

Supplementary Regulatory Capital and Pillar 3 Disclosure

Second Quarter 2020

(unaudited)

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

Notes to users

1) This <i>Supplementary Regulatory Capital and Pillar 3 Disclosure</i> document is unaudited and should be read in conjunction with the 2019 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 <i>Supplementary Financial Information</i> 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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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 - Second Quarter 2020
(3) These pages are included in the Supplementary Regulatory Capital and Pillar 3 Disclosure - Fourth Quarter 2019

KM2 – Key Metrics – TLAC Requirements⁽¹⁾

		2020		201		19	
		Q2	Q1	Q4	Q3	Q2	Q1
		а			а		
1	Total loss-absorbing capacity (TLAC) available	20,172	19,943	16,826	15,378	13,977	12,547
1a	TLAC available with transitional arrangements for ECL provisioning not applied	20,172	19,943	16,826	15,378	13,977	12,547
2	Total RWA at the level of the resolution group	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) (%)	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	21.7%	23.1%	20.3%	19.0%	17.7%	16.3%
4	Leverage ratio exposure measure at the level of the resolution group	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) (%)	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) (%)	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
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
6с	If the capped subordination exemption applies, the amount of funding issued that ranks pari passu with ExcludedLiabilities 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.

⁽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.

		Q2 2020	Q1 2020	Q4 2019	Q3 2019	Q2 2019	Q2 2020
		a	b	b	b	b	С
							Minimum
		D)444(1)	D1444(1)	D1444(1)	D1444 (1)	D) 4 (4 (1)	capital
		RWA ⁽¹⁾	requirement ⁽²⁾				
1	Credit risk (excluding counterparty credit risk)	66,385	60,155	58,361	56,306	55,225	5,311
2	Of which: standardised approach (SA)	14,065	12,095	10,429	8,911	9,407	1,125
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	52,320	48,060	47,932	47,395	45,818	4,186
6	Counterparty credit risk (CCR)	5,756	5,341	4,800	5,332	5,234	460
7	Of which: standardised approach for counterparty credit risk	4,714	4,035	3,568	4,060	4,087	377
8	Of which: internal model method (IMM)	-	-	-	-	-	-
9	Of which: other CCR	927	1,132	1,071	1,079	966	74
9a	Of which: exposures to central counterparties	115	174	161	193	181	9
10	Credit valuation adjustment (CVA)	1,555	1,364	1,200	1,139	1,151	124
11	Equity positions under the simple risk weight approach ⁽⁹⁾	1,017	1,060	1,121	1,074	943	81
12	Equity investments in funds – look-through approach	138	149	105	121	108	11
13	Equity investments in funds – mandate-based approach	-	-	_	_	_	-
14	Equity investments in funds – fall-back approach	-	-	_	_	86	-
15	Settlement risk	63	70	57	33	94	5
16	Securitization exposures in banking book	574	646	388	455	439	46
16a	Of which: subject to the transitional arrangement	-	-	(188)	(188)	(188)	-
17	Of which: securitization IRB approach (SEC-IRBA)	67	73	37	40	50	5
18	Of which: securitization external ratings-based approach (SEC-ERBA), including internal assessment approach (IAA)	427	493	463	477	449	34
19	Of which: securitization standardised approach (SEC-SA)	80	80	76	126	128	7
20	Market risk	4,121	4,397	4,276	3,972	3,788	330
21	Of which: standardised approach (SA)	1,095	916	890	983	927	88
22	Of which: internal model approach (IMA)	3,026	3,481	3,386	2,989	2,861	242
23	Capital charge for switch between trading book and banking book	_	-	-	_	_	_
24	Operational risk	11,977	11,664	11,509	11,319	11,096	958
25	Amounts below the thresholds for deduction (subject to 250% risk weight)	1,169	1,360	1,222	1,233	844	94
26	Floor adjustment	_	-	_	_	_	_
27	Total (1+6+10+11+12+13+14+15+16+20+23+24+25+26)	92,755	86,206	83,039	80,984	79,008	7,420
(4) D:-	weighted assets including the 1.06 scaling factor.		•				•

⁽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.

				Q2 2020			
	a	b	С	d	e	f	g
							Carrying values of items ⁽²⁾
	Carrying values as	Carrying values under	Subject to	Subject to	Subject to	Subject to	Not subject to
	reported in published	scope of regulatory	credit risk	counterparty	the securitization	the market risk	capital requirements or
	financial statements	consolidation	framework	credit risk framework	framework	framework	subject to deduction from capital
Assets							
Cash and deposits with financial institutions	27,800	27,800	27,800	_	_	410	ı
Securities							
At fair value through profit or loss	62,980	65,169	3,531	-	12	61,626	_
At fair value through other comprehensive income	11,441	20,146	20,140	_	6	-	_
At amortized cost	10,246	10,541	9,284	_	1,257	_	-
	84,667	95,856	32,955	-	1,275	61,626	ı
Securities purchased under reverse repurchase agreements							
and securities borrowed	17,710	16,898	-	16,898	_	_	1
Loans and acceptances							
Residential mortgage	60,216	33,783	33,783	-	-	-	_
Personal	36,879	36,879	36,879	-	-	-	_
Credit card	1,901	1,901	1,272	-	600	-	29
Business and government	57,723	57,723	57,723	-	14	421	1
	156,719	130,286	129,657	-	614	421	29
Customers' liability under acceptances	7,042	7,042	7,042	-	-	-	_
Allowances for credit losses	(1,033)	(308)	(308)	-	-		-
	162,728	137,020	136,391	-	614	421	29
Other							
Derivative financial instruments ⁽³⁾	15,747	16,061	-	16,061	-	13,479	_
Investments in associates and joint ventures	393	454	454	-	-	-	_
Premises and equipment	1,175	1,175	1,175	-	-	-	_
Goodwill	1,423	1,524	-	-	-	-	1,524
Intangible assets	1,444	1,182	-	-	-	-	1,182
Other assets	3,863	3,805	3,687	-	-	_	118
	24,045	24,201	5,316	16,061	-	13,479	2,824
Total assets	316,950	301,775	202,462	32,959	1,889	75,936	2,853
Liabilities							
Deposits	201,445	201,445	-	-	-	9,543	191,902
Other							
Acceptances	7,042	7,042	-	-	-	-	7,042
Obligations related to securities sold short	15,421	15,421	-	-	-	15,421	-
Obligations related to securities sold under repurchase							
agreements and securities loaned	34,345	33,631	-	33,631	-	-	714
Derivative financial instruments ⁽³⁾	15,200	16,998	-	16,998	-	12,595	-
Liabilities related to transferred receivables	21,239	21,239	-	-	-	-	21,239
Other liabilities	5,665	5,665	-	-	-		5,665
	98,912	99,996	-	50,629		28,016	34,660
Subordinated debt	779	779	-	-	-		779
Total liabilities	301.136	302,220	_	50,629	_	37,559	227,341

⁽¹⁾ The basis of consolidation used for financial accounting purposes, described in note 1 to the 2019 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.

		a	b	С	d	e
						Items subject $to^{(1)}$:
			Credit risk		' '	Market risk
		Total	framework	framework	risk framework	framework
1	Asset carrying value amount under scope of regulatory consolidation (as per template LI1)	298,922	202,462	1,889	32,959	75,936
2	Liabilities carrying value amount under scope of regulatory consolidation (as per template LI1)	74,879	-	-	50,629	37,559
3	Total net amount under regulatory scope of consolidation	224,043	202,462	1,889	(17,670)	38,377
4	Gross-up for repo-style transactions ⁽²⁾	67,262	-	-	67,262	-
5	Potential future exposures (PFE) ⁽³⁾	9,675	-	_	9,675	-
6	Off-balance sheet amounts ⁽⁴⁾	198,947	51,756	3,045	117,975	-
7	Differences due to different netting rules, other than those already included in row 2 including collateral	7,427	-	_	7,427	-
8	VaR amounts for Securities Financing Transactions (SFTs)	7,137	-	_	7,137	-
9	Differences in valuations	-	-	_	-	-
10	Collateral for SFTs	(165,759)	-	_	(165,759)	_
11	Exposure amounts considered for regulatory purposes ⁽⁵⁾	348,732	254,218	4,934	26,047	38,377

