



Supplementary Regulatory Capital and Pillar 3 Disclosure

Fourth Quarter 2020

(unaudited)

For more information:

Ghislain Parent, Chief Financial Officer and Executive Vice-President Finance, Tel: 514 394-6807

Jean Dagenais, Senior Vice-President Finance, Tel: 514 394-6233

Linda Boulanger, Senior Vice-President Investor Relations, Tel: 514 394-0296

This document is available via the Bank's web site: www.nbc.ca

Notes to users

- 1) This *Supplementary Regulatory Capital and Pillar 3 Disclosure* document is unaudited and should be read in conjunction with the 2020 Annual Report. All amounts are in millions of Canadian dollars, unless otherwise stated.
- 2) The information provided in this document is subject to the same level of internal review and internal control processes as the information provided by the Bank for its financial reporting.
- 3) Financial information is available through the Report to Shareholders for all quarters of 2020 and also in the document entitled *Supplementary Financial Information* which are available on the Bank's website at nbc.ca. Prior reporting periods are also available on the Bank's website.
- 4) For certain prescribed tables formats where line or column items have zero balances, such items have not been presented.

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Location of Pillar 3 Disclosure

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		The Bank continues to apply the market risk disclosures under Basel 2.5 framework as permitted by OSFI.	

n.a. Not applicable

(1) Information available on the Bank's website at nbc.ca.

(2) These pages are included in the document entitled *Supplementary Financial Information - Fourth Quarter 2020*.

KM2 – Key Metrics – TLAC Requirements⁽¹⁾

(millions of Canadian dollars)

		2020				2019			
		Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
		a				a			
1	Total loss-absorbing capacity (TLAC) available	22,511	21,584	20,172	19,943	16,826	15,378	13,977	12,547
1a	TLAC available with transitional arrangements for ECL provisioning not applied	22,511	21,584	20,172	19,943	16,826	15,378	13,977	12,547
2	Total RWA at the level of the resolution group	94,808	94,814	92,755	86,206	83,039	80,984	79,008	77,036
3	TLAC ratio: TLAC as a percentage of RWA (row 1 / row 2) (%)	23.7%	22.8%	21.7%	23.1%	20.3%	19.0%	17.7%	16.3%
3a	TLAC ratio: TLAC as a percentage of RWA (row 1a / row 2) (%) with transitional arrangements for ECL provisioning not applied	23.7%	22.8%	21.7%	23.1%	20.3%	19.0%	17.7%	16.3%
4	Leverage ratio exposure measure at the level of the resolution group	321,038	309,001	306,386	319,709	308,902	303,961	296,118	286,655
5	TLAC Leverage Ratio: TLAC as a percentage of leverage ratio exposure measure (row 1 / row 4) (%)	7.0%	7.0%	6.6%	6.2%	5.4%	5.1%	4.7%	4.4%
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) (%)	7.0%	7.0%	6.6%	6.2%	5.4%	5.1%	4.7%	4.4%
6a	Does the subordination exemption in the antepenultimate paragraph of Section 11 of the FSB TLAC Term Sheet apply?	yes	yes	yes	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	no	no	no
6c	If the capped subordination exemption applies, the amount of funding issued that ranks pari passu with Excluded Liabilities and that is recognised as external TLAC, divided by funding issued that ranks pari passu with Excluded Liabilities and that would be recognised as external TLAC if no cap was applied (%)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

(1) Minimum TLAC ratios will be required starting November 1, 2021. Lines 1, 3 and 5 incorporate expected credit loss transitional relief provided by OSFI as announced on March 27, 2020. Lines 1a, 3a and 5a represent TLAC available with transitional arrangements for ECL provisioning not applied.

OV1 – Overview of RWA⁽¹⁾

(millions of Canadian dollars)

The following table provides an overview of total RWA forming the denominator of the risk-based capital requirements. Further breakdowns of RWA are presented in subsequent parts.

		Q4 2020	Q3 2020	Q2 2020	Q1 2020	Q4 2019	Q4 2020
		a	b	b	b	b	c
		RWA ⁽¹⁾	RWA ⁽¹⁾	RWA ⁽¹⁾	RWA ⁽¹⁾	RWA ⁽¹⁾	Minimum capital requirement ⁽²⁾
1	Credit risk (excluding counterparty credit risk)	67,348	66,240	66,385	60,155	58,361	5,387
2	Of which: standardised approach (SA)	14,229	13,630	14,065	12,095	10,429	1,138
3	Of which: foundation internal ratings-based (F-IRB) approach	-	-	-	-	-	-
4	Of which: supervisory slotting approach	-	-	-	-	-	-
5	Of which: advanced internal ratings-based (A-IRB) approach	53,119	52,610	52,320	48,060	47,932	4,249
6	Counterparty credit risk (CCR)	6,149	6,188	5,756	5,341	4,800	492
7	Of which: standardised approach for counterparty credit risk	4,702	4,704	4,714	4,035	3,568	376
8	Of which: internal model method (IMM)	-	-	-	-	-	-
9	Of which: other CCR	1,276	1,345	927	1,132	1,071	102
9a	Of which: exposures to central counterparties	171	139	115	174	161	14
10	Credit valuation adjustment (CVA)	1,612	1,664	1,555	1,364	1,200	129
11	Equity positions under the simple risk weight approach⁽³⁾	1,060	1,074	1,017	1,060	1,121	85
12	Equity investments in funds – look-through approach	144	128	138	149	105	12
13	Equity investments in funds – mandate-based approach	-	-	-	-	-	-
14	Equity investments in funds – fall-back approach	-	-	-	-	-	-
15	Settlement risk	113	166	63	70	57	9
16	Securitization exposures in banking book	694	639	574	646	388	56
16a	Of which: subject to the transitional arrangement	-	-	-	-	(188)	-
17	Of which: securitization IRB approach (SEC-IRBA)	172	176	67	73	37	14
18	Of which: securitization external ratings-based approach (SEC-ERBA), including internal assessment approach (IAA)	442	383	427	493	463	35
19	Of which: securitization standardised approach (SEC-SA)	80	80	80	80	76	6
20	Market risk	3,497	4,724	4,121	4,397	4,276	280
21	Of which: standardised approach (SA)	1,031	1,025	1,095	916	890	82
22	Of which: internal model approach (IMA)	2,466	3,699	3,026	3,481	3,386	198
23	Capital charge for switch between trading book and banking book	-	-	-	-	-	-
24	Operational risk	12,326	12,146	11,977	11,664	11,509	986
25	Amounts below the thresholds for deduction (subject to 250% risk weight)	1,865	1,845	1,169	1,360	1,222	149
26	Floor adjustment	-	-	-	-	-	-
27	Total (1+6+10+11+12+13+14+15+16+20+23+24+25+26)	94,808	94,814	92,755	86,206	83,039	7,585

(1) Risk weighted assets including the 1.06 scaling factor.

(2) The capital requirement is equal to 8% of risk weighted assets.

(3) Banking Book Equities that are not equity investments in funds (EIF) are treated under the materiality exemption and consequently reported in OV1 row 11 as the materiality exemption is available for AIRB banks.

LI1 – Differences Between Accounting and Regulatory Scopes of Consolidation and Mapping of Financial Statements with Regulatory Risk Categories⁽¹⁾

(millions of Canadian dollars)

For the following tables columns a) and b) enable users to identify the differences between the scope of accounting consolidation and the scope of regulatory consolidation; and columns c) to g) break down how the amounts reported in banks' financial statements (rows) correspond to regulatory risk categories.

	Q4 2020						
	a	b	c	d	e	f	g
	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Subject to credit risk framework	Subject to counterparty credit risk framework	Subject to the securitization framework	Subject to the market risk framework	Carrying values of items ⁽²⁾ Not subject to capital requirements or subject to deduction from capital
Assets							
Cash and deposits with financial institutions	29,142	29,142	29,142	–	–	617	–
Securities							
At fair value through profit or loss	78,326	81,363	2,965	–	12	78,386	–
At fair value through other comprehensive income	12,726	21,462	21,456	–	6	–	–
At amortized cost	11,079	11,385	10,241	–	1,144	–	–
	102,131	114,210	34,662	–	1,162	78,386	–
Securities purchased under reverse repurchase agreements and securities borrowed	14,512	14,574	–	14,574	–	–	–
Loans and acceptances							
Residential mortgage	64,959	37,941	37,941	–	–	–	–
Personal	37,613	37,613	37,613	–	–	–	–
Credit card	2,038	2,038	907	–	1,071	–	60
Business and government	54,422	54,422	54,422	–	14	525	–
Customers' liability under acceptances	159,032	132,014	130,883	–	1,085	525	60
Allowances for credit losses	6,866	6,866	6,866	–	–	–	–
	(1,158)	(560)	(560)	–	–	–	–
	164,740	138,320	137,189	–	1,085	525	60
Other							
Derivative financial instruments ⁽³⁾	13,422	14,255	–	14,255	–	13,207	–
Investments in associates and joint ventures	409	444	444	–	–	–	–
Premises and equipment	1,155	1,155	1,155	–	–	–	–
Goodwill	1,414	1,515	–	–	–	–	1,515
Intangible assets	1,434	1,213	–	–	–	–	1,213
Other assets	3,266	3,204	3,125	–	–	–	79
	21,100	21,786	4,724	14,255	–	13,207	2,807
Total assets	331,625	318,032	205,717	28,829	2,247	92,735	2,867
Liabilities							
Deposits	215,878	215,878	–	–	–	9,998	205,880
Other							
Acceptances	6,866	6,866	–	–	–	–	6,866
Obligations related to securities sold short	16,368	16,368	–	–	–	16,368	–
Obligations related to securities sold under repurchase agreements and securities loaned	33,859	39,019	–	39,019	–	–	–
Derivative financial instruments ⁽³⁾	12,923	13,557	–	13,557	–	12,300	–
Liabilities related to transferred receivables	22,855	22,855	–	–	–	–	22,855
Other liabilities	5,718	5,718	–	–	–	–	5,718
	98,589	104,383	–	52,576	–	28,668	35,439
Subordinated debt	775	775	–	–	–	–	775
Total liabilities	315,242	321,036	–	52,576	–	38,666	242,094

(1) The basis of consolidation used for financial accounting purposes, described in note 1 to the 2020 Annual Report audited consolidated financial statements, may differ from regulatory purposes. The regulatory consolidation does not include structured entities, where significant risk has been transferred to third parties nor subsidiaries and associates engaged in insurance activities.

(2) The sum of amounts in columns c) to g) may not equal the amounts in column b) as some items may be subject to regulatory capital charges in more than one risk category.

(3) Derivatives financial instruments are subject to both counterparty credit risk and market risk frameworks.

LI2 – Main Sources of Differences Between Regulatory Exposure Amounts and Carrying Values in Financial Statements

(millions of Canadian dollars)

The following table provides information on the main sources of differences (other than due to different scopes of consolidation which are shown in table LI1) between the financial statements' carrying value amounts and the exposure amounts used for regulatory purposes.

		Q4 2020				
		a	b	c	d	e
		Total	Items subject to ⁽¹⁾ :			
			Credit risk framework	Securitization framework	Counterparty credit risk framework	Market risk framework
1	Asset carrying value amount under scope of regulatory consolidation (as per template LI1)	315,165	205,717	2,247	28,829	92,735
2	Liabilities carrying value amount under scope of regulatory consolidation (as per template LI1)	78,942	–	–	52,576	38,666
3	Total net amount under regulatory scope of consolidation	236,223	205,717	2,247	(23,747)	54,069
4	<i>Gross-up for repo-style transactions⁽²⁾</i>	78,038	–	–	78,038	–
5	<i>Potential future exposures (PFE)⁽³⁾</i>	11,218	–	–	11,218	–
6	<i>Off-balance sheet amounts⁽⁴⁾</i>	169,927	54,108	3,807	83,701	–
7	<i>Differences due to different netting rules, other than those already included in row 2 including collateral</i>	4,626	–	–	4,626	–
8	VaR amounts for Securities Financing Transactions (SFTs)	7,823	–	–	7,823	–
9	<i>Differences in valuations</i>	–	–	–	–	–
10	<i>Collateral for SFTs</i>	(134,941)	–	–	(134,941)	–
11	Exposure amounts considered for regulatory purposes⁽⁵⁾	372,914	259,825	6,054	26,718	54,069

(1) The sum of amounts in columns b) to e) may not equal the amounts in column a) as some items may be subject to regulatory capital charges in more than one risk category.

(2) Is equal to two times the Obligations related to securities sold under repurchase agreements and securities loaned subject to counterparty credit risk framework from table LI1.

(3) The PFE amount is presented after the alpha of 1.4.

(4) Original off-balance sheet amounts are presented in column a) while in columns b) through e) exposures are after application of credit conversion factors (CCFs).

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

CC1 – Composition of Regulatory Capital

(millions of Canadian dollars)

		2020				2019				
		Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1	
Reference ⁽¹⁾										
Common Equity Tier 1 capital: Instruments and reserves										
1	Directly issued qualifying common share capital plus related contributed surplus ⁽²⁾	a + a'	3,104	3,087	3,074	3,072	3,000	2,967	2,953	2,933
2	Retained earnings	b	10,444	10,150	10,058	9,556	9,312	9,044	8,889	8,695
3	Accumulated other comprehensive income and other reserves	c	(118)	(177)	(137)	(7)	16	59	50	65
4	Directly issued capital subject to phase out from CET1 (only applicable to non-joint stock companies)		-	-	-	-	-	-	-	-
5	Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)	d	-	-	-	-	-	22	18	15
6	Common Equity Tier 1 capital before regulatory adjustments		13,430	13,060	12,995	12,621	12,328	12,092	11,910	11,708
Regulatory adjustments to Common Equity Tier 1 capital										
7	Prudential valuation adjustments		-	-	-	-	-	-	-	-
8	Goodwill (net of related tax liability)	e - w	(1,515)	(1,518)	(1,524)	(1,511)	(1,510)	(1,510)	(1,675)	(1,671)
9	Intangible assets other than mortgage-servicing rights	f - x	(1,213)	(1,239)	(1,182)	(1,160)	(1,148)	(1,111)	(1,177)	(1,139)
10	Deferred tax assets excluding those arising from temporary differences (net of related tax liability)	g	(41)	(32)	(31)	-	-	-	-	-
11	Accumulated other comprehensive income related to cash flow hedges	h	283	311	313	47	6	(32)	6	(48)
12	Shortfall of total provisions to expected losses	i	-	-	-	-	-	-	-	-
13	Securitisation gain on sale		-	-	-	-	-	-	-	-
14	Gains (losses) due to changes in own credit risk on fair valued liabilities	j	59	41	(88)	56	24	41	35	(23)
15	Defined benefit pension plan assets (net of related tax liability)	k - y	(79)	(15)	(118)	(7)	(8)	(5)	(7)	(5)
16	Investments in own shares (if not already netted off contributed surplus on reported balance sheet)		-	-	-	-	-	-	-	-
17	Reciprocal cross holdings in common equity		-	-	-	-	-	-	-	-
18	Non-significant investments in capital of banking, financial and insurance entities, net of eligible short positions (amount above 10% threshold)	l	-	-	-	-	-	-	-	-
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)	m	-	-	-	-	-	-	-	-
20	Mortgage servicing rights (amount above 10% threshold)		-	-	-	-	-	-	-	-
21	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability)		-	-	-	-	-	-	-	-
22	Amount exceeding the 15% threshold		-	-	-	-	-	-	-	-
23	of which: significant investments in the common stock of financials	n	-	-	-	-	-	-	-	-
24	of which: mortgage servicing rights		-	-	-	-	-	-	-	-
25	of which: deferred tax assets arising from temporary differences	o	-	-	-	-	-	-	-	-
26	Other deductions or regulatory adjustments to CET1 as determined by OSFI (including regulatory adjustments in respect of own use property)		243	232	203	-	-	-	-	-
27	Regulatory adjustments applied to Common Equity Tier 1 due to insufficient Additional Tier 1 and Tier 2 to cover deductions		-	-	-	-	-	-	-	-
28	Total regulatory adjustments to Common equity Tier 1		(2,263)	(2,220)	(2,427)	(2,575)	(2,636)	(2,617)	(2,818)	(2,886)
29	Common Equity Tier 1 capital (CET1)		11,167	10,840	10,568	10,046	9,692	9,475	9,092	8,822
29a	CET1 with transitional arrangements for ECL provisioning not applied		10,924	10,608	10,365					
Additional Tier 1 capital: instruments										
30	Directly issued qualifying Additional Tier 1 instruments plus related contributed surplus ⁽²⁾	v + z	2,950	2,450	2,450	2,450	2,450	2,450	2,450	2,450
31	of which: classified as equity under applicable accounting standards		2,950	2,450	2,450	2,450	2,450	2,450	2,450	2,450
32	of which: classified as liabilities under applicable accounting standards	p	-	-	-	-	-	-	-	-
33	Directly issued capital instruments subject to phase out from Additional Tier 1 ⁽²⁾	v' + z' + p'	-	-	350	350	350	350	350	350
34	Additional Tier 1 instruments (and CET1 instruments not included in row 5) issued by subsidiaries and held by third parties (amount allowed in group AT1)	q	-	-	-	-	-	5	4	3
35	of which: instruments issued by subsidiaries subject to phase out		-	-	-	-	-	-	-	-
36	Additional Tier 1 capital before regulatory adjustments		2,950	2,450	2,800	2,800	2,800	2,805	2,804	2,803

(1) Reconciliation with Balance Sheet is presented on pages 12 to 13.

(2) A complete list of capital instruments and their main features is now available on the Bank's website at nbc.ca under *Investor Relations > Capital & Debt Information > Main Features of Regulatory Capital Instruments*.

CC1 – Composition of Regulatory Capital (continued)

(millions of Canadian dollars)

	Reference ⁽¹⁾	2020				2019			
		Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Additional Tier 1 capital: regulatory adjustments									
37		(3)	-	-	-	-	-	-	-
38		-	-	-	-	-	-	-	-
39		-	-	-	-	-	-	-	-
40		-	-	-	-	-	-	-	-
41		(2)	-	-	-	-	-	-	(1)
41a		(2)	-	-	-	-	-	-	(1)
42		-	-	-	-	-	-	-	-
43		(5)	-	-	-	-	-	-	(1)
44		2,945	2,450	2,800	2,800	2,800	2,805	2,804	2,802
45		14,112	13,290	13,368	12,846	12,492	12,280	11,896	11,624
45a		13,869	13,058	13,165					
Tier 2 capital: instruments and allowances									
46	r	750	750	750	750	750	750	750	750
47	r'	9	9	10	9	9	9	9	9
48	s	-	-	-	-	-	6	5	4
49		-	-	-	-	-	-	-	-
50	t	317	313	308	205	189	183	185	188
51		1,076	1,072	1,068	964	948	948	949	951
Tier 2 capital: regulatory adjustments									
52		-	-	-	-	-	-	-	-
53		-	-	-	-	-	-	-	-
54		(21)	(26)	(66)	(55)	(74)	(35)	(55)	(28)
54a		(21)	(26)	(66)	(55)	(74)	(35)	(55)	(28)
55		-	-	-	-	-	-	-	-
56		-	-	-	-	-	-	-	-
57		(21)	(26)	(66)	(55)	(74)	(35)	(55)	(28)
58		1,055	1,046	1,002	909	874	913	894	923
59		15,167	14,336	14,370	13,755	13,366	13,193	12,790	12,547
59a		15,167	14,336	14,370					

(1) Reconciliation with Balance Sheet is presented on pages 12 to 13.

