	10	79	38	22,522	476	5,683	—	3,447	130	1,149	—	271	10	83	—
2	Traditional securitization	17,182	204	10	79	38	11,354	476	5,683	—	1,748	130	1,149	—	135	10	83	—
3	Of which securitization	17,182	204	10	79	38	11,354	476	5,683	—	1,748	130	1,149	—	135	10	83	—
4	Of which retail underlying	11,864	77	—	43	36	6,508	476	5,036	—	839	130	1,044	—	67	10	75	—
5	Of which wholesale	5,318	127	10	36	2	4,846	—	647	—	909	—	105	—	68	—	8	—
6	Of which re-securitization	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	Of which senior	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	Of which non-senior	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	Synthetic securitization	11,132	36	—	—	—	11,168	—	—	—	1,699	—	—	—	136	—	—	—
10	Of which securitization	11,132	36	—	—	—	11,168	—	—	—	1,699	—	—	—	136	—	—	—
11	Of which retail underlying	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12	Of which wholesale	11,132	36	—	—	—	11,168	—	—	—	1,699	—	—	—	136	—	—	—
13	Of which re-securitization	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
14	Of which senior	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15	Of which non-senior	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

## SEC3 - SECURITIZATION EXPOSURES IN THE BANKING BOOK AND ASSOCIATED CAPITAL REQUIREMENTS (BANK ACTING AS ORIGINATOR OR AS SPONSOR) (1)

(\$ millions)		Q3 2021																
		Exposure values by RW bands (2)					Exposure values by regulatory approach (2)				RWA by regulatory approach (3)				Capital charge after cap			
		≤20%	>20% to 50%	>50% to 100%	>100% to <1250%	1250% RW	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
1	Total exposures	29,010	143	44	51	31	23,602	476	5,201	—	3,328	130	1,034	—	258	11	74	—
2	Traditional securitization	17,890	143	8	51	31	12,446	476	5,201	—	1,635	130	1,034	—	124	11	74	—
3	Of which securitization	17,890	143	8	51	31	12,446	476	5,201	—	1,635	130	1,034	—	124	11	74	—
4	Of which retail underlying	13,265	16	—	27	31	8,351	476	4,512	—	955	130	938	—	76	11	66	—
5	Of which wholesale	4,625	127	8	24	—	4,095	—	689	—	680	—	96	—	48	—	8	—
6	Of which re-securitization	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	Of which senior	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	Of which non-senior	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	Synthetic securitization	11,120	—	36	—	—	11,156	—	—	—	1,693	—	—	—	134	—	—	—
10	Of which securitization	11,120	—	36	—	—	11,156	—	—	—	1,693	—	—	—	134	—	—	—
11	Of which retail underlying	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12	Of which wholesale	11,120	—	36	—	—	11,156	—	—	—	1,693	—	—	—	134	—	—	—
13	Of which re-securitization	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
14	Of which senior	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15	Of which non-senior	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(1) Only includes securitization exposures where the risk transferance recognition criteria are met in accordance with OSFI's CAR Guidelines, Chapter 7, Structured Credit Products.

(2) Exposure amounts are net of collateral.

(3) RWA before application of the KIRB cap.



**SEC4 - SECURITIZATION EXPOSURES IN THE BANKING BOOK AND ASSOCIATED CAPITAL REQUIREMENTS (BANK ACTING AS INVESTOR) (1)**

(\$ millions)		Q3 2022																
		Exposure values by RW bands (2)					Exposure values by regulatory approach (2)				RWA by regulatory approach (3)				Capital charge after cap			
		≤20%	>20% to 50%	>50% to 100%	>100% to <1250%	1250% RW	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
1	<b>Total exposures</b>	217	6	—	—	—	74	149	—	—	11	19	—	—	—	1	—	—
2	Traditional securitization	217	6	—	—	—	74	149	—	—	11	19	—	—	—	1	—	—
3	Of which securitization	217	6	—	—	—	74	149	—	—	11	19	—	—	—	1	—	—
4	Of which retail underlying	180	—	—	—	—	37	143	—	—	5	17	—	—	—	1	—	—
5	Of which wholesale	37	6	—	—	—	37	6	—	—	6	2	—	—	—	—	—	—
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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

**SEC4 - SECURITIZATION EXPOSURES IN THE BANKING BOOK AND ASSOCIATED CAPITAL REQUIREMENTS (BANK ACTING AS INVESTOR) (1)**

(\$ millions)		Q2 2022																
		Exposure values by RW bands (2)					Exposure values by regulatory approach (2)				RWA by regulatory approach (3)				Capital charge after cap			
		≤20%	>20% to 50%	>50% to 100%	>100% to <1250%	1250% RW	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
1	<b>Total exposures</b>	245	6	—	—	—	90	161	—	—	14	20	—	—	2	1	—	—
2	Traditional securitization	245	6	—	—	—	90	161	—	—	14	20	—	—	2	1	—	—
3	Of which securitization	245	6	—	—	—	90	161	—	—	14	20	—	—	2	1	—	—
4	Of which retail underlying	194	—	—	—	—	39	155	—	—	6	18	—	—	—	1	—	—
5	Of which wholesale	51	6	—	—	—	51	6	—	—	8	2	—	—	2	—	—	—
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) Only includes securitization exposures where the risk transference recognition criteria are met in accordance with OSFI's CAR Guidelines, Chapter 7, Structured Credit Products.