⁽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

			20	20		2019		
			Q2	Q1	Q4	Q3	Q2	Q1
	Γ	Reference ⁽¹⁾						
	Common Equity Tier 1 capital: instruments and reserves							
1	Directly issued qualifying common share capital plus related contributed surplus ⁽²⁾	a + a'	3,074	3,072	3,000	2,967	2,953	2,933
2	Retained earnings	b	10,058	9,556	9,312	9,044	8,889	8,695
3	Accumulated other comprehensive income and other reserves	С	(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		12,995	12,621	12,328	12,092	11,910	11,708
	Regulatory adjustments to Common Equity Tier 1 capital							
7	Prudential valuation adjustments		-	1	_	-	-	_
8	Goodwill (net of related tax liability)	e -w	(1,524)	(1,511)	(1,510)	(1,510)	(1,675)	(1,671)
	Intangible assets other than mortgage-servicing rights	f-x	(1,182)	(1,160)	(1,148)	(1,111)	(1,177)	(1,139)
	Deferred tax assets excluding those arising from temporary differences (net of related tax liability)	g	(31)	_	-	_	-	_
11	Accumulated other comprehensive income related to cash flow hedges	h	313	47	6	(32)	6	(48)
	Shortfall of total provisions to expected losses	i	_	_	_	` _	_	-
	Securitisation gain on sale		_	_	_	_	_	_
	Gains (losses) due to changes in own credit risk on fair valued liabilities	i	(88)	56	24	41	35	(23)
	Defined benefit pension plan assets (net of related tax liability)	k - y	(118)	(7)	(8)	(5)	(7)	(5)
	Investments in own shares (if not already netted off contributed surplus on reported balance sheet)	,	-	_	-	-	-	-
	Reciprocal cross holdings in common equity		_	_	_	_	_	_
	Non-significant investments in capital of banking, financial and insurance entities, net of eligible short positions (amount above							
	10% threshold)	1	_	_	_	_	_	_
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)	""		_		_		
	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability)			_		_		
	Amount exceeding the 15% threshold		_	_	_	_	_	_
23	of which: significant investments in the common stock of financials	n		_	_	_		
24	of which: nortgage servicing rights	"	_	_	_	_	_	_
25	of which: hiorigage servicing rights of which: deferred tax assets arising from temporary differences	0	_	_	_	_	_	_
26	Other deductions or regulatory adjustments to CET1 as determined by OSFI (including regulatory adjustments in respect of own	U	_	_	_	_	_	_
20	use property)		203					
27	Regulatory adjustments applied to Common Equity Tier 1 due to insufficient Additional Tier 1 and Tier 2 to cover deductions		203	_	_	_	_	_
	Total regulatory adjustments to Common equity Tier 1		(2,427)	(2,575)	(2,636)	(2,617)	(2,818)	(2,886)
	Common Equity Tier 1 capital (CET1)		10,568	10,046	9,692	9,475	9,092	8,822
	CET1 with transitional arrangements for ECL provisioning not applied		10,365	10,046	9,692	9,475	9,092	8,822
29a	Additional Tier 1 capital: instruments		10,505	10,046	9,092	9,4/5	9,092	0,022
30	Directly issued qualifying Additional Tier 1 instruments plus related contributed surplus (2)		2,450	2,450	2,450	2,450	2,450	2,450
	of which: classified as equity under applicable accounting standards		2,450	2,450	2,450	2,450	2,450	,
31 32	of which: classified as liabilities under applicable accounting standards	V + Z	2,430	2,450	2,430	2,430	2,400	2,450
	Directly issued capital instruments subject to phase out from Additional Tier 1 ⁽²⁾	P Virginal	350	350	350	350	350	350
		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	_				-	,	2
25	(amount allowed in group AT1)	q	-	-	-	5	4	3
35	of which: instruments issued by subsidiaries subject to phase out		-	-	-	-	-	
	Additional Tier 1 capital before regulatory adjustments		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)

			2020		20		9	
	_		Q2	Q1	Q4	Q3	Q2	Q1
_	F	Reference ⁽¹⁾						
_	Additional Tier 1 capital: regulatory adjustments	=			-	=		
37	Investments in own Additional Tier 1 instruments		-	_	-	-	-	_
38	Reciprocal cross holdings in Additional Tier 1 instruments		-	-	-	-	_	_
39	Non-significant investments in the capital of banking, financial and insurance entities, net of eligible short positions							
	(amount above 10% threshold)		_	_	_	_	_	_
40	Significant investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory							
	consolidation, net of eligible short positions		_	_	_	-	_	_
41	Other deductions from Tier 1 capital as determined by OSFI		_	_	_	-	_	(1)
41a	of which: Reverse mortgages		_	_	_	-	_	(1)
42	Regulatory adjustments applied to Additional Tier 1 due to insufficient Tier 2 to cover deductions		-	_	-	-	_	_
43	Total regulatory adjustments to Additional Tier 1 capital		-	-	-	-	-	(1)
44	Additional Tier 1 capital (AT1)		2,800	2,800	2,800	2,805	2,804	2,802
45	Tier 1 capital (T1 = CET1 + AT1)		13,368	12,846	12,492	12,280	11,896	11,624
45a	Tier 1 Capital with transitional arrangements for ECL provisioning not applied		13,165	12,846	12,492	12,280	11,896	11,624
	Tier 2 capital: instruments and allowances							
	Directly issued qualifying Tier 2 instruments plus related contributed surplus ⁽²⁾	r	750	750	750	750	750	750
	Directly issued capital instruments subject to phase out from Tier 2 ⁽²⁾	r'	10	9	9	9	9	9
48	Tier 2 instruments (and CET1 and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties							
	(amount allowed in group Tier 2)	S	-	-	-	6	5	4
49	of which: instruments issued by subsidiaries subject to phase out		-	-	-	-	-	_
50	Allowances for credit losses	t	308	205	189	183	185	188
51	Tier 2 capital before regulatory adjustments		1,068	964	948	948	949	951
	Tier 2 capital: regulatory adjustments							
	Investments in own Tier 2 instruments		-	-	-	-	-	-
	Reciprocal cross holdings in Tier 2 instruments and Other TLAC-eligible instruments		-	-	-	-	-	-
54	Non-significant investments in the capital of banking, financial and insurance entities and Other TLAC-eligible instruments issued							
	by G-SIBs and Canadian D-SIBs that are outside the scope of regulatory consolidation, where the institution does not own more							
	than 10% of the issued common share capital of the entity (amount above 10% threshold)		(66)	(55)	(74)	(35)	(55)	(28)
54a	[Reporting row for G-SIBs and D-SIBs only] Non-significant investments in the other TLAC-eligible instruments issued by G-SIBs and							
	Canadian D-SIBs, where the institution does not own more than 10% of the issued common share capital of the entity: amount							
	previously designated for the 5% threshold but no longer meets the conditions		(66)	(55)	(74)	(35)	(55)	(28)
55	Significant investments in the capital of banking, financial and insurance entities and Other TLAC-eligible instruments							
	issued by G-SIBs and Canadian D-SIBs that are outside the scope of regulatory consolidation		-	-	-	-	-	-
	Other deductions from Tier 2 capital		_		-		-	
	Total regulatory adjustments to Tier 2 capital		(66)	(55)	(74)	(35)	(55)	(28)
	Tier 2 capital (T2)		1,002	909	874	913	894	923
	Total capital (TC = T1 + T2)		14,370	13,755	13,366	13,193	12,790	12,547
	Total Capital with transitional arrangements for ECL provisioning not applied		14,370	13,755	13,366	13,193	12,790	12,547