(2) A complete list of capital instruments and their main features is now available on the Bank's website at nbc.ca under *Investor Relations > Capital & Debt Information > Main Features of Regulatory Capital Instruments*.

CC1 – Composition of Regulatory Capital (continued)

(millions of Canadian dollars)

		2020				2019			
		Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
60	Total risk-weighted assets	94,808	94,814	92,755	86,206	83,039	80,984	79,008	77,036
60a	Common Equity Tier 1 Capital RWA (CET1)	94,808	94,814	92,755	86,206	83,039	80,984	79,008	77,036
60b	Tier 1 Capital RWA	94,808	94,814	92,755	86,206	83,039	80,984	79,008	77,036
60c	Total capital RWA	94,808	94,814	92,755	86,206	83,039	80,984	79,008	77,036
Capital ratios									
61	Common Equity Tier 1 (as a percentage of risk weighted assets)	11.8%	11.4%	11.4%	11.7%	11.7%	11.7%	11.5%	11.5%
61a	CET1 Ratio with transitional arrangements for ECL provisioning not applied	11.5%	11.2%	11.2%					
62	Tier 1 (as a percentage of risk weighted assets)	14.9%	14.0%	14.4%	14.9%	15.0%	15.2%	15.1%	15.1%
62a	Tier 1 Capital Ratio with transitional arrangements for ECL provisioning not applied	14.6%	13.8%	14.2%					
63	Total capital (as a percentage of risk weighted assets)	16.0%	15.1%	15.5%	16.0%	16.1%	16.3%	16.2%	16.3%
63a	Total Capital Ratio with transitional arrangements for ECL provisioning not applied	16.0%	15.1%	15.5%					
64	Institution-specific buffer requirement (minimum CET1 requirement plus capital conservation buffer plus G-SIB buffer requirement plus D-SIB buffer requirement expressed as a percentage of risk weighted assets)	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
65	of which: capital conservation buffer requirement	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
66	of which: bank-specific countercyclical buffer	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
67	of which: G-SIB buffer requirement	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
67a	of which: D-SIBs buffer requirement	1.0%	1.0%	1.0%	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)	11.8%	11.4%	11.4%	11.7%	11.7%	11.7%	11.5%	11.5%
OSFI target (minimum + capital conservation buffer + D-SIB buffer)⁽¹⁾									
69	Common Equity Tier 1 all-in target ratio	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
70	Tier 1 capital all-in target ratio	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%
71	Total capital all-in target ratio	11.5%	11.5%	11.5%	11.5%	11.5%	11.5%	11.5%	11.5%
Amounts below the thresholds for deduction (before risk weighting)									
72	Non-significant investments in the capital and other TLAC-eligible instruments of other financials entities	365	346	390	436	527	530	551	549
73	Significant investments in the common stock of financials	337	377	354	340	318	339	301	287
74	Mortgage servicing rights (net of related tax liability)	–	–	–	–	–	–	–	–
75	Deferred tax assets arising from temporary differences (net of related tax liabilities)	409	361	114	204	171	154	37	42
Applicable caps on the inclusion of allowances in Tier 2									
76	Allowance eligible for inclusion in Tier 2 in respect of exposures subject to standardised approach (prior to application of cap)	122	118	123	92	81	71	71	70
77	Cap on inclusion of allowances in Tier 2 under standardised approach	166	159	159	139	118	103	102	97
78	Allowance eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (IRB) (prior to application of cap)	195	195	185	113	108	112	114	118
79	Cap on inclusion of allowances in Tier 2 under internal ratings-based approach	394	392	384	354	347	345	336	326
Capital instruments subject to phase-out arrangements (only applicable between January 1, 2013 and January 1, 2022)									
80	Current cap on CET1 instruments subject to phase out arrangements	–	–	–	–	–	–	–	–
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	–	–	–	–	–	–	–	–
82	Current cap on AT1 instruments subject to phase out arrangements	387	387	387	387	581	581	581	581
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	–	–	–	–	–	–	–	–
84	Current cap on T2 instruments subject to phase out arrangements	476	476	476	476	715	715	715	715
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	–	–	–	–	–	–	–	–

(1) Do not include the domestic stability buffer.

CC2 – Reconciliation of Regulatory Capital to Balance Sheet⁽¹⁾

(millions of Canadian dollars)

	Q4 2020		
	Cross - Reference to Definition of Capital ⁽²⁾	As in Report to Shareholders	Under scope of regulatory consolidation
Assets			
Cash and deposits with financial institutions		29,142	29,142
Securities		102,131	114,210
Non-significant investments in capital of other financial institutions reflected in regulatory capital	l	–	–
Other securities		102,131	114,210
Assets purchased under reverse repurchase agreements and securities borrowed		14,512	14,574
Loans			
Residential mortgage		64,959	37,941
Personal		37,613	37,613
Credit card		2,038	2,038
Business and government		54,422	54,422
Customers' liability under acceptances		6,866	6,866
Less: Allowances for credit losses		(1,158)	(560)
Allowance reflected in Tier 2 regulatory capital	t	–	(560)
Shortfall of allowances to expected loss	i	–	–
Allowances not reflected in regulatory capital		–	(598)
Other assets			
Derivative financial instruments		13,422	14,255
Other		7,678	7,531
Goodwill	e	1,414	1,515
Intangibles assets	f	2,589	1,434
Deferred tax assets		980	892
Deferred tax assets excluding those arising from temporary differences	g	–	41
Deferred tax assets arising from temporary differences exceeding regulatory thresholds	o	–	–
Deferred tax assets - realize through loss carrybacks		–	443
Deferred tax assets - other temporary differences		–	408
Defined-benefit pension fund net assets	k	–	107
Significant investments in other financial institutions		–	337
Significant investments exceeding regulatory thresholds	m + n	–	–
Significant investments not exceeding regulatory thresholds		–	337
Other		2,695	3,246
Total assets		331,625	318,032

(1) The basis of consolidation used for financial accounting purposes, described in note 1 to the 2020 Annual Report audited consolidated financial statements, may differ from regulatory purposes. The regulatory consolidation does not include structured entities, where significant risk has been transferred to third parties nor subsidiaries and associates engaged in insurance activities. Total assets of National Bank Life Insurance Company and other insurance subsidiaries are \$185 million and \$16 million respectively.

(2) The references identify balance sheet components which are used in calculation of regulatory capital on pages 9 to 11.

CC2 – Reconciliation of Regulatory Capital to Balance Sheet⁽¹⁾ (continued)

(millions of Canadian dollars)

	Q4 2020		
	Cross - Reference to Definition of Capital ⁽²⁾	As in Report to Shareholders	Under scope of regulatory consolidation
Liabilities			
Deposits		215,878	215,878
Derivatives financials instruments		12,923	13,557
Other liabilities		85,666	90,826
Gains and losses due to changes in own credit risk on fair value liabilities	j	–	(59)
Deferred tax liabilities		337	337
Related to goodwill	w	–	–
Related to intangibles	x	–	221
Related to pensions	y	–	28
Other deferred tax liabilities		–	88
Other		85,329	90,548
Subordinated debt		775	775
Regulatory capital amortization of maturing debentures		–	–
Fair value adjustment and unamortized issuance cost		–	16
Subordinated debentures not allowed for regulatory capital	s	–	–
Subordinated debentures used for regulatory capital		–	759
Allowed for inclusion in Tier 2 capital	r	–	750
Subject to phase out	r'	–	9
Total liabilities		315,242	321,036
Equity Attributable to Shareholders and holders of other equity instruments		16,380	16,380
Common shares	a	3,057	3,057
Contributed surplus	a'	47	47
Retained earnings	b	10,444	10,444
Accumulated Other Comprehensive Income (loss)	c	(118)	(118)
Net gains (losses) on instruments designated as cash flow hedges	h	(283)	(283)
Net foreign currency translation adjustments		61	61
Other		104	104
Preferred shares and other equity instruments		2,950	2,950
of which: are qualifying	v	–	2,950
of which: are subject to phase out	v'	–	–
Non-controlling interest		3	3
Innovative instruments		–	3
of which: are qualifying		–	–
of which: are subject to phase out	p'	–	–
Other		–	3
Portion allowed for inclusion into CET1	d	–	–
Portion allowed for inclusion into Tier 1 capital	q	–	–
Portion allowed for inclusion into Tier 2 capital	s	–	–
Portion not allowed for regulatory capital		–	–
Total Equity		16,383	16,383
Total Liabilities and Equity		331,625	337,419

(1) The basis of consolidation used for financial accounting purposes, described in note 1 to the 2020 Annual Report audited consolidated financial statements, may differ from regulatory purposes. The regulatory consolidation does not include structured entities, where significant risk has been transferred to third parties nor subsidiaries and associates engaged in insurance activities. Total assets of National Bank Life Insurance Company and other insurance subsidiaries are \$185 million and \$16 million respectively.

(2) The references identify balance sheet components which are used in calculation of regulatory capital on pages 9 to 11.

TLAC1 – TLAC Composition⁽¹⁾

(millions of Canadian dollars)

		2020				2019			
		Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Regulatory capital elements of TLAC and adjustments									
1	Common Equity Tier 1 capital (CET1)	11,167	10,840	10,568	10,046	9,692	9,475	9,092	8,822
2	Additional Tier 1 capital (AT1) before TLAC adjustments	2,950	2,450	2,800	2,800	2,800	2,805	2,804	2,803
3	AT1 ineligible as TLAC as issued out of subsidiaries to third parties ⁽²⁾	-	-	-	-	-	-	-	-
4	Other adjustments	(5)	-	-	-	-	-	-	(1)
5	AT1 instruments eligible under the TLAC framework	2,945	2,450	2,800	2,800	2,800	2,805	2,804	2,802
6	Tier 2 capital (T2) before TLAC adjustments	1,076	1,072	1,068	964	948	948	949	951
7	Amortised portion of T2 instruments where remaining maturity > 1 year	-	-	-	-	-	-	-	-
8	T2 capital ineligible as TLAC as issued out of subsidiaries to third parties ⁽²⁾	-	-	-	-	-	-	-	-
9	Other adjustments	(21)	(26)	(66)	(55)	(74)	(35)	(55)	(28)
10	T2 instruments eligible under the TLAC framework	1,055	1,046	1,002	909	874	913	894	923
11	TLAC arising from regulatory capital	15,167	14,336	14,370	13,755	13,366	13,193	12,790	12,547
Non-regulatory capital elements of TLAC									
12	External TLAC instruments issued directly by the bank and subordinated to excluded liabilities	-	-	-	-	-	-	-	-
13	External TLAC instruments issued directly by the bank which are not subordinated to excluded liabilities but meet all other TLAC term sheet requirements	7,350	7,281	5,882	6,259	3,467	2,185	1,196	-
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 recapitalise a G-SIB in resolution	-	-	-	-	-	-	-	-
17	TLAC arising from non-regulatory capital instruments before adjustments	7,350	7,281	5,882	6,259	3,467	2,185	1,196	-
Non-regulatory capital elements of TLAC: adjustments									
18	TLAC before deductions	22,517	21,617	20,252	20,014	16,833	15,378	13,986	12,547
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	(6)	(33)	(80)	(71)	(7)	-	(9)	-
21	Other adjustments to TLAC	-	-	-	-	-	-	-	-
22	TLAC available after deductions	22,511	21,584	20,172	19,943	16,826	15,378	13,977	12,547
Risk-weighted assets and leverage exposure measure for TLAC purposes									
23	Total risk-weighted assets adjusted as permitted under the TLAC regime	94,808	94,814	92,755	86,206	83,039	80,984	79,008	77,036
24	Leverage exposure measure	321,038	309,001	306,386	319,709	308,902	303,961	296,118	286,655
TLAC ratios and buffers									
25	TLAC ratio (as a percentage of risk-weighted assets adjusted as permitted under the TLAC regime)	23.7%	22.8%	21.7%	23.1%	20.3%	19.0%	17.7%	16.3%
26	TLAC Leverage ratio (as a percentage of leverage exposure)	7.0%	7.0%	6.6%	6.2%	5.4%	5.1%	4.7%	4.4%
27	CET1 (as a percentage of risk-weighted assets) available after meeting the resolution group's minimum capital and TLAC requirements	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
28	Institution-specific buffer requirement (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%	3.5%	3.5%	3.5%
29	Of which: capital conservation buffer	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
30	Of which: bank specific countercyclical buffer	-	-	-	-	-	-	-	-
31	Of which: D-SIB \ G-SIB buffer	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%

(1) Minimum TLAC ratios will be required starting November 1, 2021.

(2) Additional Tier 1 capital and Tier 2 capital issued out of subsidiaries to third parties will be eligible as TLAC up to January 1, 2022.

TLAC3 – Creditor Ranking at Legal Entity Level⁽¹⁾

(millions of Canadian dollars)

		Q4 2020						Q3 2020					
		Creditor ranking					Sum (1 to 5)	Creditor ranking					Sum (1 to 5)
		1	2	3	4 ⁽²⁾	5 ⁽³⁾		1	2	3	4 ⁽²⁾	5 ⁽³⁾	
		Most junior			Most senior			Most junior			Most senior		
1	Description of creditor ranking	Common shares	Preferred shares	Subordinated debt	Bail-in debt	Other liabilities excluding Bail-in debt		Common shares	Preferred shares	Subordinated debt	Bail-in debt	Other liabilities excluding Bail-in debt	
2	Total capital and liabilities net of credit risk mitigation	3,057	2,950	759	8,369	-	15,135	3,040	2,450	759	7,997	-	14,246
3	Subset of row 2 that are excluded liabilities	-	-	-	1,025	-	1,025	-	-	-	748	-	748
4	Total capital and liabilities less excluded liabilities (row 2 minus row 3)	3,057	2,950	759	7,344	-	14,110	3,040	2,450	759	7,249	-	13,498
5	Subset of row 4 that are potentially eligible as TLAC	3,057	2,950	759	7,344	-	14,110	3,040	2,450	759	7,249	-	13,498
6	Subset of row 5 with 1 year ≤ residual maturity < 2 years	-	-	-	999	-	999	-	-	-	-	-	-
7	Subset of row 5 with 2 years ≤ residual maturity < 5 years	-	-	-	4,952	-	4,952	-	-	-	6,270	-	6,270
8	Subset of row 5 with 5 years ≤ residual maturity < 10 years	-	-	750	774	-	1,524	-	-	750	758	-	1,508
9	Subset of row 5 residual maturity ≥ 10 years, but excluding perpetual securities	-	-	9	619	-	628	-	-	9	221	-	230
10	Subset of row 5 that is perpetual securities	3,057	2,950	-	-	-	6,007	3,040	2,450	-	-	-	5,490

		Q2 2020						Q1 2020					
		Creditor ranking					Sum (1 to 5)	Creditor ranking					Sum (1 to 5)
		1	2	3	4 ⁽²⁾	5 ⁽³⁾		1	2	3	4 ⁽²⁾	5 ⁽³⁾	
		Most junior			Most senior			Most junior			Most senior		
1	Description of creditor ranking	Common shares	Preferred shares	Subordinated debt	Bail-in debt	Other liabilities excluding Bail-in debt		Common shares	Preferred shares	Subordinated debt	Bail-in debt	Other liabilities excluding Bail-in debt	
2	Total capital and liabilities net of credit risk mitigation	3,028	2,450	760	6,603	-	12,841	3,028	2,450	759	6,265	-	12,502
3	Subset of row 2 that are excluded liabilities	-	-	-	801	-	801	-	-	-	77	-	77
4	Total capital and liabilities less excluded liabilities (row 2 minus row 3)	3,028	2,450	760	5,802	-	12,040	3,028	2,450	759	6,188	-	12,425
5	Subset of row 4 that are potentially eligible as TLAC	3,028	2,450	760	5,802	-	12,040	3,028	2,450	759	6,188	-	12,425
6	Subset of row 5 with 1 year ≤ residual maturity < 2 years	-	-	-	-	-	-	-	-	-	684	-	684
7	Subset of row 5 with 2 years ≤ residual maturity < 5 years	-	-	-	5,552	-	5,552	-	-	-	4,536	-	4,536
8	Subset of row 5 with 5 years ≤ residual maturity < 10 years	-	-	750	22	-	772	-	-	750	776	-	1,526
9	Subset of row 5 residual maturity ≥ 10 years, but excluding perpetual securities	-	-	10	228	-	238	-	-	9	192	-	201
10	Subset of row 5 that is perpetual securities	3,028	2,450	-	-	-	5,478	3,028	2,450	-	-	-	5,478

(1) This table provides creditors of the legal entity National Bank of Canada with information regarding their ranking in its liabilities structure.

(2) Bail-in Debt is reflected as subordinated to Other Liabilities. Under the Bail-in Regime, Bail-in Debt which would ordinarily rank equally to Other Liabilities in liquidation, is subject to conversion under statutory resolution powers whereas Other Liabilities are not subject to such conversion.

(3) OSFI doesn't require to complete this column at this time.

LR1 – Summary Comparison of Accounting Assets vs Leverage Ratio Exposure Measure

(millions of Canadian dollars)

		2020				2019			
		Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Accounting assets vs. leverage ratio exposure									
1	Total consolidated assets as per published financial statements	331,625	322,453	316,950	289,191	281,458	276,312	269,106	263,355
2	Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation	8	55	34	25	3	28	4	(3)
3	Adjustment for securitized exposures that meet the operational requirements for the recognition of risk transference ⁽¹⁾	(65)	(65)	(37)	(898)	(897)	(894)	(890)	(904)
4	Adjustment for fiduciary assets recognised on the balance sheet pursuant to the operative accounting framework but excluded from the leverage ratio exposure measure	–	–	–	–	–	–	–	–
5	Adjustment for derivative financial instruments ⁽²⁾	2,224	1,755	(64)	6,458	5,873	5,237	5,814	3,808
6	Adjustment for securities financing transactions (i.e. repos and similar secured lending) ⁽²⁾	2,174	3,562	1,857	4,754	3,164	4,052	3,278	1,920
7	Adjustment for off-balance sheet items (i.e. conversion to credit equivalent amounts of off-balance sheet exposures)	27,365	25,938	24,833	24,555	24,141	23,436	22,940	23,050
8	Other adjustments	(42,293)	(44,697)	(37,187)	(4,376)	(4,840)	(4,210)	(4,134)	(4,571)
9	Leverage Ratio Exposure	321,038	309,001	306,386	319,709	308,902	303,961	296,118	286,655

(1) OSFI's October 2018 Leverage Requirements Guideline now allows for the exclusion of securitized exposures that meet the operational requirements for risk transference.