(2) Exposure amounts are net of collateral.

(3) RWA before application of the KIRB cap.

**SEC4 - SECURITIZATION EXPOSURES IN THE BANKING BOOK AND ASSOCIATED CAPITAL REQUIREMENTS (BANK ACTING AS INVESTOR) (1)**

(\$ millions)	Q1 2022																
	Exposure values by RW bands (2)					Exposure values by regulatory approach (2)				RWA by regulatory approach (3)				Capital charge after cap			
	≤20%	>20% to 50%	>50% to 100%	>100% to <1250%	1250% RW	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
1 <b>Total exposures</b>	197	6	—	—	—	102	101	—	—	15	12	—	—	2	1	—	—
2 Traditional securitization	197	6	—	—	—	102	101	—	—	15	12	—	—	2	1	—	—
3 Of which securitization	197	6	—	—	—	102	101	—	—	15	12	—	—	2	1	—	—
4 Of which retail underlying	137	—	—	—	—	42	95	—	—	6	10	—	—	1	1	—	—
5 Of which wholesale	60	6	—	—	—	60	6	—	—	9	2	—	—	1	—	—	—
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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

**SEC4 - SECURITIZATION EXPOSURES IN THE BANKING BOOK AND ASSOCIATED CAPITAL REQUIREMENTS (BANK ACTING AS INVESTOR) (1)**

(\$ millions)	Q4 2021																
	Exposure values by RW bands (2)					Exposure values by regulatory approach (2)				RWA by regulatory approach (3)				Capital charge after cap			
	≤20%	>20% to 50%	>50% to 100%	>100% to <1250%	1250% RW	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
1 <b>Total exposures</b>	155	6	—	—	—	74	87	—	—	11	11	—	—	1	1	—	—
2 Traditional securitization	155	6	—	—	—	74	87	—	—	11	11	—	—	1	1	—	—
3 Of which securitization	155	6	—	—	—	74	87	—	—	11	11	—	—	1	1	—	—
4 Of which retail underlying	136	—	—	—	—	55	81	—	—	8	8	—	—	1	1	—	—
5 Of which wholesale	19	6	—	—	—	19	6	—	—	3	3	—	—	—	—	—	—
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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

**SEC4 - SECURITIZATION EXPOSURES IN THE BANKING BOOK AND ASSOCIATED CAPITAL REQUIREMENTS (BANK ACTING AS INVESTOR) (1)**

(\$ millions)	Q3 2021																
	Exposure values by RW bands (2)					Exposure values by regulatory approach (2)				RWA by regulatory approach (3)				Capital charge after cap			
	≤20%	>20% to 50%	>50% to 100%	>100% to <1250%	1250% RW	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%	SEC-IRBA	SEC-ERBA, including IAA	SEC-SA	1250%
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
1 <b>Total exposures</b>	64	16	—	—	—	45	35	—	—	8	6	—	—	1	—	—	—
2 Traditional securitization	64	16	—	—	—	45	35	—	—	8	6	—	—	1	—	—	—
3 Of which securitization	64	16	—	—	—	45	35	—	—	8	6	—	—	1	—	—	—
4 Of which retail underlying	45	10	—	—	—	26	29	—	—	5	3	—	—	1	—	—	—
5 Of which wholesale	19	6	—	—	—	19	6	—	—	3	3	—	—	—	—	—	—
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) Only includes securitization exposures where the risk transferance recognition criteria are met in accordance with OSFI's CAR Guidelines, Chapter 7, Structured Credit Products.

(2) Exposure amounts are net of collateral.

(3) RWA before application of the KIRB cap.

## MARKET RISK RISK-WEIGHTED ASSETS (RWA) MOVEMENT BY KEY DRIVERS

(\$ millions)	LINE					
	#	Q3 2022	Q2 2022	Q1 2022	Q4 2021	Q3 2021
Market Risk RWA, beginning of quarter	1	12,736	12,859	12,066	10,395	8,553
Movement in risk levels (1)	2	1,761	(261)	706	1,973	(1,503)
Model updates (2)	3	—	—	—	—	—
Methodology and policy (3)	4	54	138	87	(302)	3,345
Acquisition and disposals	5	—	—	—	—	—
Foreign exchange movement and others	6	—	—	—	—	—
Market Risk RWA, end of quarter	7	14,551	12,736	12,859	12,066	10,395

(1) Movement in risk levels includes changes in exposures and market movements.