⁽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)

		202	20		20:	19	
		Q2	Q1	Q4	Q3	Q2	Q1
_							
	Total risk-weighted assets	92,755	86,206	83,039	80,984	79,008	77,036
	Common Equity Tier 1 Capital RWA (CET1)	92,755	86,206	83,039	80,984	79,008	77,036
	Tier 1 Capital RWA	92,755	86,206	83,039	80,984	79,008	77,036
60c	Total capital RWA	92,755	86,206	83,039	80,984	79,008	77,036
	Capital ratios		=0/	0/			
	Common Equity Tier 1 (as a percentage of risk weighted assets)	11.4%	11.7%	11.7%	11.7%	11.5%	11.5%
	CET1 Ratio with transitional arrangements for ECL provisioning not applied	11.2%	11.7%	11.7%	11.7%	11.5%	11.5%
62	Tier 1 (as a percentage of risk weighted assets)	14.4%	14.9%	15.0%	15.2%	15.1%	15.1%
	Tier 1 Capital Ratio with transitional arrangements for ECL provisioning not applied	14.2%	14.9%	15.0%	15.2%	15.1%	15.1%
63	Total capital (as a percentage of risk weighted assets)	15.5%	16.0%	16.1%	16.3%	16.2%	16.3%
	Total Capital Ratio with transitional arrangements for ECL provisioning not applied	15.5%	16.0%	16.1%	16.3%	16.2%	16.3%
64	Institution-specific buffer requirement (minimum CET1 requirement plus capital conservation buffer plus G-SIB buffer requirement	0.00/	0.00/	0.00/	0.00/	0.00/	0.00/
	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%
65	of which: capital conservation buffer requirement	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%
67	of which: G-SIB buffer requirement	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%
68	Common Equity Tier 1 available to meet buffers (as a percentage of risk weighted assets)	11.4%	11.7%	11.7%	11.7%	11.5%	11.5%
- (0	OSFI target (minimum + capital conservation buffer + D-SIB buffer)(1)	0.00/	0.00/	0.00/	0.00/	0.00/	0.00/
	Common Equity Tier 1 all-in target ratio	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%
71	Total capital all-in target ratio	11.5%	11.5%	11.5%	11.5%	11.5%	11.5%
70	Amounts below the thresholds for deduction (before risk weighting)	200	/2/	527	520	554	5.40
72	Non-significant investments in the capital and other TLAC-eligible instruments of other financials entities	390	436	527	530	551	549
	Significant investments in the common stock of financials Mortgage servicing rights (net of related tax liability)	354	340	318	339	301	287
	Deferred tax assets arising from temporary differences (net of related tax liabilities)	114	204	171	154	37	- 42
75	Applicable caps on the inclusion of allowances in Tier 2	114	204	171	154	37	42
7.0	Allowance eligible for inclusion in Tier 2 in respect of exposures subject to standardised approach (prior to application of cap)	122	92	0.1	71	71	70
	Cap on inclusion of allowances in Tier 2 in respect of exposures subject to standardised approach (prior to application of cap)	123 159	139	81 118	103	102	70 97
77							
78	Allowance eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (IRB) (prior to application of cap) Cap on inclusion of allowances in Tier 2 under internal ratings-based approach	185 384	113 354	108 347	112 345	114 336	118 326
79		384	354	347	345	336	326
- 00	Capital instruments subject to phase-out arrangements (only applicable between January 1, 2013 and January 1, 2022) Current cap on CET1 instruments subject to phase out arrangements			I	I	I	
80 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	581	581	581	- 581
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	367	20/	201	201	201	201
84	Current cap on T2 instruments subject to phase out arrangements	- 476	- 476	715	715	715	715
	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	4/6	4/6	/15	/15	/15	/15
00	Amount excluded from 12 due to cap texcess over cap after redemptions and maturities)					-	

(1) Do not include the domestic stability buffer.

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

	Q2 2020			
	Cross - Reference to		Under scope of regulatory	
	Definition of Capital ⁽²⁾	As in Report to Shareholders	consolidation	
Assets				
Cash and deposits with financial institutions		27,800	27,800	
Securities		84,667	95,856	
Non-significant investments in capital of other financial institutions reflected in regulatory capital	l	-	-	
Other securities		84,667	95,856	
Assets purchased under reverse repurchase agreements and securities borrowed		17,710	16,898	
Loans				
Residential mortgage		60,216	33,783	
Personal		36,879	36,879	
Credit card		1,901	1,901	
Business and government		57,723	57,723	
Customers' liability under acceptances		7,042	7,042	
Less: Allowances for credit losses		(1,033)	(308)	
Allowance reflected in Tier 2 regulatory capital	t	-	(308)	
Shortfall of allowances to expected loss	i	-	-	
Allowances not reflected in regulatory capital		-	(725)	
Other assets				
Derivative financial instruments		15,747	16,061	
Other		8,298	8,140	
Goodwill	е	-	1,524	
Intangibles assets	f	-	1,444	
Deferred tax assets		-	805	
Deferred tax assets excluding those arising from temporary differences	g	-	31	
Deferred tax assets arising from temporary differences exceeding regulatory thresholds	0	-	-	
Deferred tax assets - realize through loss carrybacks		-	660	
Deferred tax assets - other temporary differences		-	114	
Defined-benefit pension fund net assets	k	-	160	
Significant investments in other financial institutions		_	354	
Significant investments exceeding regulatory thresholds	m + n	-	_	
Significant investments not exceeding regulatory thresholds		-	354	
Other		_	3,853	
Total assets		316,950	301,775	

⁽¹⁾ The basis of consolidation used for financial accounting purposes, described in note 1 to the 2019 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 \$175 million and \$17 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)

		Q2 2020	
	Cross - Reference to	<u></u>	Under scope of regulatory
	Definition of Capital (2)	As in Report to Shareholders	consolidation
Liabilities	•	•	
Deposits		201,445	201,445
Derivatives financials instruments		15,200	16,998
Other liabilities		83,712	82,998
Gains and losses due to changes in own credit risk on fair value liabilities	j	-	88
Deferred tax liabilities	·	-	-
Related to goodwill	w	-	-
Related to intangibles	x	-	262
Related to pensions	у	-	42
Other deferred tax liabilities		-	(304)
Other		-	82,910
Subordinated debt		779	779
Regulatory capital amortization of maturing debentures		-	-
Fair value adjustment and unamortized issuance cost		-	19
Subordinated debentures not allowed for regulatory capital	s	-	-
Subordinated debentures used for regulatory capital		-	760
Allowed for inclusion in Tier 2 capital	r	-	750
Subject to phase out	r'	_	10
Total liabilities		301,136	302,220
Equity Attributable to Shareholders		15,445	15,445
Common shares	a	-	3,028
Contributed surplus	a'	-	46
Retained earnings	b	-	10,058
Accumulated Other Comprehensive Income (loss)	С	-	(137)
Net gains (losses) on instruments designated as cash flow hedges	h	-	(313)
Net foreign currency translation adjustments		-	119
Other		-	57
Preferred shares		-	2,450
of which: are qualifying	v	-	2,450
of which: are subject to phase out	v'	-	-
Non-controlling interest		369	359
Innovative instruments		-	359
of which: are qualifying		-	-
of which: are subject to phase out	p'	-	350
Other		-	9
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		15,814	15,804
Total Liabilities and Equity (1) The basis of consolidation used for financial accounting purposes, described in note 1 to the 2019 Annual Penort audited consolidated financial statements, may differ fi		316,950	318,024