(2) Adjustments due to differences between accounting and regulatory netting standards.

LR2 – Leverage Ratio Common Disclosure Template

(millions of Canadian dollars)

		2020				2019			
		Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Leverage ratio common disclosure									
On-balance sheet exposures									
1	On-balance sheet items (excluding derivatives, SFTs and grandfathered securitization exposures but including collateral)	267,262	257,390	252,666	267,659	254,653	252,885	243,584	239,966
2	Gross-up for derivatives collateral provided where deducted from balance sheet assets pursuant to the operative accounting framework	-	-	-	-	-	-	-	-
3	(Deductions of receivables assets for cash variation margin provided in derivative transactions)	(3,350)	(3,329)	(3,509)	(1,740)	(2,120)	(1,434)	(1,113)	(1,544)
4	(Asset amounts deducted in determining Basel III Tier 1 capital)	(2,570)	(2,493)	(2,855)	(2,631)	(2,661)	(2,659)	(2,852)	(2,865)
5	Total on-balance sheet exposures (excluding derivatives and SFTs) (sum of rows 1 to 4)	261,342	251,568	246,302	263,288	249,872	248,792	239,619	235,557
Derivative exposures									
6	Replacement cost associated with all derivative transactions (where applicable net of eligible cash variation margin and/or with bilateral netting)	4,757	5,433	6,373	3,408	2,868	3,095	3,007	2,483
7	Add-on amounts for PFE associated with all derivative transactions	10,821	9,769	9,290	11,995	11,115	10,638	10,058	8,463
8	(Exempted CCP leg of client-cleared trade exposures)	-	-	-	-	-	-	-	-
9	Adjusted effective notional amount of written credit derivatives	67	20	21	20	19	20	23	20
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	-	-	-	-	-	-	-	-
11	Total derivative exposures (sum of rows 6 to 10)	15,645	15,222	15,684	15,423	14,002	13,753	13,088	10,966
Securities financing transaction exposures									
12	Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions	14,512	12,711	17,710	11,689	17,723	13,928	17,193	15,162
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	(1,725)	(1,491)	(2,301)	(520)	(1,038)	(883)	(662)	(2,063)
14	CCR exposure for SFTs assets	3,899	5,053	4,158	5,274	4,202	4,935	3,940	3,983
15	Agent transaction exposures	-	-	-	-	-	-	-	-
16	Total securities financing transaction exposures (sum of rows 12 to 15)	16,686	16,273	19,567	16,443	20,887	17,980	20,471	17,082
Other off-balance sheet exposures									
17	Off-balance sheet exposure at gross notional amount	85,644	82,951	80,508	76,692	75,558	72,873	71,962	71,491
18	(Adjustments for conversion to credit equivalent amounts)	(58,279)	(57,013)	(55,675)	(52,137)	(51,417)	(49,437)	(49,022)	(48,441)
19	Off-balance sheet items (sum of rows 17 and 18)	27,365	25,938	24,833	24,555	24,141	23,436	22,940	23,050
Capital and Total Exposures									
20	Tier 1 capital	14,112	13,290	13,368	12,846	12,492	12,280	11,896	11,624
20a	Tier 1 Capital with transitional arrangements for ECL provisioning not applied	13,869	13,058	13,165					
21	Total Exposures (sum of rows 5, 11, 16 and 19)	321,038	309,001	306,386	319,709	308,902	303,961	296,118	286,655
Leverage Ratio									
22	Basel III leverage ratio	4.4%	4.3%	4.4%	4.0%	4.0%	4.0%	4.0%	4.1%
22a	Basel III leverage ratio with transitional arrangements for ECL provisioning not applied	4.3%	4.2%	4.3%					

CR1 – Credit Quality of Assets⁽¹⁾

(millions of Canadian dollars)

The following tables provide a comprehensive picture of the credit quality of a bank's (on- and off-balance sheet) assets.

		Q4 2020							Q3 2020						
		a	b	c	d	e	f	g	a	b	c	d	e	f	g
		Gross carrying values ⁽²⁾ of		Allowances for credit losses ⁽⁴⁾	Of which ECL accounting provisions for credit losses on SA exposures		Of which ECL accounting provisions for credit losses on IRB exposures	Net values (a+b-c)	Gross carrying values ⁽²⁾ of		Allowances for credit losses ⁽⁴⁾	Of which ECL accounting provisions for credit losses on SA exposures		Of which ECL accounting provisions for credit losses on IRB exposures	Net values (a+b-c)
		Default exposures ⁽³⁾	Non-default exposures		Allocated in regulatory category of Specific	Allocated in regulatory category of General			Default exposures ⁽³⁾	Non-default exposures		Allocated in regulatory category of Specific	Allocated in regulatory category of General		
1	Loans ⁽⁵⁾	782	164,083	1,163	26	57	1,080	163,702	743	157,723	1,118	26	58	1,034	157,348
2	Debt Securities	–	33,237	4	–	1	3	33,233	–	34,680	3	–	2	1	34,677
3	Off-balance-sheet commitments ⁽⁶⁾	17	82,314	176	–	4	172	82,155	12	80,210	184	–	2	182	80,038
4	Total	799	279,634	1,343	26	62	1,255	279,090	755	272,613	1,305	26	62	1,217	272,063

		Q2 2020							Q1 2020						
		a	b	c	d	e	f	g	a	b	c	d	e	f	g
		Gross carrying values ⁽²⁾ of		Allowances for credit losses ⁽⁴⁾	Of which ECL accounting provisions for credit losses on SA exposures		Of which ECL accounting provisions for credit losses on IRB exposures	Net values (a+b-c)	Gross carrying values ⁽²⁾ of		Allowances for credit losses ⁽⁴⁾	Of which ECL accounting provisions for credit losses on SA exposures		Of which ECL accounting provisions for credit losses on IRB exposures	Net values (a+b-c)
		Default exposures ⁽³⁾	Non-default exposures		Allocated in regulatory category of Specific	Allocated in regulatory category of General			Default exposures ⁽³⁾	Non-default exposures		Allocated in regulatory category of Specific	Allocated in regulatory category of General		
1	Loans ⁽⁵⁾	760	160,166	1,044	25	48	971	159,882	653	140,102	695	22	27	646	140,060
2	Debt Securities	–	31,533	5	–	2	3	31,528	–	29,100	1	–	–	1	29,099
3	Off-balance-sheet commitments ⁽⁶⁾	17	77,809	162	–	3	159	77,664	24	73,957	73	–	3	70	73,908
4	Total	777	269,508	1,211	25	53	1,133	269,074	677	243,159	769	22	30	717	243,067

(1) Excluding insurances subsidiaries and securitization exposures.

(2) Gross carrying values of on- and off-balance sheet items that give rise to a credit risk exposure according to the Basel framework (gross of CCF or CRM techniques).

(3) Definition of default as per the Capital Adequacy Requirements (CAR) guideline.

(4) Represent allowances for credit losses according to IFRS 9.

(5) Including deposits with financial institutions.

(6) For completeness purposes, revocable commitments are included.

CR2 – Changes in Stock of Defaulted Loans and Debt Securities

(millions of Canadian dollars)

The following table identifies the change in a bank's stock of defaulted exposures, the flows between non-defaulted and defaulted exposure categories and reductions in the stock of defaulted exposures due to write-offs.

		Q4 2020	Q3 2020	Q2 2020	Q1 2020	Q4 2019
		a	a	a	a	a
1	Defaulted loans ⁽¹⁾ and debt securities at beginning	743	760	653	656	636
2	Loans and debt securities that have defaulted since the last reporting period	227	179	267	245	255
3	Returned to non-defaulted status since the last reporting period	(50)	(40)	(26)	(35)	(32)
4	Amounts written off	(80)	(55)	(74)	(85)	(108)
5	Other changes ⁽²⁾	(58)	(101)	(60)	(128)	(95)
6	Defaulted loans⁽¹⁾ and debt securities at end	782	743	760	653	656

(1) Including deposits with financial institutions.

(2) Including net repayments and foreign exchange movements.

CR3 – Credit Risk Mitigation Techniques – Overview

(millions of Canadian dollars)

The following tables disclose the extent of use of credit risk mitigation techniques.

		Q4 2020					Q3 2020				
		a	b1	b	d	f	a	b1	b	d	f
		Exposures unsecured: carrying amount ⁽¹⁾	Exposures subject to risk mitigation techniques ⁽¹⁾	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives	Exposures unsecured: carrying amount ⁽¹⁾	Exposures subject to risk mitigation techniques ⁽¹⁾	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1	Loans ⁽²⁾	100,103	64,733	59,254	5,334	–	95,012	63,425	57,832	5,442	–
2	Debt securities	33,237	–	–	–	–	34,680	–	–	–	–
3	Total	133,340	64,733	59,254	5,334	–	129,692	63,425	57,832	5,442	–
4	Of which defaulted	511	289	234	51	–	486	228	189	35	–

		Q2 2020					Q1 2020				
		a	b1	b	d	f	a	b1	b	d	f
		Exposures unsecured: carrying amount ⁽¹⁾	Exposures subject to risk mitigation techniques ⁽¹⁾	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives	Exposures unsecured: carrying amount ⁽¹⁾	Exposures subject to risk mitigation techniques ⁽¹⁾	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1	Loans ⁽²⁾	99,239	61,658	52,068	3,736	–	78,604	62,124	52,964	3,126	–
2	Debt securities	31,533	–	–	–	–	29,100	–	–	–	–
3	Total	130,772	61,658	52,068	3,736	–	107,704	62,124	52,964	3,126	–
4	Of which defaulted	477	227	158	44	–	378	229	174	32	–

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

(2) Including deposits with financial institutions.

Distribution of Gross Credit Risk Exposure (Non-Retail Portfolio by Industries)

(millions of Canadian dollars)

	2020																	
	Q4						Q3						Q2					
	EAD - Gross Exposure ⁽¹⁾																	
	Drawn	Undrawn commitments	Other	Repo-style transactions	Derivatives financial instruments	Total	Drawn	Undrawn commitments	Other	Repo-style transactions	Derivatives financial instruments	Total	Drawn	Undrawn commitments	Other	Repo-style transactions	Derivatives financial instruments	Total
Non-Retail Portfolio																		
Agriculture	5,924	448	3	-	-	6,375	5,823	418	5	-	-	6,246	5,638	385	5	-	-	6,028
Oil & Gas and Pipelines	5,103	3,134	308	-	-	8,545	5,311	3,165	291	-	-	8,767	5,546	3,301	302	-	-	9,149
<i>Oil and Gas</i>	2,561	1,692	158	-	-	4,411	2,878	1,550	160	-	-	4,588	2,938	1,768	146	-	-	4,852
<i>Pipelines & Other</i>	2,542	1,442	150	-	-	4,134	2,433	1,615	131	-	-	4,179	2,608	1,533	156	-	-	4,297
Mining	690	1,271	167	-	-	2,128	910	1,104	163	-	-	2,177	1,192	855	178	-	-	2,225
Utilities	5,102	3,075	1,242	-	-	9,419	4,721	3,198	1,197	-	-	9,116	4,496	3,301	1,136	-	-	8,933
Construction Non-Real Estate ⁽²⁾	1,297	1,500	71	-	-	2,868	1,225	1,590	74	-	-	2,889	1,078	1,500	67	-	-	2,645
Manufacturing	5,457	2,671	376	-	-	8,504	6,124	2,462	362	-	-	8,948	6,571	2,120	339	-	-	9,030
Wholesale	2,128	995	46	-	-	3,169	2,016	1,064	61	-	-	3,141	2,257	831	47	-	-	3,135
Retail	2,828	1,608	43	-	-	4,479	2,979	1,538	39	-	-	4,556	3,657	886	41	-	-	4,584
Transportation	1,563	1,104	77	71	-	2,815	1,760	988	70	106	-	2,924	1,821	980	74	184	-	3,059
Communications	1,118	961	205	-	-	2,284	1,178	996	206	-	-	2,380	1,578	791	203	-	-	2,572
Finance and Insurance	28,678	4,123	1,029	111,002	2,337	147,169	28,072	4,084	1,139	127,473	1,360	162,128	32,469	4,106	1,088	138,269	1,398	177,330
Real Estate and Construction																		
Real Estate ⁽³⁾	13,418	3,506	256	-	-	17,180	12,631	3,569	231	-	-	16,431	12,101	3,074	217	-	-	15,392
Professional Services	1,243	1,152	273	-	-	2,668	1,559	1,042	277	-	-	2,878	1,892	704	326	-	-	2,922
Education & Health Care	3,581	1,523	10	3	-	5,117	3,666	1,003	8	3	-	4,680	3,628	1,203	7	1	-	4,839
Other Services	6,180	1,755	454	-	-	8,389	6,350	1,644	449	-	-	8,443	6,302	1,425	453	-	-	8,180
Government	29,873	1,426	5	33,186	178	64,668	28,559	1,197	3	34,194	145	64,098	22,461	1,588	3	35,429	125	59,606
Other	9,974	41	823	855	16	11,709	9,654	42	700	636	13	11,045	10,031	44	817	1,760	-	12,652
Total – Non-retail⁽⁴⁾	124,157	30,293	5,388	145,117	2,531	307,486	122,538	29,104	5,275	162,412	1,518	320,847	122,718	27,094	5,303	175,643	1,523	332,281

(1) EAD amounts are after securitization and excluding trading related portfolio.

(2) Including civil engineering loans, public-private partnership loans, and project finance loans.

(3) Including residential mortgages on dwellings of five or more units.

(4) Excluding SME retail exposure

Distribution of Gross Credit Risk Exposure (Non-Retail Portfolio by Industries) (continued)

(millions of Canadian dollars)

	2020						2019												
	Q1						Q4						Q3						
	EAD - Gross Exposure ⁽¹⁾																		
	Drawn	Undrawn commitments	Other	Repo-style transactions	Derivatives financial instruments	Total	Drawn	Undrawn commitments	Other	Repo-style transactions	Derivatives financial instruments	Total	Drawn	Undrawn commitments	Other	Repo-style transactions	Derivatives financial instruments	Total	
Non-Retail Portfolio																			
Agriculture	5,574	332	4	-	-	5,910	5,437	337	4	-	-	5,778	5,294	327	4	-	-	-	5,625
Oil & Gas and Pipelines	4,248	3,570	315	-	-	8,133	4,326	3,601	284	-	-	8,211	4,249	3,554	283	-	-	-	8,086
<i>Oil and Gas</i>	2,580	2,096	142	-	-	4,818	2,799	2,070	143	-	-	5,012	2,819	2,194	143	-	-	-	5,156
<i>Pipelines & Other</i>	1,668	1,474	173	-	-	3,315	1,527	1,531	141	-	-	3,199	1,430	1,360	140	-	-	-	2,930
Mining	663	1,101	172	-	-	1,936	669	1,081	159	-	-	1,909	770	917	153	-	-	-	1,840
Utilities	3,976	2,932	916	-	-	7,824	3,807	2,435	775	-	-	7,017	3,444	2,274	786	-	-	-	6,504
Construction Non-Real Estate ⁽²⁾	1,093	1,208	71	-	-	2,372	1,387	1,188	87	-	-	2,662	1,442	983	102	-	-	-	2,527
Manufacturing	6,266	2,152	315	-	-	8,733	6,250	2,036	217	-	-	8,503	6,086	2,101	207	-	-	-	8,394
Wholesale	2,203	771	46	-	-	3,020	2,137	851	47	-	-	3,035	2,217	739	54	-	-	-	3,010
Retail	3,203	1,170	53	-	-	4,426	3,202	1,172	47	-	-	4,421	3,214	1,259	45	-	-	-	4,518
Transportation	1,623	937	71	242	-	2,873	1,694	845	80	39	-	2,658	1,581	750	74	14	-	-	2,419
Communications	1,379	883	200	-	-	2,462	1,553	936	200	-	-	2,689	1,634	856	200	-	-	-	2,690
Finance and Insurance	30,697	4,174	1,103	148,504	1,864	186,342	34,318	4,102	1,335	138,430	1,982	180,167	32,076	4,069	1,582	135,303	1,676	174,706	
Real Estate and Construction																			
Real Estate ⁽³⁾	11,884	3,065	209	-	-	15,158	11,083	2,961	247	-	-	14,291	11,198	2,889	250	-	-	-	14,337
Professional Services	1,681	779	386	-	-	2,846	1,624	760	363	-	-	2,747	1,809	683	356	-	-	-	2,848
Education & Health Care	3,268	1,148	7	2	-	4,425	3,393	1,150	7	1	-	4,551	3,352	1,318	8	1	-	-	4,679
Other Services	5,782	1,375	450	-	-	7,607	4,880	1,248	398	-	-	6,526	4,691	1,313	381	6	-	-	6,391
Government	9,614	1,520	3	18,511	154	29,802	9,127	1,437	3	15,320	175	26,062	7,795	1,322	3	16,780	205	26,105	
Other	8,608	46	771	1,388	-	10,813	6,966	34	627	1,365	-	8,992	4,828	33	342	1,056	-	6,259	
Total – Non-retail⁽⁴⁾	101,762	27,163	5,092	168,647	2,018	304,682	101,853	26,174	4,880	155,155	2,157	290,219	95,680	25,387	4,830	153,160	1,881	280,938	

(1) EAD amounts are after securitization and excluding trading related portfolio.

(2) Including civil engineering loans, public-private partnership loans, and project finance loans.

(3) Including residential mortgages on dwellings of five or more units.

(4) Excluding SME retail exposure.