(2) Model updates include updates to risk models to reflect recent experience and changes in model scope.

(3) Methodology and policy include methodology changes to the calculations driven by regulatory policy changes, such as new or revised regulation.

**ESTIMATED AND ACTUAL LOSS PARAMETERS UNDER AIRB APPROACH**

(\$ millions except as noted)

Risk Profile	LINE #	Q3 2022						Q2 2022					
		PD (1) (2) (3)		LGD (1) (4) (5)		EAD (6) (7)		PD (1) (2) (3)		LGD (1) (4) (5)		EAD (6) (7)	
		Average estimated	Actual	Average estimated	Actual	Estimated	Actual	Average estimated	Actual	Average estimated	Actual	Estimated	Actual
<b>Wholesale</b>													
Corporate	1	1.09%	0.27%	35.28%	19.70%	110	79	1.12%	0.27%	35.36%	16.71%	174	144
Sovereign	2	0.17%	0.00%	18.05%	0.00%	—	—	0.17%	0.00%	17.61%	0.00%	—	—
Bank	3	0.43%	0.00%	15.64%	0.00%	—	—	0.49%	0.00%	15.89%	0.00%	—	—
<b>Retail</b>													
Residential mortgages excluding home equity line of credits (HELOCs) - Uninsured only (8) (9)	4	0.72%	0.34%	16.99%	3.65%	229	229	0.76%	0.36%	16.72%	3.27%	229	229
HELOCs (9)	5	0.33%	0.15%	30.35%	9.39%	62	52	0.35%	0.16%	35.01%	7.72%	68	58
Qualifying revolving retail (QRR)	6	0.89%	0.81%	88.00%	73.06%	385	349	0.92%	0.83%	87.99%	83.54%	395	356
Other retail (excl. SMEs)	7	3.92%	3.52%	84.06%	77.53%	219	218	3.94%	3.50%	83.45%	77.17%	208	207
Retail SMEs	8	1.54%	0.90%	75.72%	60.93%	69	67	1.67%	0.91%	74.93%	64.70%	98	96

**ESTIMATED AND ACTUAL LOSS PARAMETERS UNDER AIRB APPROACH**

(\$ millions except as noted)

Risk Profile	LINE #	Q1 2022						Q4 2021					
		PD (1) (2) (3)		LGD (1) (4) (5)		EAD (6) (7)		PD (1) (2) (3)		LGD (1) (4) (5)		EAD (6) (7)	
		Average estimated	Actual	Average estimated	Actual	Estimated	Actual	Average estimated	Actual	Average estimated	Actual	Estimated	Actual
<b>Wholesale</b>													
Corporate	1	1.16%	0.26%	35.75%	15.85%	160	135	1.16%	0.30%	35.89%	15.44%	135	96
Sovereign	2	0.18%	0.00%	17.92%	0.00%	—	—	0.18%	0.05%	17.62%	0.00%	—	—
Bank	3	0.48%	0.00%	15.02%	0.00%	—	—	0.49%	0.00%	15.07%	0.00%	—	—
<b>Retail</b>													
Residential mortgages excluding home equity line of credits (HELOCs) - Uninsured only (8) (9)	4	0.81%	0.39%	17.18%	4.28%	248	248	0.86%	0.47%	16.47%	5.25%	303	303
HELOCs (9)	5	0.40%	0.18%	33.54%	9.50%	66	57	0.41%	0.21%	30.96%	9.35%	78	66
Qualifying revolving retail (QRR)	6	0.99%	0.91%	88.26%	82.95%	431	386	0.96%	0.93%	87.69%	77.21%	434	391
Other retail (excl. SMEs)	7	4.51%	3.79%	84.75%	77.52%	223	221	4.35%	3.64%	84.20%	77.15%	251	248
Retail SMEs	8	1.83%	1.05%	71.38%	61.29%	127	124	1.87%	1.11%	70.34%	59.31%	141	138

**ESTIMATED AND ACTUAL LOSS PARAMETERS UNDER AIRB APPROACH**

(\$ millions except as noted)