⁽¹⁾ The basis of consolidation used for financial accounting purposes, described in note 1 to the 2019 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 \$175 million and \$17 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)

		20	20		20	19	-
		Q2	Q1	Q4	Q3	Q2	Q1
	Regulatory capital elements of TLAC and adjustments						_
1	Common Equity Tier 1 capital (CET1)	10,568	10,046	9,692	9,475	9,092	8,822
2	Additional Tier 1 capital (AT1) before TLAC adjustments	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	_	_	_	_	_	(1)
5	AT1 instruments eligible under the TLAC framework	2,800	2,800	2,800	2,805	2,804	2,802
6	Tier 2 capital (T2) before TLAC adjustments	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	(66)	(55)	(74)	(35)	(55)	(28)
10	T2 instruments eligible under the TLAC framework	1,002	909	874	913	894	923
11	TLAC arising from regulatory capital	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	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	5,882	6,259	3,467	2,185	1,196	-
	Non-regulatory capital elements of TLAC: adjustments						
18	TLAC before deductions	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	(80)	(71)	(7)	_	(9)	_
21	Other adjustments to TLAC	_	_	_	_	_	_
22	TLAC available after deductions	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	92,755	86,206	83,039	80,984	79,008	77,036
24	Leverage exposure measure	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)	21.7%	23.1%	20.3%	19.0%	17.7%	16.3%
26	TLAC Leverage ratio (as a percentage of leverage exposure)	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.
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%
29	Of which: capital conservation buffer	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⁾ 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⁾

				Q2 2	020					Q1 2	020		
				Creditor ranking	g		Sum (1 to 5)			Creditor ranking	g		Sum (1 to 5)
		1			4 ⁽²⁾	5 ⁽³⁾		1			4 ⁽²⁾	5 ⁽³⁾	
		Most junior	2	3	Most	senior		Most junior	2	3	Most	senior	
		Common		Subordinated		Other liabilities excluding		Common		Subordinated		Other liabilities excluding	5
1	Description of creditor ranking	shares	shares	debt	Bail-in debt	Bail-in debt		shares	shares	debt	Bail-in debt	t Bail-in debt	i
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 \geq 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	ı	_	_	5,478	3,028	2,450	_	_	_	5,478

				Q4 2	019					Q3 2	019		
			(Creditor ranking	g		Sum (1 to 5)			Creditor ranking	g		Sum (1 to 5)
		1			4 ⁽²⁾	5 ⁽³⁾		1			4 ⁽²⁾	5 ⁽³⁾	
		Most junior	2	3	Most	senior		Most junior	2	3	Most	senior	
		Common	Preferred	Subordinated		Other liabilities excluding		Common	Preferred	Subordinated		Other liabilities excluding	
1	Description of creditor ranking	shares	shares	debt	Bail-in debt	Bail-in debt		shares	shares	debt	Bail-in debt	Bail-in debt	
2	Total capital and liabilities net of credit risk mitigation	2,949	2,450	759	3,467	-	9,625	2,914	2,450	759	2,185	-	8,308
3	Subset of row 2 that are excluded liabilities	-	-	ı	7	-	7	-	_	-	-	-	_
4	Total capital and liabilities less excluded liabilities (row 2 minus row 3)	2,949	2,450	759	3,460	ı	9,618	2,914	2,450	759	2,185	_	8,308
5	Subset of row 4 that are potentially eligible as TLAC	2,949	2,450	759	3,460	-	9,618	2,914	2,450	759	2,185	_	8,308
6	Subset of row 5 with 1 year ≤ residual maturity < 2 years	-	-	-	682	-	682	-	-	-	682	_	682
7	Subset of row 5 with 2 years ≤ residual maturity < 5 years	-	-	-	2,778	-	2,778	-	-	-	1,503	_	1,503
8	Subset of row 5 with 5 years ≤ residual maturity < 10 years	-	-	750	-	-	750	-	-	750	-	_	750
9	Subset of row 5 residual maturity \geq 10 years, but excluding perpetual securities	-	-	9	_	-	9	-	-	9	_	-	9
10	Subset of row 5 that is perpetual securities	2,949	2,450	_	_	_	5,399	2,914	2,450	_	_	_	5,364

⁽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

		20	20		20	19	
		Q2	Q1	Q4	Q3	Q2	Q1
	Accounting assets vs. leverage ratio exposure						
1	Total consolidated assets as per published financial statements	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	34	25	3	28	4	(3)
3	Adjustment for securitized exposures that meet the operational requirements for the recognition of risk transference ⁽¹⁾	(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⁾	(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⁾	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)	24,833	24,555	24,141	23,436	22,940	23,050
8	Other adjustments	(37,187)	(4,376)	(4,840)	(4,210)	(4,134)	(4,571)
9	Leverage Ratio Exposure	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

		20	20		20	19	
		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)	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)	(3,509)	(1,740)	(2,120)		(1,113)	
4	(Asset amounts deducted in determining Basel III Tier 1 capital)	(2,855)	(2,631)		(2,659)	(2,852)	
5	Total on-balance sheet exposures (excluding derivatives and SFTs) (sum of rows 1 to 4)	246,302	263,288	249,872	248,792	239,619	235,557
	Derivative exposures	1					
6	Replacement cost associated with all derivative transactions (where applicable net of eligible cash variation margin and/or with bilateral netting)	6,373	3,408	2,868	3,095	3,007	2,483
7	Add-on amounts for PFE associated with all derivative transactions	9,290	11,995	11,115	10,638	10,058	8,463
8	(Exempted CCP leg of client-cleared trade exposures)	_	-	-	-	-	-
	Adjusted effective notional amount of written credit derivatives	21	20	19	20	23	20
	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	-	_	-	-	-	
11	Total derivative exposures (sum of rows 6 to 10)	15,684	15,423	14,002	13,753	13,088	10,966
	Securities financing transaction exposures	1					12.162
	Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions	17,710	11,689	17,723	13,928	17,193	15,162
	(Netted amounts of cash payables and cash receivables of gross SFT assets)	(2,301)	(520)	(1,038)		(662)	(2,063)
	CCR exposure for SFTs assets	4,158	5,274	4,202	4,935	3,940	3,983
	Agent transaction exposures	- 40.545	-		- 47.000		47.000
16	Total securities financing transaction exposures (sum of rows 12 to 15)	19,567	16,443	20,887	17,980	20,471	17,082
17	Other off-balance sheet exposures Off-balance sheet exposure at gross notional amount	80,508	76,692	75 550	72,873	71,962	71,491
	(Adjustments for conversion to credit equivalent amounts)	(55,675)	(52,137)	75,558 (51,417)			, ,
	Off-balance sheet items (sum of rows 17 and 18)	24.833	24,555	24,141	23,436	22,940	23,050
15	Capital and Total Exposures	24,033	24,555	24,141	23,430	22,940	23,030
20	Tier 1 capital	13,368	12,846	12,492	12,280	11,896	11,624
	Tier 1 Capital with transitional arrangements for ECL provisioning not applied	13,165	12,846	12,492	12,280	11,896	11,624
	Total Exposures (sum of rows 5, 11, 16 and 19)	306,386	319,709	308,902	303,961	296,118	286,655
	Leverage Ratio	223,500	2 - 2 , 7 0 2	223,302	222,202		
22	Basel III leverage ratio	4.4%	4.0%	4.0%	4.0%	4.0%	4.1%
	Basel III leverage ratio with transitional arrangements for ECL provisioning not applied	4.3%	4.0%	4.0%	4.0%	4.0%	4.1%
-2u	peases in teretage take that dansidonal arrangements for EEE profisioning not applied	4.570	4.070	4.070	4.070	4.070	4.170

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.