Gross Credit Risk Exposure at Default in Europe⁽¹⁾

(millions of Canadian dollars)

	2020																	
	Q4						Q3						Q2					
	Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾	Derivatives Financial Instruments	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾	Derivatives Financial Instruments	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾	Derivatives Financial Instruments	Other off-balance sheet items ⁽³⁾	Total
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ireland	-	-	143	9	-	152	80	24	172	7	-	283	82	20	35	10	-	147
Italy	-	1	-	-	5	6	-	1	-	-	3	4	-	1	-	-	-	3
Portugal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	8	30	1,346	1	31	1,416	10	30	1,377	1	31	1,449	20	30	716	1	31	798
Total GIIPS	8	31	1,489	10	36	1,574	90	55	1,549	8	34	1,736	102	51	751	11	34	949
France	24	71	1,959	9	355	2,418	67	68	7,777	143	351	8,406	40	80	7,082	133	358	7,693
Germany	172	23	-	34	20	249	175	22	-	35	21	253	179	29	-	32	27	267
United Kingdom	1,637	80	22,314	2,265	3	26,299	2,215	4	25,418	2,195	3	29,835	1,973	2	33,668	2,062	3	37,708
Other Europe	284	45	4,580	559	11	5,479	349	45	4,075	437	2	4,908	216	154	3,789	423	2	4,584
Total – Credit Risk⁽⁴⁾	2,125	250	30,342	2,877	425	36,019	2,896	194	38,819	2,818	411	45,138	2,510	316	45,290	2,661	424	51,201

Adjustment to exposure for collateral	Drawn	Undrawn commitments	Net Repo-Style transactions and derivatives financial instruments	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Net Repo-Style transactions and derivatives financial instruments	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Net Repo-Style transactions and derivatives financial instruments	Other off-balance sheet items ⁽³⁾	Total
	Total – Net Credit Risk⁽⁴⁾	2,125	250	1,484	425	4,284	2,896	194	1,609	411	5,110	2,510	316	1,549	424

	2020												2019					
	Q1						Q4						Q3					
	Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾	Derivatives Financial Instruments	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾	Derivatives Financial Instruments	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾	Derivatives Financial Instruments	Other off-balance sheet items ⁽³⁾	Total
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ireland	70	23	580	1	3	677	71	22	690	1	-	784	72	20	252	1	-	345
Italy	-	1	-	-	-	1	-	1	-	-	1	2	-	1	-	-	-	1
Portugal	-	-	-	-	31	31	-	-	-	-	-	-	-	-	-	-	-	-
Spain	4	36	1,965	11	-	2,016	1	38	33	1	39	112	-	38	-	2	38	78
Total GIIPS	74	60	2,545	12	34	2,725	72	61	723	2	40	898	72	59	252	3	39	425
France	87	77	10,539	104	318	11,125	25	76	2,527	-	52	2,680	22	98	1,706	-	51	1,877
Germany	168	32	-	28	28	256	175	34	-	30	27	266	166	10	-	35	-	211
United Kingdom	1,233	44	27,996	3,147	1	32,421	872	15	27,374	2,125	1	30,387	495	3	27,546	1,960	1	30,005
Other Europe	184	20	6,626	512	18	7,360	118	22	2,696	210	9	3,055	218	22	2,939	227	11	3,417
Total – Credit Risk⁽⁴⁾	1,746	233	47,706	3,803	399	53,887	1,262	208	33,320	2,367	129	37,286	973	192	32,443	2,225	102	35,935

Adjustment to exposure for collateral	Drawn	Undrawn commitments	Net Repo-Style transactions and derivatives financial instruments	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Net Repo-Style transactions and derivatives financial instruments	Other off-balance sheet items ⁽³⁾	Total	Drawn	Undrawn commitments	Net Repo-Style transactions and derivatives financial instruments	Other off-balance sheet items ⁽³⁾	Total
	Total – Net Credit Risk⁽⁴⁾	1,746	233	1,695	399	4,073	1,262	208	1,267	129	2,866	973	192	750	102

(1) Exposure at default is the expected gross exposure upon the default of an obligor. This amount is before any specific allowance or partial write-offs and does not reflect the impact of credit risk mitigation and collateral held. These tables exclude Equity exposures.

(2) Represents securities purchased under reverse repurchase agreements and sold under repurchase agreements, and securities borrowed and loaned.

(3) Letters of guarantee and credit that represent the Bank's commitment to make payments in the event that a client cannot meet its financial obligations to third parties.

(4) For drawn, undrawn and Other off-balance sheet exposures, eligible financial collateral is taken into account in the Bank's Loss Given Default (LGD) models.

CR4 – Standardised Approach – Credit Risk Exposure and Credit Risk Mitigation (CRM) Effects⁽¹⁾

(millions of Canadian dollars)

The following tables illustrate the effect of CRM on standardised approach capital requirements' calculations. RWA density provides a synthetic metric on riskiness of each portfolio.

Assets classes		Q4 2020						Q3 2020					
		a		b		c		d		e		f	
		Exposures before CCF and CRM		Exposures post-CCF and CRM		RWA	RWA density	Exposures before CCF and CRM		Exposures post-CCF and CRM		RWA	RWA density
On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount			On-balance sheet amount	Off-balance sheet amount				
1	Sovereigns and their central banks	2,672	82	2,672	-	2,069	77%	2,257	82	2,257	-	1,693	75%
2	Non-central government public sector entities	-	-	-	-	-	0%	-	-	-	-	-	0%
3	Multilateral development banks	304	-	304	-	-	0%	117	-	117	-	-	0%
4	Financial institutions	802	4,839	802	271	609	57%	729	4,841	729	274	599	60%
5	Securities firms	-	-	-	-	-	0%	-	-	-	-	-	0%
6	Corporates	6,232	785	6,232	235	3,739	58%	5,793	737	5,795	204	3,540	59%
7	Regulatory retail portfolios	4,130	27	4,130	7	2,342	57%	4,128	404	4,128	63	2,342	56%
8	Secured by residential property	6,555	139	6,555	55	2,392	36%	6,317	128	6,317	50	2,387	37%
9	Secured by commercial real estate	157	-	157	-	157	100%	156	-	156	-	156	100%
10	Equity	-	-	-	-	-	0%	-	-	-	-	-	0%
11	Past-due loans	46	3	46	-	33	72%	30	1	30	-	32	107%
12	Higher-risk categories	4	-	4	-	6	150%	-	-	-	-	-	0%
13	Other assets ⁽²⁾	3,978	-	3,978	-	2,882	72%	3,997	-	3,997	-	2,881	72%
14	Total	24,880	5,875	24,880	568	14,229	56%	23,524	6,193	23,526	591	13,630	57%

Assets classes		Q2 2020						Q1 2020					
		a		b		c		d		e		f	
		Exposures before CCF and CRM		Exposures post-CCF and CRM		RWA	RWA density	Exposures before CCF and CRM		Exposures post-CCF and CRM		RWA	RWA density
On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount			On-balance sheet amount	Off-balance sheet amount				
1	Sovereigns and their central banks	1,959	82	1,959	-	1,242	63%	1,938	52	1,938	-	-	0%
2	Non-central government public sector entities	-	-	-	-	-	0%	-	-	-	-	-	0%
3	Multilateral development banks	147	-	147	-	-	0%	95	-	95	-	-	0%
4	Financial institutions	2,118	2,625	2,118	278	883	37%	2,456	2,608	2,456	252	960	35%
5	Securities firms	-	-	-	-	-	0%	-	-	-	-	-	0%
6	Corporates	4,706	883	4,706	268	3,822	77%	4,362	727	4,362	202	3,394	74%
7	Regulatory retail portfolios	4,355	1,029	4,355	186	2,590	57%	4,551	1,337	4,551	242	2,778	58%
8	Secured by residential property	6,220	108	6,220	42	2,412	39%	5,443	92	5,443	35	2,090	38%
9	Secured by commercial real estate	152	-	152	-	152	100%	140	-	140	-	140	100%
10	Equity	-	-	-	-	-	0%	-	-	-	-	-	0%
11	Past-due loans	36	8	36	-	24	67%	34	6	34	-	23	68%
12	Higher-risk categories	-	-	-	-	-	0%	4	-	4	-	6	150%
13	Other assets ⁽²⁾	3,939	-	3,939	-	2,940	75%	3,566	-	3,566	-	2,704	76%
14	Total	23,632	4,735	23,632	774	14,065	58%	22,589	4,822	22,589	731	12,095	52%

(1) Excluding items subject to securitization and counterparty credit risk frameworks.

(2) For completeness purposes, row 13 "Other assets" is populated with all other assets except exposures that are subject to direct capital deductions, those that are treated in the off-balance sheet calculations and exposures below the threshold for deduction.

CR5 – Standardised Approach – Exposures by Asset Classes and Risk Weights⁽¹⁾

(millions of Canadian dollars)

The following tables present the breakdown of credit risk exposures under the standardised approach by asset class and risk weight (corresponding to the riskiness attributed to the exposure according to standardised approach).

		Q4 2020										Q3 2020									
		a	b	c	d	e	f	g	h	i	j	a	b	c	d	e	f	g	h	i	j
Risk weight		0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount ⁽²⁾	0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount ⁽²⁾
Asset classes		0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount ⁽²⁾	0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount ⁽²⁾
1	Sovereigns and their central banks	603	-	-	-	-	-	2,069	-	-	2,672	564	-	-	-	-	-	1,693	-	-	2,257
2	Non-central government public sector entities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Multilateral development banks	304	-	-	-	-	-	-	-	-	304	117	-	-	-	-	-	-	-	-	117
4	Financial institutions	50	-	517	-	-	-	506	-	-	1,073	60	-	429	-	-	-	514	-	-	1,003
5	Securities firms	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Corporates	2,679	-	62	-	-	-	3,726	-	-	6,467	2,409	-	62	-	-	-	3,528	-	-	5,999
7	Regulatory retail portfolios	1,015	-	-	-	-	3,122	-	-	-	4,137	1,068	-	-	-	3,123	-	-	-	-	4,191
8	Secured by residential property	887	-	-	4,751	41	886	45	-	-	6,610	800	-	-	4,487	6	1,039	35	-	-	6,367
9	Secured by commercial real estate	-	-	-	-	-	-	157	-	-	157	-	-	-	-	-	-	156	-	-	156
10	Equity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Past-due loans	14	-	-	-	-	-	29	3	-	46	-	-	-	-	-	-	26	4	-	30
12	Higher-risk categories	-	-	-	-	-	-	-	4	-	4	-	-	-	-	-	-	-	-	-	-
13	Other assets ⁽³⁾	1,088	-	82	-	-	-	2,803	-	5	3,978	1,058	-	72	-	-	-	2,867	-	-	3,997
14	Total	6,640	-	661	4,751	41	4,008	9,335	7	5	25,448	6,076	-	563	4,487	6	4,162	8,819	4	-	24,117

		Q2 2020										Q1 2020									
		a	b	c	d	e	f	g	h	i	j	a	b	c	d	e	f	g	h	i	j
Risk weight		0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount ⁽²⁾	0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount ⁽²⁾
Asset classes		0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount ⁽²⁾	0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount ⁽²⁾
1	Sovereigns and their central banks	717	-	-	-	-	-	1,242	-	-	1,959	1,938	-	-	-	-	-	-	-	-	1,938
2	Non-central government public sector entities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Multilateral development banks	147	-	-	-	-	-	-	-	-	147	95	-	-	-	-	-	-	-	-	95
4	Financial institutions	61	-	1,815	-	-	-	520	-	-	2,396	71	-	2,096	-	-	-	541	-	-	2,708
5	Securities firms	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Corporates	1,151	-	-	-	-	-	3,823	-	-	4,974	1,171	-	-	-	-	-	3,393	-	-	4,564
7	Regulatory retail portfolios	1,088	-	-	-	-	3,453	-	-	-	4,541	1,089	-	-	-	3,704	-	-	-	-	4,793
8	Secured by residential property	737	-	-	4,348	7	1,133	37	-	-	6,262	521	-	-	4,089	8	820	40	-	-	5,478
9	Secured by commercial real estate	-	-	-	-	-	-	152	-	-	152	-	-	-	-	-	-	140	-	-	140
10	Equity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Past-due loans	13	-	-	-	-	-	22	1	-	36	12	-	-	-	-	-	21	1	-	34
12	Higher-risk categories	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4
13	Other assets ⁽³⁾	913	-	108	-	-	-	2,918	-	-	3,939	731	-	164	-	-	-	2,671	-	-	3,566
14	Total	4,827	-	1,923	4,348	7	4,586	8,714	1	-	24,406	5,628	-	2,260	4,089	8	4,524	6,806	5	-	23,320

(1) Excluding items subject to securitization and counterparty credit risk frameworks. In the wholesale portfolio, for sovereign and banks asset classes, risk weights are based on external credit ratings issued by independent rating agencies (Moody's, Standard & Poor's, Fitch or DBRS) approved by our supervisor, OSFI.

(2) Post-CCF and Post-CRM.

(3) For completeness purposes, row 13 "Other assets" is populated with all other assets except exposures that are subject to direct capital deductions, those that are treated in the off-balance sheet calculations and exposures below the threshold for deduction.

CR6 – IRB – Credit Risk Exposures by Portfolio and PD Range

(millions of Canadian dollars)

The following tables provide the main parameters used for the calculation of capital requirements for IRB models. The purpose of disclosing these parameters is to enhance the transparency of banks' RWA calculations and the reliability of regulatory measures.

Q4 2020												
	a	b	c	d	e	f	g	h	i	j	k	l
PD scale ⁽¹⁾	Original on-balance sheet gross exposure	Off-balance sheet exposures pre CCF ⁽²⁾	Average CCF ⁽³⁾	EAD post CRM and post-CCF	Average PD ⁽⁴⁾	Number of obligors ⁽⁵⁾	Average LGD ⁽⁶⁾	Average maturity ⁽⁷⁾	RWA ⁽⁸⁾	RWA density ⁽⁹⁾	EL ⁽¹⁰⁾	Allowances for credit losses
Residential Mortgages – insured	0.00 to < 0.15	1,105	–	0%	1,105	0.08%	54,469	6.3%	15	1.4%	–	–
	0.15 to < 0.25	408	–	0%	408	0.19%	17,623	6.8%	12	2.8%	–	–
	0.25 to < 0.50	547	–	0%	547	0.36%	19,096	5.8%	21	3.8%	–	–
	0.50 to < 0.75	336	–	0%	336	0.61%	8,660	4.7%	15	4.5%	–	–
	0.75 to < 2.50	531	–	0%	531	1.29%	14,086	4.0%	31	6.1%	–	–
	2.50 to < 10.00	153	–	0%	153	4.55%	3,803	3.0%	15	9.8%	–	–
	10.00 to < 100.00	71	–	0%	71	27.75%	1,565	2.8%	12	16.4%	1	–
	100.00 (Default)	48	–	0%	48	100.00%	647	2.7%	5	9.6%	1	–
Sub-total	3,199	–	0%	3,199	2.72%	119,949	5.5%		126	3.9%	2	6
Residential Mortgages and HELOCs – uninsured	0.00 to < 0.15	26,786	15,391	50%	34,454	0.06%	206,549	19.5%	1,211	3.5%	5	–
	0.15 to < 0.25	7,142	1,260	66%	7,978	0.19%	32,699	21.1%	708	8.9%	3	–
	0.25 to < 0.50	7,268	1,196	72%	8,132	0.35%	30,444	21.6%	1,102	13.5%	6	–
	0.50 to < 0.75	2,681	222	71%	2,838	0.61%	10,407	22.4%	606	21.4%	4	–
	0.75 to < 2.50	2,428	210	69%	2,573	1.24%	11,014	21.5%	843	32.8%	7	–
	2.50 to < 10.00	616	31	69%	638	4.59%	3,280	21.3%	445	69.7%	7	–
	10.00 to < 100.00	235	2	117%	237	24.16%	1,321	22.6%	304	128.2%	15	–
	100.00 (Default)	108	3	77%	110	100.00%	778	22.1%	196	177.3%	11	–
Sub-total	47,264	18,315	53%	56,960	0.55%	296,492	20.3%		5,415	9.5%	58	64
Qualifying revolving retail	0.00 to < 0.15	785	6,135	74%	5,353	0.05%	740,541	78.2%	145	2.7%	2	–
	0.15 to < 0.25	180	739	90%	844	0.19%	227,400	87.1%	82	9.8%	1	–
	0.25 to < 0.50	265	530	86%	721	0.35%	193,442	83.8%	105	14.5%	2	–
	0.50 to < 0.75	187	226	87%	384	0.63%	73,795	78.9%	86	22.5%	2	–
	0.75 to < 2.50	586	364	90%	913	1.44%	237,019	84.3%	412	45.2%	12	–
	2.50 to < 10.00	409	58	120%	477	4.44%	187,694	87.5%	486	101.9%	19	–
	10.00 to < 100.00	56	3	80%	60	22.45%	20,557	87.2%	139	231.4%	12	–
	100.00 (Default)	20	–	34%	20	100.00%	3,667	71.5%	8	40.9%	14	–
Sub-total	2,488	8,055	78%	8,772	0.87%	1,684,115	80.8%		1,463	16.7%	64	258
Other retail	0.00 to < 0.15	2,003	2,300	64%	3,470	0.06%	123,434	50.6%	300	8.6%	1	–
	0.15 to < 0.25	852	350	62%	1,067	0.20%	51,576	53.1%	250	23.4%	1	–
	0.25 to < 0.50	1,358	363	63%	1,588	0.37%	76,230	52.8%	530	33.4%	3	–
	0.50 to < 0.75	1,130	244	74%	1,312	0.63%	59,502	55.9%	639	48.7%	5	–
	0.75 to < 2.50	3,445	261	67%	3,620	1.35%	193,897	53.0%	2,271	62.7%	26	–
	2.50 to < 10.00	1,076	88	68%	1,136	4.09%	64,523	52.3%	902	79.4%	24	–
	10.00 to < 100.00	276	18	51%	285	24.17%	12,697	50.5%	333	116.7%	33	–
	100.00 (Default)	102	3	40%	103	100.00%	7,495	52.5%	83	80.3%	55	–
Sub-total	10,242	3,627	64%	12,581	2.27%	589,354	52.5%		5,308	42.2%	148	182

(1) Prescribed PD bands based on BIS document on Revised Pillar 3 disclosure requirements issued in January 2015.

(2) Represents the exposure value without taking into account value adjustments and provisions, conversion factors and the effect of credit risk mitigation techniques.

(3) Represents the EAD post-CCF for off-balance sheet exposure to total off-balance sheet exposure pre CCF.

(4) Represents the obligor grade PD weighted by EAD.

(5) Represents the number of retail accounts.

(6) Represents the obligor grade LGD (net of any CRM effect) weighted by EAD.

(7) Represents the obligor maturity in years weighted by EAD. This parameter needs to be filled in only when it is used for the RWA calculation.

(8) Risk weighted assets including the 1.06 scaling factor.

(9) Total risk-weighted assets to EAD post-CRM.

(10) The expected losses (EL) as calculated according to paragraphs 375 - 379 of the Basel framework.