Risk Profile	LINE #	Q3 2021					
		PD (1) (2) (3)		LGD (1) (4) (5)		EAD (6) (7)	
		Average estimated	Actual	Average estimated	Actual	Estimated	Actual
<b>Wholesale</b>							
Corporate	1	1.13%	0.35%	35.11%	11.46%	339	265
Sovereign	2	0.18%	0.04%	14.53%	0.00%	—	—
Bank	3	0.47%	0.00%	15.51%	0.00%	—	—
<b>Retail</b>							
Residential mortgages excluding home equity line of credits (HELOCs) - Uninsured only (8) (9)	4	0.84%	0.47%	16.14%	6.03%	296	296
HELOCs (9)	5	0.37%	0.22%	27.78%	10.11%	79	67
Qualifying revolving retail (QRR)	6	1.03%	0.98%	87.79%	76.69%	455	412
Other retail (excl. SMEs)	7	4.19%	3.48%	84.13%	77.46%	269	267
Retail SMEs	8	1.95%	1.25%	69.95%	61.17%	160	157

(1) The actual percentages reflect the experience of the past 12 months and are compared to the estimated percentages as at the beginning of the 12 month period being assessed.

(2) Wholesale PDs are based on a borrower count simple average. There have been no Bank defaults in the past 12 months.

(3) Retail PDs are based on account weighted average.

(4) Wholesale LGDs are expressed as an exposure weighted average. The LGD figures include back-dated resolved facilities.

(5) Retail LGDs are based on weighted average of LGD eligible accounts.

(6) Wholesale EADs represent predicted vs. realized comparison for defaults in the previous 12 months. Term products are not included. There have been no defaults in the Bank asset class within the past 12 months.

(7) Retail EADs represent predicted vs. realized comparison for defaults in the previous 12 months.

(8) Mortgages insured by Canada Mortgage and Housing Corporation and private mortgage insurers are primarily included in Sovereign.

(9) Investor-owned mortgages are included in the Other Retail asset class.

**Advanced Internal Ratings Based (AIRB) Approach:** The AIRB Approach is the most advanced of the range of options for determining the capital requirements for credit risk. This option allows banks to use their own internal models to measure credit risk capital requirements, subject to regulatory approval. OSFI has indicated that it expects the largest Canadian Banks to adopt the AIRB Approach.

**Basel Capital Floor:** A capital floor is measured based on the Basel Standardized Approach for credit risk and internal model for market risk, as prescribed by OSFI in CAR.

**Central Counterparty (CCP):** A clearing house that acts as an intermediary between counterparties for contracts traded in one or more financial markets. CCPs aim to mitigate risk through the use of margin requirements (both initial and variation) and a default management process, including a default fund and other resources. A CCP becomes a counterparty to trades with market participants through novation, an open offer system, or another legally binding arrangement. For the purposes of the capital framework, a CCP is a financial institution.

**Common Equity Tier 1 (CET1):** Primarily comprised of common shares, surplus resulting from the issue of instruments included in Common Equity Tier 1, retained earnings, and accumulated other comprehensive income. Regulatory CET1 deductions include: goodwill, intangible assets, pension assets, certain deferred tax asset and other items.

**Credit valuation Adjustment (CVA):** The adjustment that a bank must add as a capital charge to cover the risk of mark-to-market losses on the expected counterparty risk to OTC derivatives.

**Drawn:** The amount of funds invested or advanced to a customer.

**Exposure at Default (EAD):** EAD for on-balance sheet amounts represents outstandings, grossed up by provisions for credit losses on impaired loans and write-offs. EAD for undrawn and other off-balance sheet are estimated using Credit Conversion Factors (CCFs).

**Loss Given Default (LGD):** A measure of economic loss, the amount that may not be recovered in the event of a default, presented as a proportion of the exposure at default.

**Probability of Default (PD):** Represents the likelihood that a borrower or counterparty will go into default within a one-year time horizon.

**Qualifying Central Counterparty (QCCP):** An entity that is licensed to operate as a central counterparty (CCP) and is permitted by the appropriate regulator/overseer to operate as such with respect to the products offered.

**Risk-Weighted Assets (RWA):** A measure of a bank's exposures, weighted for their relative risk and calculated in accordance with OSFI's regulatory capital rules.

**Securities Financing Transactions (SFT):** Transactions such as repurchase agreements, reverse repurchase agreements, security lending and borrowing, which are also referred to as Repo-Style transactions, and wholesale margin lending transactions.

**Standardized Approach (SA):** An approach that allows banks to measure capital requirements by multiplying exposures by defined percentages based on the exposures product type and external credit rating (if applicable).

**Total Loss Absorbing Capital (TLAC):** The sum of Tier 1 capital, Tier 2 Capital, and Prescribed Shares and Liabilities ("Other TLAC Instruments") that are subject to conversion - in whole or in part - into common shares pursuant to subsection 39.2(2.3) of the Canada Deposit Insurance Corporation Act and meet all of the eligibility criteria set out in this guideline.

**Undrawn Commitments:** The unutilized authorizations associated with the drawn loans, including those which are unconditionally cancellable.