					Q2 2020							Q1 2020			
		a	b	С	d	e	f	g	a	b	С	d	e	f	g
					Of which ECL ac	counting provisions	Of which ECL					Of which ECL ac	counting provisions	Of which ECL	
		Gross carryin	ig values ⁽²⁾ of		for credit losses	s on SA exposures ⁽⁵⁾	accounting		Gross carryin	ng values ⁽²⁾ of		for credit losse	s on SA exposures ⁽⁵⁾	accounting	
				Allowances	Allocated in	Allocated in	provisions				Allowances	Allocated in	Allocated in	provisions	
				for	regulatory	regulatory	for credit				for	regulatory	regulatory	for credit	
		Default	Non-default	credit	category	category	losses on IRB	Net values	Default	Non-default	credit	category	category	losses on IRB	
		exposures ⁽³⁾	exposures	losses ⁽⁴⁾	of Specific	of General	exposures ⁽⁵⁾	(a+b-c)	exposures ⁽³⁾	exposures	losses ⁽⁴⁾	of Specific	of General	exposures ⁽⁵⁾	(a+b-c)
1	Loans ⁽⁶⁾	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 ⁽⁷⁾	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

					Q4 2019							Q3 2019			
		a	b	С	d	e	f	g	a	b	С	d	e	f	g
					Of which ECL ac	counting provisions	Of which ECL					Of which ECL ac	counting provisions	Of which ECL	
		Gross carryin	ng values ⁽²⁾ of		for credit losse	s on SA exposures ⁽⁵⁾	accounting		Gross carryin	ng values ⁽²⁾ of		for credit losse	s on SA exposures ⁽⁵⁾	accounting	
				Allowances	Allocated in	Allocated in	provisions				Allowances	Allocated in	Allocated in	provisions	
				for	regulatory	regulatory	for credit				for	regulatory	regulatory	for credit	
		Default	Non-default	credit	category		losses on IRB			Non-default		category	- ,	losses on IRB	
		exposures ⁽³⁾	exposures	losses ⁽⁴⁾	of Specific	of General	exposures ⁽⁵⁾	(a+b-c)	exposures ⁽³⁾	exposures	losses ⁽⁴⁾	of Specific	of General	exposures ⁽⁵⁾	(a+b-c)
1	Loans ⁽⁶⁾	656	137,240	680	22	32	626	137,216	636	133,921	688				133,869
2	Debt Securities	-	21,740	1	-	-	1	21,739	_	18,382	1				18,381
3	Off-balance-sheet commitments ⁽⁷⁾	25	72,829	74	_	2	72	72,780	14	70,027	76				69,965
4	Total	681	231,809	755	22	34	699	231,735	650	222,330	765				222,215

⁽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⁾ Following the BCBS Technical Amendments to Pillar 3 disclosure requirements and as required by OSFI, allowance for credit losses granularity is presented on a prospective basis, starting Q4 2019.

⁽⁶⁾ Including deposits with financial institutions.

⁽⁷⁾ 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.

		Q2 2020	Q1 2020	Q4 2019	Q3 2019	Q2 2019
		a	a	a	a	a
1	Defaulted loans ⁽¹⁾ and debt securities at beginning	653	656	636	596	572
2	Loans and debt securities that have defaulted since the last reporting period	267	245	255	246	200
3	Returned to non-defaulted status since the last reporting period	(26)	(35)	(32)	(48)	(32)
4	Amounts written off	(74)	(85)	(108)	(78)	(80)
5	Other changes ⁽²⁾	(60)	(128)	(95)	(80)	(64)
6	Defaulted loans ⁽¹⁾ and debt securities at end	760	653	656	636	596

⁽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.

				Q2 2020					Q1 2020		
		a	b1	b	d	f	a	b1	b	d	f
		Exposures	Exposures subject		Exposures secured	Exposures secured	Exposures	Exposures subject		Exposures secured	Exposures secured
		unsecured:	to risk mitigation	Exposures secured	by financial	by credit	unsecured:	to risk mitigation	Exposures secured	by financial	by credit
		carrying amount ⁽¹⁾	techniques ⁽¹⁾	by collateral	guarantees	derivatives	carrying amount ⁽¹⁾	techniques ⁽¹⁾	by collateral	guarantees	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	_

				Q4 2019					Q3 2019		
		a	b1	b	d	f	a	b1	b	d	f
		Exposures	Exposures subject		Exposures secured	Exposures secured	Exposures	Exposures subject		Exposures secured	Exposures secured
		unsecured:	to risk mitigation	Exposures secured	by financial	by credit	unsecured:	to risk mitigation	Exposures secured	by financial	by credit
		carrying amount ⁽¹⁾	techniques ⁽¹⁾	by collateral	guarantees	derivatives	carrying amount ⁽¹⁾	techniques ⁽¹⁾	by collateral	guarantees	derivatives
1	Loans ⁽²⁾	74,199	63,670	61,023	2,516	-	70,646	63,885	58,392	5,388	_
2	Debt securities	21,740	1	_	1	_	18,382	1	_	_	_
3	Total	95,939	63,670	61,023	2,516	_	89,028	63,885	58,392	5,388	-
4	Of which defaulted	388	207	178	27	_	339	227	195	30	_

⁽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)

						20	20								2	019		
			1	Q2					1	Q1					1	Q4		
									EAD - Gros	s Exposure ⁽¹⁾								
					Derivatives						Derivatives						Derivatives	
		Undrawn		Repo-style				Undrawn		Repo-style				Undrawn		Repo-style		
<u></u>	Drawn	commitments	Other	transactions	instruments	Total	Drawn	commitments	Other	transactions	instruments	Total	Drawn	commitments	Other	transactions	instruments	Total
Non-Retail Portfolio																		
Agriculture	5,638	385	5	_	_	6,028	5,574	332	4	-	-	5,910	5,437	337	4	-	_	5,778
Oil & Gas and Pipelines	5,546	3,301	302	_	_	9,149	4,248	3,570	315	-	-	8,133	4,326	3,601	284	-	_	8,211
Oil and Gas	2,938	1,768	146	-	-	4,852	2,580	2,096	142	-	-	4,818	2,799	2,070	143	-	-	5,012
Pipelines & Other	2,608	1,533	156	-	-	4,297	1,668	1,474	173	-	-	3,315	1,527	1,531	141	-	-	3,199
Mining	1,192	855	178	-	_	2,225	663	1,101	172	_	-	1,936	669	1,081	159	-	_	1,909
Utilities	4,496	3,301	1,136	-	_	8,933	3,976	2,932	916	_	-	7,824	3,807	2,435	775	-	_	7,017
Construction Non-Real Estate ⁽²⁾	1,078	1,500	67	-	_	2,645	1,093	1,208	71	-	-	2,372	1,387	1,188	87	-	_	2,662
Manufacturing	6,571	2,120	339	-	_	9,030	6,266	2,152	315	-	-	8,733	6,250	2,036	217	-	_	8,503
Wholesale	2,257	831	47	-	_	3,135	2,203	771	46	-	-	3,020	2,137	851	47	-	_	3,035
Retail	3,657	886	41	-	_	4,584	3,203	1,170	53	-	-	4,426	3,202	1,172	47	-	_	4,421
Transportation	1,821	980	74	184	_	3,059	1,623	937	71	242	-	2,873	1,694	845	80	39	_	2,658
Communications	1,578	791	203	-	_	2,572	1,379	883	200	-	-	2,462	1,553	936	200	-	_	2,689
Finance and Insurance	32,469	4,106	1,088	138,269	1,398	177,330	30,697	4,174	1,103	148,504	1,864	186,342	34,318	4,102	1,335	138,430	1,982	180,167
Real Estate and Construction																		1
Real Estate ⁽³⁾	12,101	3,074	217	-	-	15,392	11,884	3,065	209	_	-	15,158	11,083	2,961	247	-	-	14,291
Professional Services	1,892	704	326	-	-	2,922	1,681	779	386	_	-	2,846	1,624	760	363	-	-	2,747
Education & Health Care	3,628	1,203	7	1	_	4,839	3,268	1,148	7	2	-	4,425	3,393	1,150	7	1	_	4,551
Other Services	6,302	1,425	453	-	_	8,180	5,782	1,375	450	-	-	7,607	4,880	1,248	398	-	_	6,526
Government	22,461	1,588	3	35,429	125	59,606	9,614	1,520	3	18,511	154	29,802	9,127	1,437	3	15,320	175	26,062
Other	10,031	44	817	1,760	_	12,652	8,608	46	771	1,388	_	10,813	6,966	34	627	1,365	_	8,992
Total – Non-retail(4)	122,718	27,094	5,303	175,643	1,523	332,281	101,762	27,163	5,092	168,647	2,018	304,682	101,853	26,174	4,880	155,155	2,157	290,219