CR6 – IRB – Credit Risk Exposures by Portfolio and PD Range (continued)

(millions of Canadian dollars)

Q4 2020													
	a	b	c	d	e	f	g	h	i	j	k	l	
PD scale ⁽¹⁾	Original on-balance sheet gross exposure	Off-balance sheet exposures pre CCF ⁽²⁾	Average CCF ⁽³⁾	EAD post CRM and post-CCF	Average PD ⁽⁴⁾	Number of obligors ⁽⁵⁾	Average LGD ⁽⁶⁾	Average maturity ⁽⁷⁾	RWA ⁽⁸⁾	RWA density ⁽⁹⁾	EL ⁽¹⁰⁾	Allowances for credit losses	
Corporate	0.00 to < 0.15	2,238	6,055	82%	6,512	0.08%	467	46.3%	2.12	1,517	23.3%	2	
	0.15 to < 0.25	11,741	15,782	89%	23,419	0.20%	2,464	37.3%	2.32	7,645	32.6%	17	
	0.25 to < 0.50	10,327	6,544	90%	15,401	0.36%	2,245	36.3%	2.42	6,646	43.2%	20	
	0.50 to < 0.75	7,955	3,792	89%	10,944	0.56%	2,432	32.3%	2.05	4,745	43.4%	20	
	0.75 to < 2.50	19,480	6,265	87%	23,425	1.17%	6,487	32.7%	1.95	13,680	58.4%	90	
	2.50 to < 10.00	3,837	897	91%	4,533	4.87%	1,339	32.6%	1.68	4,266	94.1%	73	
	10.00 to < 100.00	125	104	96%	197	16.91%	59	33.7%	1.21	303	153.0%	11	
	100.00 (Default)	466	79	98%	532	100.00%	219	35.5%	1.12	562	106.0%	197	
	Sub-total	56,169	39,518	88%	84,963	1.45%	15,712	35.6%	2.14	39,364	46.3%	430	737
Sovereign	0.00 to < 0.15	55,048	6,598	99%	60,761	0.01%	610	8.5%	2.18	771	1.3%	1	
	0.15 to < 0.25	-	-	0%	-	0%	-	0%	-	-	0%	-	
	0.25 to < 0.50	-	-	0%	-	0%	-	0%	-	-	0%	-	
	0.50 to < 0.75	-	-	0%	-	0%	-	0%	-	-	0%	-	
	0.75 to < 2.50	-	-	0%	-	0%	-	0%	-	-	0%	-	
	2.50 to < 10.00	31	34	88%	58	5.07%	3	15.2%	1.00	28	47.5%	-	
	10.00 to < 100.00	-	-	0%	-	0%	-	0%	-	-	0%	-	
	100.00 (Default)	-	-	0%	-	0%	-	0%	-	-	0%	-	
	Sub-total	55,079	6,632	98%	60,819	0.02%	613	8.5%	2.18	799	1.3%	1	5
Financial institutions	0.00 to < 0.15	2,493	237	0%	2,730	0.06%	62	46.3%	1.19	495	18.1%	1	
	0.15 to < 0.25	223	345	96%	568	0.20%	28	22.0%	1.10	109	19.1%	-	
	0.25 to < 0.50	9	31	81%	40	0.36%	4	36.5%	1.00	19	47.6%	-	
	0.50 to < 0.75	-	23	55%	23	0.56%	6	50.3%	1.04	15	66.4%	-	
	0.75 to < 2.50	2	6	100%	8	1.11%	9	41.6%	1.00	6	72.1%	-	
	2.50 to < 10.00	-	-	100%	-	3.59%	3	48.3%	1.00	-	0%	-	
	10.00 to < 100.00	-	-	0%	-	0%	-	0%	-	-	0%	-	
	100.00 (Default)	-	-	0%	-	0%	-	0%	-	-	0%	-	
	Sub-total	2,727	642	58%	3,369	0.09%	112	42.1%	1.17	644	19.1%	1	3
Total (all portfolio)	177,168	76,789	76%	230,663	0.87%	2,706,347	27.0%	2.00	53,119	24.5%	704	1,255	

(1) Prescribed PD bands based on BIS document on Revised Pillar 3 disclosure requirements issued in January 2015.

(2) Represents the exposure value without taking into account value adjustments and provisions, conversion factors and the effect of credit risk mitigation techniques.

(3) Represents the EAD post-CCF for off-balance sheet exposure to total off-balance sheet exposure pre CCF.

(4) Represents the obligor grade PD weighted by EAD.

(5) Represents the number of individual borrowers.

(6) Represents the obligor grade LGD (net of any CRM effect) weighted by EAD.

(7) Represents the obligor maturity in years weighted by EAD. This parameter needs to be filled in only when it is used for the RWA calculation.

(8) Risk weighted assets including the 1.06 scaling factor.

(9) Total risk-weighted assets to EAD post-CRM.

(10) The expected losses (EL) as calculated according to paragraphs 375 - 379 of the Basel framework.

CR6 – IRB – Credit Risk Exposures by Portfolio and PD Range (continued)

(millions of Canadian dollars)

Q4 2019												
	a	b	c	d	e	f	g	h	i	j	k	l
PD scale ⁽¹⁾	Original on-balance sheet gross exposure	Off-balance sheet exposures pre CCF ⁽²⁾	Average CCF ⁽³⁾	EAD post CRM and post-CCF	Average PD ⁽⁴⁾	Number of obligors ⁽⁵⁾	Average LGD ⁽⁶⁾	Average maturity ⁽⁷⁾	RWA ⁽⁸⁾	RWA density ⁽⁹⁾	EL ⁽¹⁰⁾	Allowances for credit losses
Residential Mortgages – insured												
0.00 to < 0.15	780	–	0%	780	0.07%	53,452	5.9%		9	1.1%	–	
0.15 to < 0.25	334	–	0%	334	0.20%	17,743	5.4%		8	2.3%	–	
0.25 to < 0.50	502	–	0%	502	0.36%	20,505	6.4%		21	4.2%	–	
0.50 to < 0.75	289	–	0%	289	0.60%	9,271	6.6%		18	6.3%	–	
0.75 to < 2.50	422	–	0%	422	1.32%	14,027	7.9%		54	12.7%	–	
2.50 to < 10.00	148	–	0%	148	4.33%	4,150	6.6%		29	19.9%	–	
10.00 to < 100.00	60	–	0%	60	28.27%	1,414	3.0%		11	17.6%	–	
100.00 (Default)	35	–	0%	35	100.00%	602	3.0%		5	15.0%	2	
Sub-total	2,570	–	0%	2,570	2.70%	121,164	6.3%		155	6.0%	2	3
Residential Mortgages and HELOCs – uninsured												
0.00 to < 0.15	24,487	14,376	50%	31,626	0.07%	196,837	19.6%		1,137	3.6%	4	
0.15 to < 0.25	6,467	986	68%	7,139	0.19%	31,425	22.0%		659	9.2%	3	
0.25 to < 0.50	5,939	911	70%	6,572	0.34%	26,307	22.6%		921	14.0%	5	
0.50 to < 0.75	2,448	198	72%	2,591	0.61%	10,183	22.5%		555	21.4%	4	
0.75 to < 2.50	2,305	222	69%	2,458	1.29%	10,969	22.3%		841	34.2%	7	
2.50 to < 10.00	668	50	68%	702	4.52%	3,830	21.5%		488	69.4%	7	
10.00 to < 100.00	189	4	122%	193	23.85%	1,213	22.9%		251	130.2%	10	
100.00 (Default)	91	3	86%	93	100.00%	707	21.6%		132	141.8%	12	
Sub-total	42,594	16,750	52%	51,374	0.54%	281,471	20.6%		4,984	9.7%	52	36
Qualifying revolving retail												
0.00 to < 0.15	723	5,324	40%	2,873	0.05%	704,204	77.6%		81	2.8%	1	
0.15 to < 0.25	187	379	75%	471	0.19%	204,518	83.4%		44	9.4%	1	
0.25 to < 0.50	305	327	73%	544	0.36%	181,889	80.4%		77	14.2%	2	
0.50 to < 0.75	217	155	77%	336	0.63%	75,335	76.5%		73	21.7%	2	
0.75 to < 2.50	601	250	79%	798	1.43%	258,658	81.8%		347	43.5%	10	
2.50 to < 10.00	413	51	105%	467	4.52%	223,005	85.4%		469	100.4%	17	
10.00 to < 100.00	70	4	63%	73	22.42%	30,381	83.6%		164	223.6%	14	
100.00 (Default)	24	–	5%	24	100.00%	4,197	72.6%		50	208.5%	14	
Sub-total	2,540	6,490	47%	5,586	1.42%	1,682,187	79.6%		1,305	23.4%	61	196
Other retail												
0.00 to < 0.15	2,051	2,043	45%	2,977	0.06%	118,678	50.9%		276	9.3%	1	
0.15 to < 0.25	824	214	67%	967	0.20%	46,048	54.3%		229	23.7%	1	
0.25 to < 0.50	1,403	250	71%	1,579	0.36%	77,925	56.9%		562	35.6%	3	
0.50 to < 0.75	1,058	199	81%	1,219	0.63%	54,037	59.0%		624	51.2%	5	
0.75 to < 2.50	2,978	219	75%	3,143	1.38%	195,759	62.2%		2,340	74.5%	28	
2.50 to < 10.00	966	59	76%	1,011	4.33%	70,111	65.6%		1,017	100.6%	29	
10.00 to < 100.00	273	4	72%	276	18.59%	15,379	64.9%		396	143.6%	33	
100.00 (Default)	103	3	70%	105	100.00%	6,923	57.8%		188	178.6%	49	
Sub-total	9,656	2,991	54%	11,277	2.31%	584,860	57.8%		5,632	49.9%	149	138

(1) Prescribed PD bands based on BIS document on Revised Pillar 3 disclosure requirements issued in January 2015.

(2) Represents the exposure value without taking into account value adjustments and provisions, conversion factors and the effect of credit risk mitigation techniques.

(3) Represents the EAD post-CCF for off-balance sheet exposure to total off-balance sheet exposure pre CCF.

(4) Represents the obligor grade PD weighted by EAD.

(5) Represents the number of retail accounts.

(6) Represents the obligor grade LGD (net of any CRM effect) weighted by EAD.

(7) Represents the obligor maturity in years weighted by EAD. This parameter needs to be filled in only when it is used for the RWA calculation.

(8) Risk weighted assets including the 1.06 scaling factor.

(9) Total risk-weighted assets to EAD post-CRM.

(10) The expected losses (EL) as calculated according to paragraphs 375 - 379 of the Basel framework.

CR6 – IRB – Credit Risk Exposures by Portfolio and PD Range (continued)

(millions of Canadian dollars)

Q4 2019												
	a	b	c	d	e	f	g	h	i	j	k	l
PD scale ⁽¹⁾	Original on-balance sheet gross exposure	Off-balance sheet exposures pre CCF ⁽²⁾	Average CCF ⁽³⁾	EAD post CRM and post-CCF	Average PD ⁽⁴⁾	Number of obligors ⁽⁵⁾	Average LGD ⁽⁶⁾	Average maturity ⁽⁷⁾	RWA ⁽⁸⁾	RWA density ⁽⁹⁾	EL ⁽¹⁰⁾	Allowances for credit losses
Corporate	0.00 to < 0.15	1,619	5,558	85%	5,440	0.09%	741	46.2%	2.45	1,394	25.7%	2
	0.15 to < 0.25	12,807	12,825	90%	21,924	0.20%	3,654	37.5%	2.61	7,408	33.8%	16
	0.25 to < 0.50	10,733	6,984	93%	15,929	0.36%	2,388	35.1%	2.46	6,661	41.8%	20
	0.50 to < 0.75	8,127	3,646	87%	11,092	0.56%	2,641	33.0%	2.21	4,953	44.6%	20
	0.75 to < 2.50	15,845	4,586	87%	18,503	1.15%	6,180	33.4%	1.94	10,793	58.3%	72
	2.50 to < 10.00	2,547	524	85%	2,929	4.65%	1,295	28.4%	1.66	2,244	76.6%	39
	10.00 to < 100.00	215	37	78%	242	16.98%	61	32.6%	1.07	349	144.4%	14
	100.00 (Default)	385	214	2%	599	100.00%	200	27.5%	1.23	580	96.9%	112
	Sub-total	52,278	34,374	88%	76,658	1.51%	17,160	35.5%	2.29	34,382	44.8%	295
Sovereign	0.00 to < 0.15	29,496	6,189	98%	34,857	0.01%	575	8.9%	2.44	563	1.6%	-
	0.15 to < 0.25	-	-	0%	-	0%	-	0%	-	-	0%	-
	0.25 to < 0.50	-	-	0%	-	0%	-	0%	-	-	0%	-
	0.50 to < 0.75	-	-	0%	-	0%	-	0%	-	-	0%	-
	0.75 to < 2.50	-	-	0%	-	0%	-	0%	-	-	0%	-
	2.50 to < 10.00	62	16	94%	72	5.07%	4	14.1%	1.00	31	44.0%	1
	10.00 to < 100.00	-	-	0%	-	0%	-	0%	-	-	0%	-
	100.00 (Default)	-	-	0%	-	0%	-	0%	-	-	0%	-
	Sub-total	29,558	6,205	98%	34,929	0.02%	579	8.9%	2.43	594	1.7%	1
Financial institutions	0.00 to < 0.15	2,902	498	0%	3,400	0.06%	67	48.1%	1.42	640	18.9%	1
	0.15 to < 0.25	226	263	95%	489	0.21%	22	26.2%	1.53	104	21.2%	-
	0.25 to < 0.50	20	133	94%	154	0.36%	10	12.4%	1.53	23	15.4%	-
	0.50 to < 0.75	3	25	50%	28	0.56%	5	50.1%	1.44	19	67.4%	-
	0.75 to < 2.50	122	6	100%	127	0.86%	14	45.6%	1.00	93	73.5%	1
	2.50 to < 10.00	1	-	0%	1	3.15%	3	47.9%	1.00	1	153.1%	-
	10.00 to < 100.00	-	-	0%	-	0%	-	0%	-	-	0%	-
	100.00 (Default)	-	-	0%	-	0%	-	0%	-	-	0%	-
	Sub-total	3,274	925	43%	4,199	0.11%	121	44.2%	1.43	880	21.0%	2
Total (all portfolio)	142,470	67,735	74%	186,593	0.99%	2,687,542	29.3%	2.30	47,932	24.1%	562	699

(1) Prescribed PD bands based on BIS document on Revised Pillar 3 disclosure requirements issued in January 2015.

(2) Represents the exposure value without taking into account value adjustments and provisions, conversion factors and the effect of credit risk mitigation techniques.

(3) Represents the EAD post-CCF for off-balance sheet exposure to total off-balance sheet exposure pre CCF.

(4) Represents the obligor grade PD weighted by EAD.

(5) Represents the number of individual borrowers.

(6) Represents the obligor grade LGD (net of any CRM effect) weighted by EAD.

(7) Represents the obligor maturity in years weighted by EAD. This parameter needs to be filled in only when it is used for the RWA calculation.

(8) Risk weighted assets including the 1.06 scaling factor.

(9) Total risk-weighted assets to EAD post-CRM.

(10) The expected losses (EL) as calculated according to paragraphs 375 - 379 of the Basel framework.

CR8 – RWA Flow Statements of Credit Risk Exposures Under IRB

(millions of Canadian dollars)

The following table presents a flow statement explaining variations in the credit risk-weighted assets (RWA) determined under an IRB approach.

	Q4 2020	Q3 2020	Q2 2020	Q1 2020	Q4 2019	Q3 2019	Q2 2019	Q1 2019
	a	a	a	a	a	a	a	a
1 RWA at beginning	54,451	54,049	49,915	49,546	49,045	47,395	47,097	46,640
2 Book size ⁽¹⁾	343	568	3,668	391	544	1,511	93	721
3 Book quality ⁽²⁾	720	157	(59)	(41)	(2)	(127)	49	(254)
4 Model updates ⁽³⁾	(447)	–	112	(17)	(32)	397	30	–
5 Methodology and policy ⁽⁴⁾	–	–	–	–	–	–	–	–
6 Acquisitions and disposals ⁽⁵⁾	–	–	–	–	–	–	–	–
7 Foreign exchange movements ⁽⁶⁾	(50)	(323)	413	36	(9)	(131)	126	(10)
8 Other ⁽⁷⁾	–	–	–	–	–	–	–	–
9 RWA at end	55,017	54,451	54,049	49,915	49,546	49,045	47,395	47,097

(1) The Book size item reflects organic changes in book size and composition (including new loans and maturing loans). RWA movements attributable to book size include increases or decreases in exposures, measured by exposure at default, assuming a stable risk profile.

(2) The Book quality item is the Bank's best estimate of changes in book quality related to experience, such as underlying customer behaviour or demographics, including changes resulting from model recalibrations or realignments and also including risk mitigation factors.

(3) The Model updates item is used to reflect implementations of new models, changes in model scope, and any other change applied to address model malfunctions.

(4) The Methodology and policy item presents the impact of changes in calculation methods resulting from changes in regulatory policies as a result, for example, of new regulations.

(5) The Acquisitions and disposals item includes the impact of the acquisition and/or the disposal of entities.

(6) The Foreign exchange movements item is driven by market movements such as foreign exchange movements.

(7) The Other item captures changes that cannot be attributed to any other category.

CR9 – IRB – Backtesting of probability of default (PD) per portfolio

(millions of Canadian dollars)

The following table provides backtesting data to validate the reliability of PD calculations. In particular, the template compares the PD used in IRB capital calculations with the effective default rates of bank obligors. A minimum five-year average annual default rate is required to compare the PD with a "more stable" default rate, although a bank may use a longer historical period that is consistent with its actual risk management practices.

Q4 2020										
a	b	c		d	e	f		g	h	i
Portfolio	PD Range ⁽¹⁾	External rating equivalent		Weighted average PD	Arithmetic average PD by obligors	Number of obligors ⁽²⁾		Defaulted obligors in the year	Of which new defaulted obligors in the year	Average historical annual default rate
		S&P	Moody's			End of previous year	End of the year			
Residential Mortgages – insured	0.00 to < 0.15	AAA to BBB+	Aaa to Baa1	0.08%	0.08%	53,452	54,469	58	–	0.07%
	0.15 to < 0.25	BBB	Baa2	0.19%	0.19%	17,743	17,623	38	2	0.14%
	0.25 to < 0.50	BBB-	Baa3	0.36%	0.36%	20,505	19,096	84	2	0.26%
	0.50 to < 0.75	BB+	Ba1	0.61%	0.62%	9,271	8,660	61	6	0.48%
	0.75 to < 2.50	BB to BB-	Ba2 to Ba3	1.29%	1.26%	14,027	14,086	177	12	0.83%
	2.50 to < 10.00	B+ to B-	B1 to B3	4.55%	4.60%	4,150	3,803	203	3	3.32%
10.00 to < 100.00	CCC+ to CCC-	Caa1 to Caa3	27.75%	26.14%	1,414	1,565	321	–	22.37%	
Residential Mortgages and HELOCs – uninsured	0.00 to < 0.15	AAA to BBB+	Aaa to Baa1	0.06%	0.06%	196,837	206,549	189	18	0.04%
	0.15 to < 0.25	BBB	Baa2	0.19%	0.19%	31,425	32,699	102	19	0.16%
	0.25 to < 0.50	BBB-	Baa3	0.35%	0.35%	26,307	30,444	125	12	0.26%
	0.50 to < 0.75	BB+	Ba1	0.61%	0.61%	10,183	10,407	86	4	0.58%
	0.75 to < 2.50	BB to BB-	Ba2 to Ba3	1.24%	1.25%	10,969	11,014	197	6	1.44%
	2.50 to < 10.00	B+ to B-	B1 to B3	4.59%	4.65%	3,830	3,280	205	–	5.01%
10.00 to < 100.00	CCC+ to CCC-	Caa1 to Caa3	24.16%	25.61%	1,213	1,321	244	3	19.85%	
Qualifying revolving retail	0.00 to < 0.15	AAA to BBB+	Aaa to Baa1	0.05%	0.07%	704,204	740,541	137	1	0.04%
	0.15 to < 0.25	BBB	Baa2	0.19%	0.19%	204,518	227,400	121	–	0.06%
	0.25 to < 0.50	BBB-	Baa3	0.35%	0.34%	181,889	193,442	276	8	0.19%
	0.50 to < 0.75	BB+	Ba1	0.63%	0.62%	75,335	73,795	229	15	0.42%
	0.75 to < 2.50	BB to BB-	Ba2 to Ba3	1.44%	1.48%	258,658	237,019	2,993	223	1.23%
	2.50 to < 10.00	B+ to B-	B1 to B3	4.44%	3.97%	223,005	187,694	5,532	65	3.54%
10.00 to < 100.00	CCC+ to CCC-	Caa1 to Caa3	22.45%	25.10%	30,381	20,557	8,883	41	27.10%	
Other retail	0.00 to < 0.15	AAA to BBB+	Aaa to Baa1	0.06%	0.07%	118,678	123,434	101	2	0.01%
	0.15 to < 0.25	BBB	Baa2	0.20%	0.20%	46,048	51,576	59	4	0.07%
	0.25 to < 0.50	BBB-	Baa3	0.37%	0.37%	77,925	76,230	168	17	0.19%
	0.50 to < 0.75	BB+	Ba1	0.63%	0.62%	54,037	59,502	173	14	0.38%
	0.75 to < 2.50	BB to BB-	Ba2 to Ba3	1.35%	1.30%	195,759	193,897	1,369	154	0.79%
	2.50 to < 10.00	B+ to B-	B1 to B3	4.09%	4.01%	70,111	64,523	1,556	81	2.47%
10.00 to < 100.00	CCC+ to CCC-	Caa1 to Caa3	24.17%	24.28%	15,379	12,697	1,545	36	12.64%	

(1) Prescribed PD bands based on BIS document on Revised Pillar 3 disclosure requirements issued in January 2015.

(2) Represents the number of retail accounts.

CR9 – IRB – Backtesting of probability of default (PD) per portfolio (continued)

(millions of Canadian dollars)

Q4 2020										
a	b	c		d	e	f		g	h	i
Portfolio	PD Range ⁽¹⁾	External rating equivalent		Weighted average PD	Arithmetic average PD by obligors	Number of obligors ⁽²⁾		Defaulted obligors in the year	Of which new defaulted obligors in the year	Average historical annual default rate
		S&P	Moody's			End of previous year	End of the year			
Corporate	0.00 to < 0.15	AAA to BBB+	Aaa to Baa1	0.08%	0.08%	741	467	–	–	0.02%
	0.15 to < 0.25	BBB+ to BBB	Baa1 to Baa2	0.20%	0.21%	3,654	2,464	5	–	0.08%
	0.25 to < 0.50	BBB to BB+	Baa2 to Ba1	0.36%	0.36%	2,388	2,245	1	–	0.09%
	0.50 to < 0.75	BB+	Ba1	0.56%	0.56%	2,641	2,432	7	–	0.16%
	0.75 to < 2.50	BB+ to B+	Ba1 to B1	1.17%	1.17%	6,180	6,487	25	–	0.63%
	2.50 to < 10.00	B+ to B-	B1 to B3	4.87%	4.68%	1,295	1,339	32	–	1.54%
	10.00 to < 100.00	B- to CCC	B3 to Caa2	16.91%	16.57%	61	59	12	–	8.31%
Sovereign	0.00 to < 0.15	AAA to BBB+	Aaa to Baa1	0.01%	0.02%	575	610	–	–	–
	0.15 to < 0.25	BBB+ to BBB	Baa1 to Baa2	–	–	–	–	–	–	–
	0.25 to < 0.50	BBB to BB+	Baa2 to Ba1	–	–	–	–	–	–	–
	0.50 to < 0.75	BB+	Ba1	–	–	–	–	–	–	–
	0.75 to < 2.50	BB+ to B+	Ba1 to B1	–	–	–	–	–	–	–
	2.50 to < 10.00	B+ to B-	B1 to B3	5.07%	5.07%	4	3	–	–	–
	10.00 to < 100.00	B- to CCC	B3 to Caa2	–	–	–	–	–	–	–
Financial institutions	0.00 to < 0.15	AAA to BBB+	Aaa to Baa1	0.06%	0.07%	67	62	–	–	–
	0.15 to < 0.25	BBB+ to BBB	Baa1 to Baa2	0.20%	0.21%	22	28	–	–	–
	0.25 to < 0.50	BBB to BB+	Baa2 to Ba1	0.36%	0.36%	10	4	–	–	–
	0.50 to < 0.75	BB+	Ba1	0.56%	0.56%	5	6	–	–	–
	0.75 to < 2.50	BB+ to B+	Ba1 to B1	1.11%	1.22%	14	9	–	–	–
	2.50 to < 10.00	B+ to B-	B1 to B3	3.59%	5.07%	3	3	–	–	–
	10.00 to < 100.00	B- to CCC	B3 to Caa2	–	–	–	–	–	–	–

(1) Prescribed PD bands based on BIS document on Revised Pillar 3 disclosure requirements issued in January 2015.

(2) Represents the number of individual borrowers.

CR9 – IRB – Backtesting of probability of default (PD) per portfolio (continued)

(million of Canadian dollars)

a	Q4 2019									
	b	c		d	e	f		g	h	i
		External rating equivalent				Number of obligors ⁽²⁾	Arithmetic average PD by obligors			
Portfolio	PD Range ⁽¹⁾	S&P	Moody's	Weighted average PD	End of previous year			End of the year	Defaulted obligors in the year	Of which new defaulted obligors in the year
Residential Mortgages – insured	0.00 to < 0.15	AAA to BBB+	Aaa to Baa1	0.07%	0.07%	51,552	53,452	23	–	0.05%
	0.15 to < 0.25	BBB	Baa2	0.20%	0.19%	19,669	17,743	20	–	0.13%
	0.25 to < 0.50	BBB-	Baa3	0.36%	0.35%	22,937	20,505	32	–	0.24%
	0.50 to < 0.75	BB+	Ba1	0.60%	0.61%	10,021	9,271	41	1	0.45%
	0.75 to < 2.50	BB to BB-	Ba2 to Ba3	1.32%	1.28%	16,044	14,027	98	2	0.78%
	2.50 to < 10.00	B+ to B-	B1 to B3	4.33%	4.47%	4,588	4,150	147	4	3.24%
10.00 to < 100.00	CCC+ to CCC-	Caa1 to Caa3	28.27%	26.46%	1,618	1,414	371	1	22.02%	
Residential Mortgages and HELOCs – uninsured	0.00 to < 0.15	AAA to BBB+	Aaa to Baa1	0.07%	0.06%	186,609	196,837	54	1	0.04%
	0.15 to < 0.25	BBB	Baa2	0.19%	0.19%	30,702	31,425	50	5	0.12%
	0.25 to < 0.50	BBB-	Baa3	0.34%	0.35%	26,260	26,307	82	2	0.20%
	0.50 to < 0.75	BB+	Ba1	0.61%	0.61%	9,714	10,183	61	–	0.50%
	0.75 to < 2.50	BB to BB-	Ba2 to Ba3	1.29%	1.30%	11,040	10,969	176	4	1.32%
	2.50 to < 10.00	B+ to B-	B1 to B3	4.52%	4.62%	3,891	3,830	228	2	4.69%
10.00 to < 100.00	CCC+ to CCC-	Caa1 to Caa3	23.85%	24.19%	1,355	1,213	295	2	20.28%	
Qualifying revolving retail	0.00 to < 0.15	AAA to BBB+	Aaa to Baa1	0.05%	0.07%	895,632	704,204	411	2	0.04%
	0.15 to < 0.25	BBB	Baa2	0.19%	0.19%	117,492	204,518	148	4	0.12%
	0.25 to < 0.50	BBB-	Baa3	0.36%	0.35%	148,785	181,889	328	15	0.23%
	0.50 to < 0.75	BB+	Ba1	0.63%	0.62%	71,453	75,335	357	16	0.48%
	0.75 to < 2.50	BB to BB-	Ba2 to Ba3	1.43%	1.48%	236,145	258,658	3,824	316	1.20%
	2.50 to < 10.00	B+ to B-	B1 to B3	4.52%	4.10%	234,061	223,005	7,402	92	3.86%
10.00 to < 100.00	CCC+ to CCC-	Caa1 to Caa3	22.42%	26.81%	32,158	30,381	9,046	26	25.86%	
Other retail	0.00 to < 0.15	AAA to BBB+	Aaa to Baa1	0.06%	0.07%	109,622	118,678	96	–	0.05%
	0.15 to < 0.25	BBB	Baa2	0.20%	0.20%	43,211	46,048	58	1	0.12%
	0.25 to < 0.50	BBB-	Baa3	0.36%	0.37%	75,981	77,925	166	10	0.20%
	0.50 to < 0.75	BB+	Ba1	0.63%	0.62%	53,529	54,037	209	9	0.41%
	0.75 to < 2.50	BB to BB-	Ba2 to Ba3	1.38%	1.34%	206,716	195,759	1,791	251	0.84%
	2.50 to < 10.00	B+ to B-	B1 to B3	4.33%	4.22%	70,018	70,111	1,946	107	2.65%
10.00 to < 100.00	CCC+ to CCC-	Caa1 to Caa3	18.59%	19.35%	13,355	15,379	1,898	41	13.27%	

(1) Prescribed PD bands based on BIS document on Revised Pillar 3 disclosure requirements issued in January 2015.

(2) Represents the number of individual borrowers.

CR9 – IRB – Backtesting of probability of default (PD) per portfolio (continued)

(millions of Canadian dollars)

Q4 2019										
a	b	c		d	e	f		g	h	i
Portfolio	PD Range ⁽¹⁾	External rating equivalent		Weighted average PD	Arithmetic average PD by obligors	Number of obligors ⁽²⁾		Defaulted obligors in the year	Of which new defaulted obligors in the year	Average historical annual default rate
		S&P	Moody's			End of previous year	End of the year			
Corporate	0.00 to < 0.15	AAA to BBB+	Aaa to Baa1	0.09%	0.08%	749	741	–	–	0.02%
	0.15 to < 0.25	BBB+ to BBB	Baa1 to Baa2	0.20%	0.21%	3,664	3,654	1	–	0.05%
	0.25 to < 0.50	BBB to BB+	Baa2 to Ba1	0.36%	0.36%	2,234	2,388	2	–	0.12%
	0.50 to < 0.75	BB+	Ba1	0.56%	0.56%	2,493	2,641	1	–	0.13%
	0.75 to < 2.50	BB+ to B+	Ba1 to B1	1.15%	1.16%	6,221	6,180	36	2	0.70%
	2.50 to < 10.00	B+ to B-	B1 to B3	4.65%	4.77%	1,163	1,295	21	1	1.42%
	10.00 to < 100.00	B- to CCC	B3 to Caa2	16.98%	16.73%	69	61	4	–	6.08%
Sovereign	0.00 to < 0.15	AAA to BBB+	Aaa to Baa1	0.01%	0.02%	583	575	–	–	–
	0.15 to < 0.25	BBB+ to BBB	Baa1 to Baa2	–	–	–	–	–	–	–
	0.25 to < 0.50	BBB to BB+	Baa2 to Ba1	–	–	–	–	–	–	–
	0.50 to < 0.75	BB+	Ba1	–	–	–	–	–	–	–
	0.75 to < 2.50	BB+ to B+	Ba1 to B1	–	–	–	–	–	–	–
	2.50 to < 10.00	B+ to B-	B1 to B3	5.07%	5.07%	1	4	–	–	–
	10.00 to < 100.00	B- to CCC	B3 to Caa2	–	–	–	–	–	–	–
Financial institutions	0.00 to < 0.15	AAA to BBB+	Aaa to Baa1	0.06%	0.06%	72	67	–	–	–
	0.15 to < 0.25	BBB+ to BBB	Baa1 to Baa2	0.21%	0.21%	15	22	–	–	–
	0.25 to < 0.50	BBB to BB+	Baa2 to Ba1	0.36%	0.36%	16	10	–	–	–
	0.50 to < 0.75	BB+	Ba1	0.56%	0.56%	3	5	–	–	–
	0.75 to < 2.50	BB+ to B+	Ba1 to B1	0.86%	1.07%	17	14	–	–	–
	2.50 to < 10.00	B+ to B-	B1 to B3	3.15%	5.07%	4	3	–	–	–
	10.00 to < 100.00	B- to CCC	B3 to Caa2	–	–	–	–	–	–	–

(1) Prescribed PD bands based on BIS document on Revised Pillar 3 disclosure requirements issued in January 2015.

(2) Represents the number of individual borrowers.

AIRB Credit Risk Exposure – Backtesting⁽¹⁾

(millions of Canadian dollars)

	2020											
	Q4						Q3					
	PD average estimated (%)	PD actual (%)	LGD average estimated (%) ⁽²⁾	LGD actual (%) ⁽³⁾	EAD estimated (%) ⁽⁴⁾	EAD actual (%) ⁽⁴⁾	PD average estimated (%)	PD actual (%)	LGD average estimated (%) ⁽²⁾	LGD actual (%) ⁽³⁾	EAD estimated (%) ⁽⁴⁾	EAD actual (%) ⁽⁴⁾
Retail Portfolio⁽⁵⁾												
Insured residential mortgages ⁽⁶⁾	0.89%	0.60%	2.64%	n.a.	n.a.	n.a.	0.89%	0.72%	2.64%	n.a.	n.a.	n.a.
Uninsured residential mortgages incl. HELOCs ⁽⁷⁾	0.34%	0.28%	19.51%	4.20%	92.32%	86.17%	0.34%	0.32%	20.11%	5.70%	93.63%	88.93%
Qualifying revolving retail	1.27%	1.12%	82.94%	74.48%	107.58%	93.05%	1.25%	1.22%	85.60%	78.04%	107.58%	103.07%
Other retail	1.64%	1.12%	67.76%	50.57%	96.16%	79.82%	1.64%	1.22%	68.55%	53.56%	94.02%	87.73%
Non-Retail Portfolio⁽⁸⁾												
Corporate	1.11%	0.48%	39.57%	30.88%	81.95%	75.57%	1.20%	0.56%	40.67%	32.29%	79.34%	81.94%
Sovereign ⁽⁹⁾	0.06%	0.00%	11.54%	n.a.	88.30%	n.a.	0.06%	0.00%	11.54%	n.a.	88.30%	n.a.
Financial Institutions ⁽⁹⁾	0.48%	0.00%	40.75%	n.a.	100.00%	n.a.	0.44%	0.00%	40.75%	n.a.	100.00%	n.a.

	2020											
	Q2						Q1					
	PD average estimated (%)	PD actual (%)	LGD average estimated (%) ⁽²⁾	LGD actual (%) ⁽³⁾	EAD estimated (%) ⁽⁴⁾	EAD actual (%) ⁽⁴⁾	PD average estimated (%)	PD actual (%)	LGD average estimated (%) ⁽²⁾	LGD actual (%) ⁽³⁾	EAD estimated (%) ⁽⁴⁾	EAD actual (%) ⁽⁴⁾
Retail Portfolio⁽⁵⁾												
Insured residential mortgages ⁽⁶⁾	0.98%	0.56%	2.64%	n.a.	n.a.	n.a.	0.74%	0.54%	2.64%	n.a.	n.a.	n.a.
Uninsured residential mortgages incl. HELOCs ⁽⁷⁾	0.38%	0.31%	21.48%	10.73%	95.56%	90.08%	0.33%	0.31%	20.77%	9.01%	96.69%	91.15%
Qualifying revolving retail	1.27%	1.23%	85.90%	79.50%	106.93%	102.95%	1.35%	1.21%	85.09%	79.24%	106.14%	102.91%
Other retail	1.77%	0.96%	68.20%	56.83%	94.70%	86.04%	1.54%	0.98%	66.70%	57.99%	94.91%	86.75%
Non-Retail Portfolio⁽⁸⁾												
Corporate	1.13%	0.51%	41.35%	35.08%	79.76%	83.92%	1.06%	0.44%	40.93%	33.09%	80.14%	85.53%
Sovereign ⁽⁹⁾	0.05%	0.00%	11.54%	n.a.	88.30%	n.a.	0.06%	0.00%	11.54%	n.a.	88.30%	n.a.
Financial Institutions ⁽⁹⁾	0.34%	0.00%	40.75%	n.a.	100.00%	n.a.	0.36%	0.00%	40.75%	n.a.	100.00%	n.a.

(1) Estimated PD and actual default rates are consistent with what is presented in table CR9 (presented annually). Actual and estimated LGD and EAD parameters are reported on a one-month lag. For example, for Q4 2020, estimated percentages are as of September 30, 2019 and actual percentages reflect experience in the following 12 months.

(2) Estimated LGD reflects loss estimates under a downturn economic scenario and is based on defaulted accounts.

(3) Actual LGD includes indirect costs and discount rate and is based on defaulted accounts on which recovery process is completed.

(4) Estimated and actual EAD are computed for revolving products only and are based on defaulted accounts.

(5) Retail PD and EAD are based on account weighted average whilst retail LGD is based on exposure weighted average.

(6) Actual LGD for insured residential mortgages is not applicable to reflect the credit risk mitigation from government backed entities.

(7) Actual and estimated EAD for residential mortgage is computed only for HELOCs since the conventional residential mortgages are non-revolving.

(8) Wholesale and Sovereign's PD is based on borrower weighted average whilst the LGD and EAD are based on facility weighted average.

(9) Actual LGD for the financial institutions and sovereign are not applicable because no defaulted facilities recovery were completed during the period. Actual EAD are not applicable because no default was observed during the period.

CR10 – IRB – Specialised Lending and Equities Under the Simple Risk Weight Method

(millions of Canadian dollars)

	Q4 2020					Q3 2020				
	On-balance sheet amount	Off-balance sheet amount	RW	Exposure amount	RWA	On-balance sheet amount	Off-balance sheet amount	RW	Exposure amount	RWA
Equities under the materiality exemption	957	88	100%	1,000	1,060	965	97	100%	1,013	1,074

	Q2 2020					Q1 2020				
	On-balance sheet amount	Off-balance sheet amount	RW	Exposure amount	RWA	On-balance sheet amount	Off-balance sheet amount	RW	Exposure amount	RWA
Equities under the materiality exemption	908	102	100%	959	1,017	948	103	100%	1,000	1,060

CCR1 – Analysis of Counterparty Credit Risk (CCR) Exposure by Approach⁽¹⁾

(millions of Canadian dollars)

The following tables provide a comprehensive view of the methods used to calculate counterparty credit risk regulatory requirements and the main parameters used within each method.