⁽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)

									2	019								
			(Q3						Q2						Q1		
									EAD - Gros	s Exposure ⁽¹⁾								
					Derivatives						Derivatives						Derivatives	
		Undrawn		Repo-style	financial			Undrawn		Repo-style	financial			Undrawn		Repo-style		
	Drawn	commitments	Other	transactions	instruments	Total	Drawn	commitments	Other	transactions	instruments	Total	Drawn	commitments	Other	transactions	instruments	Total
Non-Retail Portfolio																		
Agriculture	5,294	327	4	-	-	5,625	5,080	316	4	_	-	5,400	4,919	288	4	-	-	5,211
Oil & Gas and Pipelines	4,249	3,554	283	-	-	8,086	3,974	3,557	275	-	-	7,806	4,445	3,402	253	-	-	8,100
Oil and Gas	2,819	2,194	143	-	-	5,156	2,659	2,158	147	-	-	4,964	2,792	2,035	147	-	-	4,974
Pipelines & Other	1,430	1,360	140	-	-	2,930	1,315	1,399	128	_	-	2,842	1,653	1,367	106	-	-	3,126
Mining	770	917	153	-	-	1,840	687	937	135	_	_	1,759	915	976	146	-	-	2,037
Utilities	3,444	2,274	786	-	-	6,504	3,672	2,169	790	_	_	6,631	3,239	1,910	774	-	-	5,923
Construction Non-Real Estate ⁽²⁾	1,442	983	102	-	-	2,527	1,393	867	118	_	-	2,378	1,215	585	109	-	-	1,909
Manufacturing	6,086	2,101	207	-	-	8,394	5,878	2,151	218	_	-	8,247	5,294	1,999	217	-	-	7,510
Wholesale	2,217	739	54	-	-	3,010	2,593	603	56	_	-	3,252	2,092	700	55	-	-	2,847
Retail	3,214	1,259	45	-	-	4,518	3,333	1,162	44	_	-	4,539	3,349	1,018	46	-	-	4,413
Transportation	1,581	750	74	14	-	2,419	1,537	775	71	8	-	2,391	1,514	1,066	69	19	-	2,668
Communications	1,634	856	200	-	-	2,690	1,394	882	627	_	-	2,903	1,560	816	819	-	-	3,195
Finance and Insurance	32,076	4,069	1,582	135,303	1,676	174,706	29,384	3,706	1,573	113,243	1,572	149,478	32,646	3,665	1,444	105,098	3,418	146,271
Real Estate and Construction																		
Real Estate ⁽³⁾	11,198	2,889	250	-	-	14,337	11,092	2,813	236	_	-	14,141	10,484	2,747	244	-	-	13,475
Professional Services	1,809	683	356	-	-	2,848	1,668	623	354	_	-	2,645	1,519	774	360	_	_	2,653
Education & Health Care	3,352	1,318	8	1	-	4,679	3,242	1,401	8	2	-	4,653	3,326	1,318	7	2	-	4,653
Other Services	4,691	1,313	381	6	-	6,391	4,420	1,406	356	_	-	6,182	4,497	1,473	348	15	_	6,333
Government	7,795	1,322	3	16,780	205	26,105	7,561	1,353	3	15,269	197	24,383	7,617	1,438	3	20,389	232	29,679
Other	4,828	33	342	1,056	-	6,259	4,726	33	287	1,268	ı	6,314	3,839	32	482	822	-	5,175
Total – Non-retail ⁽⁴⁾	95,680	25,387	4,830	153,160	1,881	280,938	91,634	24,754	5,155	129,790	1,769	253,102	92,470	24,207	5,380	126,345	3,650	252,052

⁽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⁾

						20	20								20	19		
			Q	2					Q	1					Q	4		
	Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾				Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾				Drawn	Undrawn commitments	Repo-style transactions ⁽²⁾		off-balance	:
Greece	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	_	-
Ireland	82	20	35	10	-	147	70	23	580	1	3	677	71	22	690	1	_	784
Italy	-	1	-	-	3	4	-	1	-	-	_	1	-	1	-	-	1	2
Portugal	-	-	-	-	-	_	-	-	-	-	31	31	-	-	_	-	-	_
Spain	20	30	716	1	31	798	4	36	1,965	11	ı	2,016	1	38	33	1	39	112
Total GIIPS	102	51	751	11	34	949	74	60	2,545	12	34	2,725	72	61	723	2	40	898
France	40	80	7,082	133	358	7,693	87	77	10,539	104	318	11,125	25	76	2,527	-	52	2,680
Germany	179	29	-	32	27	267	168	32	-	28	28	256	175	34	-	30	27	266
United Kingdom	1,973	2	33,668	2,062	3	37,708	1,233	44	27,996	3,147	1	32,421	872	15	27,374	2,125	1	30,387
Other Europe	216	154	3,789	423	2	4,584	184	20	6,626	512	18	7,360	118	22	2,696	210	9	3,055
Total – Credit Risk ⁽⁴⁾	2,510	316	45,290	2,661	424	51,201	1,746	233	47,706	3,803	399	53,887	1,262	208	33,320	2,367	129	37,286

			Net Repo-Style										Net Repo-Style		
			transactions and	Other				Net Repo-Style	Other				transactions and	Other	ı
Adjustment to exposure		Undrawn	derivatives financial	off-balance			Undrawn	transactions and financial	off-balance			Undrawn	derivatives financial	off-balance	ı
for collateral	Drawn	commitments	instruments	sheet items(3)	Total	Drawn	commitments	instruments derivatives	sheet items(3)	Total	Drawn	commitments	instruments	sheet items(3)	Total
Total – Net Credit Risk ⁽⁴⁾	2,510	316	1,549	424	4,799	1,746	233	1,695	399	4,073	1,262	208	1,267	129	2,866