		Q4 2020						Q3 2020					
		a	b	c	d	e	f	a	b	c	d	e	f
		Replacement cost	Potential future exposure	EEPE ⁽²⁾	Alpha used for computing regulatory EAD	EAD post-CRM	RWA	Replacement cost	Potential future exposure	EEPE ⁽²⁾	Alpha used for computing regulatory EAD	EAD post-CRM	RWA
1	SA-CCR (for derivatives)	3,382	6,886		1.4	14,375	4,702	3,868	6,440		1.4	14,431	4,704
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)					-	-					-	-
5	VaR for SFTs					9,907	1,276					11,459	1,345
6	Total						5,978						6,049

		Q2 2020						Q1 2020					
		a	b	c	d	e	f	a	b	c	d	e	f
		Replacement cost	Potential future exposure	EEPE ⁽²⁾	Alpha used for computing regulatory EAD	EAD post-CRM	RWA	Replacement cost	Potential future exposure	EEPE ⁽²⁾	Alpha used for computing regulatory EAD	EAD post-CRM	RWA
1	SA-CCR (for derivatives)	4,480	6,161		1.4	14,897	4,714	2,414	7,854		1.4	14,375	4,035
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)					-	-					-	-
5	VaR for SFTs					9,794	927					8,525	1,132
6	Total						5,641						5,167

(1) Excluding exposure and RWA for qualified central counterparties (QCCPs) and credit valuation adjustment (CVA).

(2) EEPE: Effective Expected Positive Exposure.

CCR2 – Credit Valuation Adjustment (CVA) Capital Charge

(millions of Canadian dollars)

The following table provides the CVA regulatory calculations (with a breakdown by standardised and advanced approaches).

		Q4 2020		Q3 2020		Q2 2020		Q1 2020		Q4 2019	
		a	b	a	b	a	b	a	b	a	b
		EAD post-CRM	RWA	EAD post-CRM	RWA	EAD post-CRM	RWA	EAD post-CRM	RWA	EAD post-CRM	RWA
Total portfolios subject to the Advanced CVA capital charge											
1	(i) VaR component (including the 3 x multiplier)		-		-		-		-		-
2	(ii) Stressed VaR component (including the 3 x multiplier)		-		-		-		-		-
3	All portfolios subject to the Standardised CVA capital charge	10,047	1,612	10,088	1,664	10,407	1,555	9,981	1,364	8,628	1,200
4	Total subject to the CVA capital charge	10,047	1,612	10,088	1,664	10,407	1,555	9,981	1,364	8,628	1,200

CCR3 – Standardised Approach – CCR Exposures by Regulatory Portfolio and Risk Weights

(millions of Canadian dollars)

The following tables provide a breakdown of counterparty credit risk exposures calculated according to the standardised approach: by portfolio (type of counterparties) and by risk weights (riskiness attributed according to standardised approach).

		Q4 2020									Q3 2020								
Risk weight		a	b	c	d	e	f	g	h	i	a	b	c	d	e	f	g	h	i
Regulatory portfolio		0%	10%	20%	50%	75%	100%	150%	Others	Total credit exposure	0%	10%	20%	50%	75%	100%	150%	Others	Total credit exposure
Sovereigns		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-central government public sector entities (PSEs)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Multilateral development banks (MDBs)		3	-	-	-	-	-	-	-	3	4	-	-	-	-	-	-	-	4
Financial institutions		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Securities firms		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Corporates		-	-	-	-	-	632	-	-	632	-	-	-	-	-	653	-	-	653
Regulatory retail portfolios		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other assets ⁽¹⁾		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		3	-	-	-	-	632	-	-	635	4	-	-	-	-	653	-	-	657

		Q2 2020									Q1 2020								
Risk weight		a	b	c	d	e	f	g	h	i	a	b	c	d	e	f	g	h	i
Regulatory portfolio		0%	10%	20%	50%	75%	100%	150%	Others	Total credit exposure	0%	10%	20%	50%	75%	100%	150%	Others	Total credit exposure
Sovereigns		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-central government public sector entities (PSEs)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Multilateral development banks (MDBs)		6	-	-	-	-	-	-	-	6	9	-	-	-	-	-	-	-	9
Financial institutions		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Securities firms		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Corporates		-	-	-	-	-	392	-	-	392	-	-	-	-	-	513	-	-	513
Regulatory retail portfolios		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other assets ⁽¹⁾		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		6	-	-	-	-	392	-	-	398	9	-	-	-	-	513	-	-	522

(1) Excluding the exposures to CCPs, which are reported in CCR8.

CCR4 – IRB – CCR Exposures by Portfolio and PD Scale

(millions of Canadian dollars)

The following tables provide all relevant parameters used for the calculation of counterparty credit risk capital requirements for IRB models.

Q4 2020								
PD scale ⁽¹⁾	a	b	c	d	e	f	g	
	EAD post-CRM	Average PD ⁽²⁾	Number of obligors ⁽³⁾	Average LGD ⁽⁴⁾	Average maturity ⁽⁵⁾	RWA	RWA density ⁽⁶⁾	
Corporate								
0.00 to < 0.15	2,068	0.07%	499	48.1%	0.76	392	19.0%	
0.15 to < 0.25	2,544	0.19%	517	40.5%	2.21	856	33.6%	
0.25 to < 0.50	913	0.36%	254	43.8%	1.92	488	53.5%	
0.50 to < 0.75	747	0.56%	213	35.3%	1.90	371	49.7%	
0.75 to < 2.50	1,503	0.90%	725	39.3%	1.52	1,038	69.1%	
2.50 to < 10.00	320	4.50%	80	41.4%	1.34	404	126.3%	
10.00 to < 100.00	1	13.90%	4	51.3%	1.00	2	200.0%	
100.00 (Default)	11	100.00%	3	38.3%	1.00	15	136.4%	
Sub-total	8,107	0.65%	2,295	42.2%	1.61	3,566	44.0%	
Sovereign								
0.00 to < 0.15	7,169	0.03%	153	11.8%	1.37	144	2.0%	
0.15 to < 0.25	76	0.21%	1	13.1%	0.01	5	6.6%	
0.25 to < 0.50	–	0%	–	0%	–	–	0%	
0.50 to < 0.75	–	0%	–	0%	–	–	0%	
0.75 to < 2.50	–	0%	–	0%	–	–	0%	
2.50 to < 10.00	–	0%	–	0%	–	–	0%	
10.00 to < 100.00	–	0%	–	0%	–	–	0%	
100.00 (Default)	–	0%	–	0%	–	–	0%	
Sub-total	7,245	0.03%	154	11.8%	1.36	149	2.1%	
Financial institutions								
0.00 to < 0.15	6,614	0.06%	65	50.8%	0.45	911	13.8%	
0.15 to < 0.25	1,462	0.17%	39	46.3%	0.84	522	35.7%	
0.25 to < 0.50	221	0.36%	13	49.7%	0.28	93	42.1%	
0.50 to < 0.75	109	0.56%	11	48.3%	0.26	63	57.8%	
0.75 to < 2.50	42	1.30%	20	46.5%	1.09	42	100.0%	
2.50 to < 10.00	–	0%	–	0%	–	–	0%	
10.00 to < 100.00	–	0%	–	0%	–	–	0%	
100.00 (Default)	–	0%	–	0%	–	–	0%	
Sub-total	8,448	0.10%	148	49.9%	0.51	1,631	19.3%	
Total (sum of portfolios)	23,800	0.27%	2,597	36.0%	1.03	5,346	22.5%	

(1) Prescribed PD bands based on BIS document on Revised Pillar 3 disclosure requirements issued in January 2015.

(2) Represents the obligor grade PD weighted by EAD.

(3) Represents the number of individual borrowers.

(4) Represents the obligor grade LGD (net of any CRM effect) weighted by EAD.

(5) Represents the obligor maturity in years weighted by EAD. This parameter needs to be filled in only when it is used for the RWA calculation.

(6) Total risk-weighted assets to EAD post-CRM.

CCR4 – IRB – CCR Exposures by Portfolio and PD Scale (continued)

(millions of Canadian dollars)

		Q4 2019						
PD scale ⁽¹⁾		a	b	c	d	e	f	g
		EAD post-CRM	Average PD ⁽²⁾	Number of obligors ⁽³⁾	Average LGD ⁽⁴⁾	Average maturity ⁽⁵⁾	RWA	RWA density ⁽⁶⁾
Corporate	0.00 to < 0.15	2,541	0.06%	496	53.1%	2.55	265	10.4%
	0.15 to < 0.25	2,113	0.19%	507	48.0%	1.92	845	40.0%
	0.25 to < 0.50	673	0.36%	258	43.4%	2.13	372	55.3%
	0.50 to < 0.75	866	0.56%	201	43.7%	2.99	334	38.6%
	0.75 to < 2.50	816	0.91%	606	47.8%	1.63	692	84.8%
	2.50 to < 10.00	56	4.52%	53	35.8%	1.26	58	103.6%
	10.00 to < 100.00	9	13.84%	6	37.6%	1.61	13	144.4%
	100.00 (Default)	5	100.00%	2	21.6%	4.98	2	40.0%
	Sub-total	7,079	0.41%	2,129	48.7%	2.26	2,581	36.5%
Sovereign	0.00 to < 0.15	5,988	0.03%	171	11.7%	1.52	128	2.1%
	0.15 to < 0.25	2	0.21%	1	11.6%	-	-	0%
	0.25 to < 0.50	-	0%	-	0%	-	-	0%
	0.50 to < 0.75	-	0%	-	0%	-	-	0%
	0.75 to < 2.50	7	1.03%	1	12.8%	1.00	2	28.6%
	2.50 to < 10.00	-	0%	-	0%	-	-	0%
	10.00 to < 100.00	-	0%	-	0%	-	-	0%
	100.00 (Default)	-	0%	-	0%	-	-	0%
	Sub-total	5,997	0.04%	173	11.7%	1.51	130	2.2%
Financial institutions	0.00 to < 0.15	5,699	0.06%	57	46.8%	0.74	896	15.7%
	0.15 to < 0.25	1,274	0.16%	33	50.7%	0.25	396	31.1%
	0.25 to < 0.50	45	0.36%	16	48.8%	0.17	20	44.4%
	0.50 to < 0.75	143	0.56%	18	49.0%	0.50	102	71.3%
	0.75 to < 2.50	71	1.15%	23	46.6%	0.77	60	84.5%
	2.50 to < 10.00	-	3.09%	2	38.4%	0.41	-	0%
	10.00 to < 100.00	-	0%	-	0%	-	-	0%
	100.00 (Default)	-	0%	-	0%	-	-	0%
	Sub-total	7,232	0.10%	149	47.6%	0.65	1,474	20.4%
Total (sum of portfolios)		20,308	0.19%	2,451	37.0%	1.31	4,185	20.6%

(1) Prescribed PD bands based on BIS document on Revised Pillar 3 disclosure requirements issued in January 2015.

(2) Represents the obligor grade PD weighted by EAD.

(3) Represents the number of individual borrowers.

(4) Represents the obligor grade LGD (net of any CRM effect) weighted by EAD.

(5) Represents the obligor maturity in years weighted by EAD. This parameter needs to be filled in only when it is used for the RWA calculation.

(6) Total risk-weighted assets to EAD post-CRM.

CCR5 – Composition of Collateral for CCR Exposure

(millions of Canadian dollars)

The following tables provide a breakdown of all types of collateral posted or received by banks to support or reduce the counterparty credit risk exposures related to derivative transactions or to SFTs, including transactions cleared through a CCP.

	Q4 2020						Q3 2020					
	a	b	c	d	e	f	a	b	c	d	e	f
	Collateral used in derivative transactions				Collateral used in SFTs		Collateral used in derivative transactions				Collateral used in SFTs	
	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received ⁽¹⁾	Fair value of posted collateral ⁽¹⁾	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received ⁽¹⁾	Fair value of posted collateral ⁽¹⁾
Segregated	Unsegregated	Segregated	Unsegregated			Segregated	Unsegregated	Segregated	Unsegregated			
Cash	-	10,046	-	1,861	29,253	15,472	-	9,046	-	2,232	29,596	13,780
Securities issued or guaranteed by												
Canadian government	6	215	-	1,752	9,050	10,323	1	185	-	1,897	14,552	15,115
Canadian provincial and municipal governments	-	145	-	62	15,296	19,040	-	78	-	289	12,819	19,898
U.S. Treasury, other U.S. agencies and other foreign governments	60	66	-	126	32,990	33,558	60	109	-	-	34,893	36,663
Other debt securities	-	60	-	-	1,111	332	-	51	-	-	2,079	607
Equity securities	-	-	-	-	48,212	59,554	-	-	-	-	56,778	66,655
Total	66	10,532	-	3,801	135,912	138,279	61	9,469	-	4,418	150,717	152,718

	Q2 2020						Q1 2020					
	a	b	c	d	e	f	a	b	c	d	e	f
	Collateral used in derivative transactions				Collateral used in SFTs		Collateral used in derivative transactions				Collateral used in SFTs	
	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received ⁽¹⁾	Fair value of posted collateral ⁽¹⁾	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
Segregated	Unsegregated	Segregated	Unsegregated			Segregated	Unsegregated	Segregated	Unsegregated			
Cash	-	9,144	-	2,205	28,305	19,721	-	6,714	-	857	26,402	16,037
Securities issued or guaranteed by												
Canadian government	16	287	-	2,118	18,946	18,943	-	49	-	985	14,777	14,699
Canadian provincial and municipal governments	-	137	-	194	11,885	17,981	-	12	-	18	14,215	16,978
U.S. Treasury, other U.S. agencies and other foreign governments	63	211	-	-	43,378	40,788	59	55	-	3	42,540	39,162
Other debt securities	-	61	-	-	1,490	852	-	33	-	-	2,228	749
Equity securities	-	-	-	-	61,452	69,145	-	-	-	-	59,905	76,203
Total	79	9,840	-	4,517	165,456	167,430	59	6,863	-	1,863	160,067	163,828

(1) Excluding collateral from repurchase agreements guaranteed by bearer deposit notes issued by the Bank and covered bonds issued by the Bank.

CCR6 – Credit Derivatives Exposures

(millions of Canadian dollars)

The following tables illustrate the extent of a bank's exposures to credit derivative transactions broken down between derivatives purchased or sold.

	Q4 2020		Q3 2020		Q2 2020		Q1 2020		Q4 2019	
	a	b	a	b	a	b	a	b	a	b
	Protection purchased	Protection sold	Protection purchased	Protection sold	Protection purchased	Protection sold	Protection purchased	Protection sold	Protection purchased	Protection sold
Notionals										
Credit default swaps										
Indices, singles names and other	5,632	4,024	5,339	3,449	6,271	4,319	4,923	2,211	3,959	1,878
Tranches on indices	-	-	-	-	-	-	-	-	-	-
Total return swaps	-	-	-	-	-	-	-	-	142	-
Credit options	-	-	-	-	-	-	-	-	-	-
Other credit derivatives	-	-	-	-	-	-	-	-	-	-
Total notionals	5,632	4,024	5,339	3,449	6,271	4,319	4,923	2,211	4,101	1,878
Fair values										
Positive fair value (asset)	13	28	19	52	50	34	-	52	-	45
Negative fair value (liability)	(58)	(1)	(83)	-	(50)	(3)	(120)	-	(101)	-

CCR8 – Exposures to Central Counterparties (CCP)⁽¹⁾

(millions of Canadian dollars)

The following table provides a comprehensive picture of the bank's exposures to central counterparties. In particular, the template includes all types of exposures and related capital requirements.

	Q4 2020		Q3 2020		Q2 2020		Q1 2020		Q4 2019	
	a	b	a	b	a	b	a	b	a	b
	EAD (post-CRM)	RWA	EAD (post-CRM)	RWA	EAD (post-CRM)	RWA	EAD (post-CRM)	RWA	EAD (post-CRM)	RWA
1	Exposures to QCCPs (total)									
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which									
3	(i) OTC derivatives									
4	(ii) Exchange-traded derivatives									
5	(iii) Securities financing transactions									
6	(iv) Netting sets where cross-product netting has been approved									
7	Segregated initial margin									
8	Non-segregated initial margin									
9	Pre-funded default fund contributions									
10	Unfunded default fund contributions									
	2,436	48	1,350	27	1,356	27	1,794	35	1,797	36
	48	1	49	1	92	2	74	1	63	1
	2,119	42	1,174	23	1,174	23	1,602	32	1,680	34
	269	5	127	3	90	2	118	2	54	1
	–	–	–	–	–	–	–	–	–	–
	5,536	–	4,856	–	6,078	–	1,802	–	733	–
	561	–	401	–	696	–	51	–	46	–
	484	123	393	112	493	88	159	139	168	125
	–	–	–	–	–	–	–	–	–	–

(1) The Bank has no exposure to non-qualifying central counterparties.

SEC1 – Securitization Exposures in the Banking Book

(millions of Canadian dollars)

The following tables present the bank's securitization exposures in its banking book.

		Q4 2020								
		a	b	c	e	f	g	i	j	k
		Bank acts as originator			Bank acts as sponsor			Banks acts as investor ⁽¹⁾		
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	1,071	-	1,071	3,228	-	3,228	715	-	715
	Of which :									
2	Residential mortgages	-	-	-	2,708	-	2,708	203	-	203
3	Credit card	1,071	-	1,071	-	-	-	12	-	12
4	Other retail exposures	-	-	-	520	-	520	500	-	500
5	Re-securitization	-	-	-	-	-	-	-	-	-
6	Non-Retail	-	-	-	247	-	247	793	-	793
	Of which :									
7	Loans to corporates	-	-	-	-	-	-	-	-	-
8	Commercial mortgage	-	-	-	-	-	-	6	-	6
9	Lease and receivables	-	-	-	233	-	233	787	-	787
10	Other wholesale	-	-	-	14	-	14	-	-	-
11	Re-securitization	-	-	-	-	-	-	-	-	-

		Q3 2020								
		a	b	c	e	f	g	i	j	k
		Bank acts as originator			Bank acts as sponsor			Banks acts as investor ⁽¹⁾		
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	1,071	-	1,071	2,614	-	2,614	722	-	722
	Of which :									
2	Residential mortgages	-	-	-	2,092	-	2,092	210	-	210
3	Credit card	1,071	-	1,071	-	-	-	12	-	12
4	Other retail exposures	-	-	-	522	-	522	500	-	500
5	Re-securitization	-	-	-	-	-	-	-	-	-
6	Non-Retail	-	-	-	268	-	268	793	-	793
	Of which :									
7	Loans to corporates	-	-	-	-	-	-	-	-	-
8	Commercial mortgage	-	-	-	-	-	-	6	-	6
9	Lease and receivables	-	-	-	254	-	254	787	-	787
10	Other wholesale	-	-	-	14	-	14	-	-	-
11	Re-securitization	-	-	-	-	-	-	-	-	-

(1) Represents the investment positions purchased in third-party deals.

(2) The Bank has no synthetic securitization exposure.