						-	-		20	19	-	-						
			Q	3					Q	2					Q	1		
				Derivatives	Other					Derivatives	Other					Derivatives	Other	
		Undrawn	Repo-style					Undrawn	Repo-style				١.	Undrawn				
1	Drawn	commitments	transactions ⁽²⁾	Instruments	sheet items(3)	Total	Drawn	commitments	transactions ⁽²⁾	Instruments	sheet items(3)	Total	Drawn	commitments	transactions(2)	Instruments	sheet items(3)	Total
Greece	-	-	-	-	-	-	-	-	-	-	-	_	-	-	-	-	-	-
Ireland	72	20	252	1	-	345	61	37	257	_	_	355	52	22	317	-	1	392
Italy	-	1	-	-	1	2	-	_	-	-	2	2	-	_	-	-	-	-
Portugal	-	_	_	-	_	-	-	_	-	_	_	_	-	_	-	-	40	40
Spain	_	38	_	2	38	78	_	-	14	-	40	54	1	-	14	-	-	15
Total GIIPS	72	59	252	3	39	425	61	37	271	-	42	411	53	22	331	ı	41	447
France	22	98	1,706		51	1,877	25	52	1,325	1	49	1,452	22	36	1,349	1	29	1,437
Germany	166	10	_	35	-	211	152	44	19	28	23	266	148	45	-	24	253	470
United Kingdom	495	3	27,546	1,960	1	30,005	513	21	17,154	1,722	1	19,411	786	-	16,612	941	4	18,343
Other Europe	218	22	2,939	227	11	3,417	118	3	1,999	176	11	2,307	100	4	1,643	169	9	1,925
Total – Credit Risk ⁽⁴⁾	973	192	32,443	2,225	102	35,935	869	157	20,768	1,927	126	23,847	1,109	107	19,935	1,135	336	22,622

			Net Repo-Style					Net Repo-Style					Net Repo-Style		
			transactions and	Other				transactions and	Other				transactions and	Other	i
Adjustment to exposure		Undrawn	derivatives financial	off-balance			Undrawn	derivatives financial	off-balance			Undrawn	derivatives financial	off-balance	1
for collateral	Drawn	commitments	instruments	sheet items(3)	Total	Drawn	commitments	instruments	sheet items(3)	Total	Drawn	commitments	instruments	sheet items(3)	Total
Total – Net Credit Risk(4)	973	192	750	102	2,017	869	157	671	126	1,823	1,109	107	587	336	2,139

⁽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.

				Q2 2020						Q1 2020	Ö		
		a	b	С	d	e	f	a	b	С	d	e	f
		Exposures befo	re CCF and CRM	Exposures po	st-CCF and CRM			Exposures befo	re CCF and CRM	Exposures po	st-CCF and CRM		
		On-balance	Off-balance	On-balance	Off-balance		RWA	On-balance	Off-balance	On-balance	Off-balance		RWA
	Assets classes	sheet amount	sheet amount	sheet amount	sheet amount	RWA	density	sheet amount	sheet amount	sheet amount	sheet amount	RWA	density
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%

				Q4 2019						Q3 2019			
		a	b	С	d	e	f	a	b	С	d	e	f
		Exposures befo	re CCF and CRM	Exposures po	st-CCF and CRM			Exposures befo	re CCF and CRM	Exposures po	st-CCF and CRM		
		On-balance	Off-balance	On-balance	Off-balance		RWA	On-balance	Off-balance	On-balance	Off-balance		RWA
	Assets classes	sheet amount	sheet amount	sheet amount	sheet amount	RWA	density	sheet amount	sheet amount	sheet amount	sheet amount	RWA	density
1	Sovereigns and their central banks	1,654	49	1,654	_	_	0%	1,444	49	1,444	_	496	34%
2	Non-central government public sector entities	-	-	_	_	-	0%	-	_	_	_	-	0%
3	Multilateral development banks	95	_	95	_	_	0%	95	_	95	_	_	0%
4	Financial institutions	1,922	2,507	1,922	129	615	30%	667	2,583	667	237	452	50%
5	Securities firms	_	_	-	-	-	0%	-	-	-	_	-	0%
6	Corporates	3,575	972	3,575	250	2,624	69%	3,058	645	3,058	109	1,986	63%
7	Regulatory retail portfolios	4,580	1,550	4,580	309	2,843	58%	4,821	92	4,821	18	1,987	41%
8	Secured by residential property	5,137	82	5,137	32	1,927	37%	4,782	38	4,782	19	1,802	38%
9	Secured by commercial real estate	136	_	136	_	136	100%	118	_	118	_	118	100%
10	Equity	-	_	_	_	_	0%	-	-	-	-	_	0%
11	Past-due loans	34	5	34	-	23	68%	35	3	35	_	24	69%
12	Higher-risk categories	4	_	4	_	6	150%	4	-	4	-	6	150%
13	Other assets ⁽²⁾	3,372	_	3,372	_	2,255	67%	2,836	-	2,836	-	2,040	72%
14	Total	20,509	5,165	20,509	720	10,429	49%	17,860	3,410	17,860	383	8,911	49%

⁽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).

						Q2	2020									Q1	2020				
		a	b	С	d	е	f	g	h	i	j	a	b	С	d	е	f	g	h	i	j
	Risk weight	0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount ⁽²⁾		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

						Q4	2019									Q3	2019				
		a	b	С	d	е	f	g	h	i	j	a	b	С	d	е	f	g	h	i	j
	Risk weight Asset classes	0%	10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount ⁽²⁾		10%	20%	35%	50%	75%	100%	150%	Others	Total credit exposures amount ⁽²⁾
1	Sovereigns and their central banks	1,654	_	_	-	-	-	-	_	_	1,654	948	_	_	_	-	_	496	-	-	1,444
2	Non-central government public sector entities	_	-	_	_	_	_	-	_	_	_	-	-	_	_	_	_	_	-	_	-
3	Multilateral development banks	95	-	_	_	_	_	_	_	_	95	95	-	-	_	_	_	_	_	_	95
4	Financial institutions	-	-	1,795	_	_	_	256	_	_	2,051	-	-	564	_	_	_	340	_	_	904
5	Securities firms	-	-	_	_	-	_	-	-	-	_	-	-	-	_	-	_	_	-	_	-
6	Corporates	1,202	-	_	_	_	_	2,623	_	_	3,825	1,181	-	-	_	_	_	1,986	_	_	3,167
7	Regulatory retail portfolios	1,099	-	_	_	_	3,790	_	_	_	4,889	2,191	_	-	_	_	2,648	_	_	_	4,839
8	Secured by residential property	686	-	_	3,607	9	829	38	_	_	5,169	678	_	-	3,244	9	833	37	_	_	4,801
9	Secured by commercial real estate	-	-	_	_	-	_	136	_	_	136	-	_	-	_	-	_	118	_	_	118
10	Equity	-	-	-	_	_	_	-	_	_	-	-	-	-	-	_	_	_	-	_	-
11	Past-due loans	12	-	_	_	-	_	21	1	_	34	11	_	-	_	-	_	23	1	_	35
12	Higher-risk categories	-	-	_	_	-	_	_	4	_	4	-	_	-	_	-	_	_	4	_	4
13	Other assets ⁽³⁾	704	_	515	_	-	_	2,153	_	_	3,372	657	_	174	_	-	_	2,005	_	_	2,836
14	Total	5,452	-	2,310	3,607	9	4,619	5,227	5	-	21,229	5,761	-	738	3,244	9	3,481	5,005	5	-	18,243

⁽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.