SEC1 – Securitization Exposures in the Banking Book (continued)

(millions of Canadian dollars)

		Q2 2020								
		a	b	c	e	f	g	i	j	k
		Bank acts as originator			Bank acts as sponsor			Banks acts as investor ⁽¹⁾		
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	600	-	600	2,560	-	2,560	728	-	728
	Of which :									
2	Residential mortgages	-	-	-	2,036	-	2,036	216	-	216
3	Credit card	600	-	600	-	-	-	12	-	12
4	Other retail exposures	-	-	-	524	-	524	500	-	500
5	Re-securitization	-	-	-	-	-	-	-	-	-
6	Non-Retail	-	-	-	270	-	270	776	-	776
	Of which :									
7	Loans to corporates	-	-	-	-	-	-	-	-	-
8	Commercial mortgage	-	-	-	-	-	-	6	-	6
9	Lease and receivables	-	-	-	256	-	256	770	-	770
10	Other wholesale	-	-	-	14	-	14	-	-	-
11	Re-securitization	-	-	-	-	-	-	-	-	-

		Q1 2020								
		a	b	c	e	f	g	i	j	k
		Bank acts as originator			Bank acts as sponsor			Banks acts as investor ⁽¹⁾		
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	653	-	653	2,587	-	2,587	749	-	749
	Of which :									
2	Residential mortgages	-	-	-	2,057	-	2,057	237	-	237
3	Credit card	653	-	653	-	-	-	12	-	12
4	Other retail exposures	-	-	-	530	-	530	500	-	500
5	Re-securitization	-	-	-	-	-	-	-	-	-
6	Non-Retail	-	-	-	271	-	271	777	-	777
	Of which :									
7	Loans to corporates	-	-	-	-	-	-	-	-	-
8	Commercial mortgage	-	-	-	-	-	-	7	-	7
9	Lease and receivables	-	-	-	257	-	257	770	-	770
10	Other wholesale	-	-	-	14	-	14	-	-	-
11	Re-securitization	-	-	-	-	-	-	-	-	-

(1) Represents the investment positions purchased in third-party deals.

(2) The Bank has no synthetic securitization exposure.

SEC2 – Securitization Exposures in the Trading Book

(millions of Canadian dollars)

The following tables present the bank's securitization exposures in its trading book.

		Q4 2020								
		a	b	c	e	f	g	i	j	k
		Bank acts as originator			Bank acts as sponsor			Banks acts as investor ⁽¹⁾		
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	-	-	-	21	-	21	18	-	18
	Of which :									
2	Residential mortgages	-	-	-	17	-	17	-	-	-
3	Credit card	-	-	-	-	-	-	18	-	18
4	Other retail exposures	-	-	-	4	-	4	-	-	-
5	Re-securitization	-	-	-	-	-	-	-	-	-
6	Non-Retail	-	-	-	2	-	2	13	-	13
	Of which :									
7	Loans to corporates	-	-	-	-	-	-	-	-	-
8	Commercial mortgage	-	-	-	-	-	-	12	-	12
9	Lease and receivables	-	-	-	2	-	2	1	-	1
10	Other wholesale	-	-	-	-	-	-	-	-	-
11	Re-securitization	-	-	-	-	-	-	-	-	-

		Q3 2020								
		a	b	c	e	f	g	i	j	k
		Bank acts as originator			Bank acts as sponsor			Banks acts as investor ⁽¹⁾		
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	-	-	-	4	-	4	8	-	8
	Of which :									
2	Residential mortgages	-	-	-	3	-	3	3	-	3
3	Credit card	-	-	-	-	-	-	5	-	5
4	Other retail exposures	-	-	-	1	-	1	-	-	-
5	Re-securitization	-	-	-	-	-	-	-	-	-
6	Non-Retail	-	-	-	-	-	-	14	-	14
	Of which :									
7	Loans to corporates	-	-	-	-	-	-	-	-	-
8	Commercial mortgage	-	-	-	-	-	-	12	-	12
9	Lease and receivables	-	-	-	-	-	-	2	-	2
10	Other wholesale	-	-	-	-	-	-	-	-	-
11	Re-securitization	-	-	-	-	-	-	-	-	-

(1) Represents the investment positions purchased in third-party deals.

(2) The Bank has no synthetic securitization exposure.

SEC2 – Securitization Exposures in the Trading Book (continued)

(millions of Canadian dollars)

		Q2 2020								
		a	b	c	e	f	g	i	j	k
		Bank acts as originator			Bank acts as sponsor			Banks acts as investor ⁽¹⁾		
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	-	-	-	12	-	12	13	-	13
	Of which :									
2	Residential mortgages	-	-	-	9	-	9	9	-	9
3	Credit card	-	-	-	-	-	-	4	-	4
4	Other retail exposures	-	-	-	3	-	3	-	-	-
5	Re-securitization	-	-	-	-	-	-	-	-	-
6	Non-Retail	-	-	-	1	-	1	22	-	22
	Of which :									
7	Loans to corporates	-	-	-	-	-	-	-	-	-
8	Commercial mortgage	-	-	-	-	-	-	12	-	12
9	Lease and receivables	-	-	-	1	-	1	10	-	10
10	Other wholesale	-	-	-	-	-	-	-	-	-
11	Re-securitization	-	-	-	-	-	-	-	-	-

		Q1 2020								
		a	b	c	e	f	g	i	j	k
		Bank acts as originator			Bank acts as sponsor			Banks acts as investor ⁽¹⁾		
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	1	-	1	4	-	4	18	-	18
	Of which :									
2	Residential mortgages	-	-	-	3	-	3	9	-	9
3	Credit card	1	-	1	-	-	-	9	-	9
4	Other retail exposures	-	-	-	1	-	1	-	-	-
5	Re-securitization	-	-	-	-	-	-	-	-	-
6	Non-Retail	-	-	-	-	-	-	13	-	13
	Of which :									
7	Loans to corporates	-	-	-	-	-	-	-	-	-
8	Commercial mortgage	-	-	-	-	-	-	12	-	12
9	Lease and receivables	-	-	-	-	-	-	1	-	1
10	Other wholesale	-	-	-	-	-	-	-	-	-
11	Re-securitization	-	-	-	-	-	-	-	-	-

(1) Represents the investment positions purchased in third-party deals.

(2) The Bank has no synthetic securitization exposure.

SEC 3 – Securitization Exposures in the Banking Book and Associated Regulatory Capital Requirements⁽¹⁾ – Bank Acting as Originator or as Sponsor

(millions of Canadian dollars)

The following tables present securitization in the banking book when the bank acts as originator or sponsor and the associated capital requirements.

		Q4 2020																
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
		Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach) ⁽²⁾				Capital charge after cap			
		≤ 20% RW	> 20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%
1	Total exposures	4,546	–	–	–	–	1,320	3,226	–	–	144	322	–	–	12	25	–	–
2	Traditional securitization	4,546	–	–	–	–	1,320	3,226	–	–	144	322	–	–	12	25	–	–
3	Of which securitization	4,546	–	–	–	–	1,320	3,226	–	–	144	322	–	–	12	25	–	–
4	Of which retail underlying	4,299	–	–	–	–	1,320	2,979	–	–	144	297	–	–	12	23	–	–
5	Of which wholesale	247	–	–	–	–	–	247	–	–	–	25	–	–	–	2	–	–
6	Of which re-securitization	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7	Of which senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8	Of which non-senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

		Q3 2020																
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
		Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach) ⁽²⁾				Capital charge after cap			
		≤ 20% RW	> 20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%
1	Total exposures	3,953	–	–	–	–	1,321	2,632	–	–	144	263	–	–	11	21	–	–
2	Traditional securitization	3,953	–	–	–	–	1,321	2,632	–	–	144	263	–	–	11	21	–	–
3	Of which securitization	3,953	–	–	–	–	1,321	2,632	–	–	144	263	–	–	11	21	–	–
4	Of which retail underlying	3,685	–	–	–	–	1,321	2,364	–	–	144	236	–	–	11	19	–	–
5	Of which wholesale	268	–	–	–	–	–	268	–	–	–	27	–	–	–	2	–	–
6	Of which re-securitization	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7	Of which senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8	Of which non-senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

(1) The Bank has no synthetic securitization exposure.

(2) RWA amounts do not include the transitional arrangement related amount.

SEC 3 – Securitization Exposures in the Banking Book and Associated Regulatory Capital Requirements⁽¹⁾ – Bank Acting as Originator or as Sponsor (continued)

(millions of Canadian dollars)

		Q2 2020																
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
		Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach) ⁽²⁾				Capital charge after cap			
		≤ 20% RW	> 20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%
1	Total exposures	3,430	–	–	–	–	250	3,180	–	–	37	318	–	–	3	26	–	–
2	Traditional securitization	3,430	–	–	–	–	250	3,180	–	–	37	318	–	–	3	26	–	–
3	Of which securitization	3,430	–	–	–	–	250	3,180	–	–	37	318	–	–	3	26	–	–
4	Of which retail underlying	3,160	–	–	–	–	250	2,910	–	–	37	291	–	–	3	24	–	–
5	Of which wholesale	270	–	–	–	–	–	270	–	–	–	27	–	–	–	2	–	–
6	Of which re-securitization	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7	Of which senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8	Of which non-senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

		Q1 2020																
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
		Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach) ⁽²⁾				Capital charge after cap			
		≤ 20% RW	> 20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%
1	Total exposures	3,457	–	28	26	–	250	3,261	–	–	37	383	–	–	3	30	–	–
2	Traditional securitization	3,457	–	28	26	–	250	3,261	–	–	37	383	–	–	3	30	–	–
3	Of which securitization	3,457	–	28	26	–	250	3,261	–	–	37	383	–	–	3	30	–	–
4	Of which retail underlying	3,186	–	28	26	–	250	2,990	–	–	37	356	–	–	3	28	–	–
5	Of which wholesale	271	–	–	–	–	–	271	–	–	–	27	–	–	–	2	–	–
6	Of which re-securitization	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7	Of which senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8	Of which non-senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

(1) The Bank has no synthetic securitization exposure.

(2) RWA amounts do not include the transitional arrangement related amount.

SEC 4 – Securitization Exposures in the Banking Book and Associated Capital Requirements⁽¹⁾ – Bank Acting as Investor

(millions of Canadian dollars)

The following tables present securitization exposures in the banking book where the bank acts as investor and the associated capital requirements.

Q4 2020																		
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	
	Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach) ⁽²⁾				Capital charge after cap				
	≤ 20% RW	> 20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	
1	Total exposures	1,380	61	67	–	–	203	805	500	–	28	120	80	–	2	10	6	–
2	Traditional securitization	1,380	61	67	–	–	203	805	500	–	28	120	80	–	2	10	6	–
3	Of which securitization	1,380	61	67	–	–	203	805	500	–	28	120	80	–	2	10	6	–
4	Of which retail underlying	660	55	–	–	–	203	12	500	–	28	2	80	–	2	–	6	–
5	Of which wholesale	720	6	67	–	–	–	793	–	–	–	118	–	–	–	10	–	–
6	Of which re-securitization	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7	Of which senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8	Of which non-senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Q3 2020																		
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	
	Exposure values (by RW bands)					Exposure values (by regulatory approach)				RWA (by regulatory approach) ⁽²⁾				Capital charge after cap				
	≤ 20% RW	> 20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	
1	Total exposures	1,397	51	67	–	–	210	805	500	–	32	120	80	–	3	10	6	–
2	Traditional securitization	1,397	51	67	–	–	210	805	500	–	32	120	80	–	3	10	6	–
3	Of which securitization	1,397	51	67	–	–	210	805	500	–	32	120	80	–	3	10	6	–
4	Of which retail underlying	677	45	–	–	–	210	12	500	–	32	2	80	–	3	1	6	–
5	Of which wholesale	720	6	67	–	–	–	793	–	–	–	118	–	–	–	9	–	–
6	Of which re-securitization	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7	Of which senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8	Of which non-senior	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

(1) The Bank has no synthetic securitization exposure.

(2) RWA amounts do not include the transitional arrangement related amount.

SEC 4 – Securitization Exposures in the Banking Book and Associated Capital Requirements⁽¹⁾

- Bank Acting as Investor (continued)

(millions of Canadian dollars)

		Q2 2020																
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
		Exposure values (by RW bands)				Exposure values (by regulatory approach)				RWA (by regulatory approach) ⁽²⁾				Capital charge after cap				
		≤ 20% RW	> 20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%
1	Total exposures	1,448	6	50	-	-	216	788	500	-	30	109	80	-	2	9	6	-
2	Traditional securitization	1,448	6	50	-	-	216	788	500	-	30	109	80	-	2	9	6	-
3	Of which securitization	1,448	6	50	-	-	216	788	500	-	30	109	80	-	2	9	6	-
4	Of which retail underlying	728	-	-	-	-	216	12	500	-	30	2	80	-	2	-	6	-
5	Of which wholesale	720	6	50	-	-	-	776	-	-	-	107	-	-	-	9	-	-
6	Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

		Q1 2020																
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
		Exposure values (by RW bands)				Exposure values (by regulatory approach)				RWA (by regulatory approach) ⁽²⁾				Capital charge after cap				
		≤ 20% RW	> 20% to 50% RW	>50% to 100% RW	>100% to 1250% RW	1250% RW	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%
1	Total exposures	1,469	-	57	-	-	237	789	500	-	36	110	80	-	3	9	6	-
2	Traditional securitization	1,469	-	57	-	-	237	789	500	-	36	110	80	-	3	9	6	-
3	Of which securitization	1,469	-	57	-	-	237	789	500	-	36	110	80	-	3	9	6	-
4	Of which retail underlying	749	-	-	-	-	237	12	500	-	36	2	80	-	3	-	6	-
5	Of which wholesale	720	-	57	-	-	-	777	-	-	-	108	-	-	-	9	-	-
6	Of which re-securitization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Of which senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Of which non-senior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(1) The Bank has no synthetic securitization exposure.

(2) RWA amounts do not include the transitional arrangement related amount.

Glossary

Advanced Internal Ratings-Based (AIRB) approach	See risk-weighted assets below.
Banking Book Equities	Banking book equities comprise mainly exposures held for strategic and other reasons.
Capital Ratio	The Bank's capital divided by risk-weighted assets. The Bank's capital can be either CET1 Capital, Tier 1 capital or Total capital, producing three different capital ratios.
Common Equity Tier 1 (CET1) capital	Common Equity Tier 1 capital consists of common shareholders' equity less goodwill, intangible assets and other capital deductions. Common Equity Tier 1 capital ratio is calculated by dividing Common Equity Tier 1 capital by risk-weighted assets.
Corporate	All direct credit risk exposures to corporations, partnerships and proprietorships, exposures guaranteed by those entities.
Credit Risk	Credit risk is the risk of a financial loss if an obligor does not fully honor its contractual commitments to the Bank. Obligors may be borrowers, issuers, counterparties or guarantors. Credit risk is the most significant risk facing the Bank in the normal course of business. The Bank is exposed to credit risk not only through its direct lending activities and transactions but also through commitments to extend credit, letters of guarantee, letters of credit, over-the-counter derivatives trading, available-for-sale debt securities, securities purchased under reverse repurchase agreements, deposits with financial institutions, brokerage activities and transactions carrying a settlement risk for the Bank such as irrevocable fund transfers to third parties via electronic payment systems.
Drawn exposure	The amount of credit risk exposure resulting from loans already advanced to the customer.
Exposure at default (EAD)	An estimate of the amount of exposure to a customer at the event of, and at the time of, default.
Financial institutions	All direct credit risk exposures to deposit-taking institutions and regulated securities firms, and exposures guaranteed by those entities.
Leverage ratio	The leverage ratio is calculated by dividing the amount of Tier 1 capital by the total exposure. Total exposure is defined as the sum of on-balance-sheet assets (including derivative exposures and securities financing transaction exposures) and off-balance-sheet items. Assets deducted from Tier 1 capital are also deducted from the total exposure.
Loss given default (LGD)	An estimate of the amount of exposure to a customer that will not be recovered following a default by that customer, expressed as a percentage of the exposure at default.
Market risk	Market risk is the risk of financial loss resulting from adverse movements in underlying market factors. Market risk at the Bank arises from its participation in market-making, trading, investment and asset/liability management activities.
Operational risk	Operational risk is the risk of loss resulting from an inadequacy or a failure ascribable to people, processes, technology or external events. Operational risks are present in every activity of the Bank. Theft, fraud, unauthorized transactions, system errors, human error, amendments to or misinterpretation of acts and regulations, litigation or disputes with clients or property damage are just a few examples of events likely to cause financial loss, harm the Bank's reputation or result in regulatory penalties or sanctions.
Other off-balance sheet	Letters of guarantee, documentary letters of credit and securitized assets that represent the Bank's commitment to make payments in the event that a client cannot meet its financial obligations to third parties.
Other retail	This exposure class includes consumer loans, SME credit card receivables, SME loans (excluding mortgages of five units or more), and other personal loans.
Over-the-counter derivatives (OTC)	The amount of credit risk exposure resulting from derivatives that trade directly between two counterparties, rather than through exchanges.
Probability of default (PD)	An estimate of the likelihood of default for any particular customer which occurs when that customer is not able to repay its obligations as they become contractually due.
Qualifying revolving retail (QRR)	This exposure class includes lines of credit and credit card receivables.
Repo-style transactions	Financial obligations related to securities sold (repos) or repurchased (reverse repos) pursuant to an agreement under which the securities will be repurchased (repos) or resold (reverse repos) on a specified date and at a specified price. Such an agreement is a form of short-term funding (repos) or collateralized lending (reverse repos). Repo-style transactions also include loaned and borrowed securities that are off-balance sheet.
Retail Residential Mortgage	This exposure class includes loans to individuals against residential property (four units or less) and lines of credit secured by equity in residential property (HELOC).
Risk-weighted assets (RWA)	Assets are risk weighted according to the guidelines established by the Office of the Superintendent of Financial Institutions. In the standardized calculation approach, factors are applied to the face value of certain assets in order to reflect comparable risk levels. In the advanced approach, risk-weighted assets are derived from the Bank's internal models which represents the Bank's own assessment of the risks it incurs. Off-balance sheet instruments are converted to balance sheet (or credit) equivalents by adjusting the notional values before applying the appropriate risk-weighting factors.
Scaling Factor	An add-on of 6% is applied as a calibration adjustment to the risk weighted assets amount for credit risk assessed under the AIRB approach.
Sovereign	All direct credit risk exposures to governments, central banks and certain public sector entities, and exposures guaranteed by those entities.
Standardized approach	See risk-weighted assets.
Tier 1 capital	Tier 1 capital ratio consists of Common Equity Tier 1 capital and Additional Tier 1 instruments, namely, eligible non-cumulative preferred shares and the eligible amount of innovative instruments. Tier 1 capital ratio is calculated by dividing Tier 1 capital by risk-weighted assets.
Tier 2 capital	Tier 2 capital mainly includes the qualifying portion of the subordinated debentures and the collective allowance on non-impaired loans eligible for credit risk.
Total capital	Total capital is the sum of Tier 1 and Tier 2 capital. Total capital ratio is calculated by dividing total capital, less adjustments or regulatory deductions, by risk-weighted assets.
Undrawn commitments	The amount of credit risk exposure resulting from loans that have not been advanced to a customer, but which a customer may be entitled to draw in the future.