							Q2 2020						
		a	b	С	d	e	f	g	h	i	j	k	l
		•	Off-balance sheet										
	PD scale ⁽¹⁾	balance sheet	exposures pre CCF ⁽²⁾	Average CCF ⁽³⁾	EAD post CRM and post-CCF	A DD(4)	Number of obligors ⁽⁵⁾	Average LGD ⁽⁶⁾	Average maturity ⁽⁷⁾	RWA ⁽⁸⁾	RWA density ⁽⁹⁾	EL ⁽¹⁰⁾	Allowances for credit losses
		gross exposure	pre ccr.			Average PD ⁽⁴⁾			maturity		1.1%	EL. "	credit losses
Residential Mortgages		795 265	_	0% 0%	795	0.08%	53,284 17,070	5.5%		9		_	
	0.15 to < 0.25 0.25 to < 0.50	359	_	0%	265 359	0.19% 0.37%	17,070	5.3% 4.4%		10	2.2% 2.9%	_	
	0.50 to < 0.75	217	_	0%	217	0.57%	8,669	4.4%		8	3.8%	_	
	0.75 to < 2.50	366	_	0%	366	1.28%	13,720	3.6%		21	5.5%	_	
	2.50 to < 10.00	127	_	0%	127	4.78%	4,482	3.6%		13	10.3%	_	
	10.00 to < 100.00	80	_	0%	80	29.54%	2,070	2.8%		13	16.7%	1	
	100.00 (Default)	43	_	0%	43	100.00%	2,070 599	2.7%		5	10.7%	1	
	Sub-total	2,252	_	0%	2,252	3.62%	119,076	4.5%		85	3.8%	2	6
Residential Mortgages		24,164	14,621	49%	31,375	0.07%	195,656	19.6%		1,119	3.6%	4	
	0.15 to < 0.25	6,806	1,195	65%	7,580	0.19%	32,369	21.4%		682	9.0%	3	
	0.25 to < 0.50	7,093	1,134	72%	7,906	0.35%	30,853	21.9%		1,085	13.7%	6	
	0.50 to < 0.75	2,625	235	70%	2,789	0.61%	10,867	22.2%		585	21.0%	4	
	0.75 to < 2.50	2,796	254	73%	2,982	1.28%	13,077	22.1%		1,014	34.0%	8	
	2.50 to < 10.00	732	29	77%	755	4.48%	3,965	22.0%		529	70.0%	7	
	10.00 to < 100.00	245	2	106%	247	26.38%	1,529	23.1%		325	131.7%	16	
	100.00 (Default)	89	2	120%	91	100.00%	673	21.6%		140	154.0%	11	
	Sub-total	44,550	17,472	53%	53,725	0.57%	288,989	20.5%		5,479	10.2%	59	54
Qualifying revolving	0.00 to < 0.15	800	6,983	76%	6,096	0.05%	718,410	80.4%		182	3.0%	3	
	0.15 to < 0.25	201	992	90%	1,090	0.19%	216,392	88.4%		108	9.9%	2	
	0.25 to < 0.50	293	772	87%	966	0.35%	190,755	85.9%		144	14.9%	3	
	0.50 to < 0.75	211	299	86%	468	0.63%	72,986	81.5%		108	23.0%	2	
	0.75 to < 2.50	735	548	88%	1,219	1.45%	240,743	85.8%		563	46.2%	16	
	2.50 to < 10.00	617	104	111%	733	4.54%	205,101	88.9%		770	105.1%	30	
	10.00 to < 100.00	101	7	84%	106	24.27%	27,058	89.0%		255	240.0%	22	
	100.00 (Default)	24	-	14%	24	100.00%	4,449	72.0%		20	83.4%	16	
	Sub-total	2,982	9,705	80%	10,702	1.05%	1,675,894	83.0%		2,150	20.1%	94	250
Other retail	0.00 to < 0.15	1,928	2,121	67%	3,348	0.06%	121,278	53.7%		313	9.4%	1	
	0.15 to < 0.25	932	212	68%	1,077	0.20%	50,274	54.1%		257	23.9%	1	
	0.25 to < 0.50	1,395	274	73%	1,594	0.37%	73,016	55.5%		559	35.1%	3	
	0.50 to < 0.75	1,066	222	83%	1,250	0.63%	57,222	59.3%		646	51.6%	5	
	0.75 to < 2.50	2,762	246	78%	2,953	1.35%	188,740	62.0%		2,165	73.3%	25	
	2.50 to < 10.00	900	52	77%	940	4.26%	69,104	65.7%		945	100.6%	26	
	10.00 to < 100.00	231	4	75%	234	26.13%	14,890	65.8%		373	159.6%	41	
	100.00 (Default)	111	2	68%	112	100.00%	7,642	58.4%		162	144.4%	59	
	Sub-total	9,325	3,133	70%	11,508	2.36%	582,166	58.0%		5,420	47.1%	161	186

⁽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)

							Q2 2020						
		a	b	С	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	2,705	3,730	70%	6,774	0.08%	657	46.6%	2.39	1,610	23.8%	3	
	0.15 to < 0.25	12,196	8,976	85%	23,307	0.20%	2,753	37.5%	2.59	7,638	32.8%	17	
	0.25 to < 0.50	11,564	4,904	84%	17,351	0.36%	2,476	36.1%	2.47	7,420	42.8%	23	
	0.50 to < 0.75	8,167	2,337	84%	11,576	0.56%	2,786	32.4%	2.15	4,969	42.9%	21	
	0.75 to < 2.50	15,423	3,503	80%	20,115	1.16%	6,983	32.8%	1.86	11,533	57.3%	76	
	2.50 to < 10.00	3,105	527	82%	3,894	4.52%	1,489	30.9%	1.69	3,284	84.3%	56	
	10.00 to < 100.00	175	31	91%	206	16.74%	76	44.9%	1.17	430	208.6%	16	
	100.00 (Default)	443	7	52%	453	100.00%	207	31.1%	1.05	545	120.4%	159	
	Sub-total	53,778	24,015	82%	83,676	1.29%	17,427	35.8%	2.26	37,429	44.7%	371	616
Sovereign	0.00 to < 0.15	51,526	4,459	97%	57,609	0.01%	593	8.4%	2.20	755	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	65	6	83%	73	5.07%	4	14.1%	1.00	32	44.0%	-	
	10.00 to < 100.00	-	-	0%	-	0%		0%	-	-	0%	-	
	100.00 (Default)	_	-	0%	_	0%	_	0%	-	_	0%	_	
	Sub-total	51,591	4,465	97%	57,682	0.02%	597	8.4%	2.20	787	1.4%	1	12
Financial institutions	0.00 to < 0.15	2,852	184	0%	3,201	0.05%	71	51.1%	1.39	704	22.0%	2	
	0.15 to < 0.25	434	264	95%	698	0.20%	27	31.4%	1.19	186	26.6%	-	
	0.25 to < 0.50	20	79	95%	149	0.36%	6	10.6%	1.16	21	13.7%	-	
	0.50 to < 0.75	-	23	55%	23	0.56%	4	50.4%	1.23	15	65.8%	-	
	0.75 to < 2.50	35	6	100%	49	0.86%	13	56.5%	1.00	44	91.4%	-	
	2.50 to < 10.00	_	-	0%	-	3.24%	2	39.3%	1.00	-	0%	_	
	10.00 to < 100.00 100.00 (Default)	_	_	0% 0%	-	0% 0%	-	0% 0%	-	-	0% 0%	_	
	Sub-total	3,341	556	62%	4,120	0.10%	123	46.4%	1.34	970	23.5%	2	9
		,			,								·
Total (all portfolio)		167,819	59,346	74%	223,665	0.83%	2,684,272	28.3%	2.00	52,320	24.4%	690	1,133

⁽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)

							Q4 2019						
		a	b	С	d	e	f	g	h	i	j	k	l
		Original on-							_				
	PD scale ⁽¹⁾	gross exposure	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		780	pic eci	0%	780	0.07%	53,452	5.9%	<i>'</i>	9	1.1%		credit tosses
	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	0.00 to < 0.15	24,487	14,376	50%	31,626	0.07%	196,837	19.6%		1,137	3.6%	4	
and HELOCs –	0.15 to < 0.25	6,467	986	68%	7,139	0.19%	31,425	22.0%		659	9.2%	3	
uninsured	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	0.00 to < 0.15	723	5,324	40%	2,873	0.05%	704,204	77.6%		81	2.8%	1	
retail	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)

		-	-				Q4 2019		_			_	-
		a	b	С	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	1,592	3,561	76%	5,440	0.09%	741	46.2%	2.45	1,394	25.7%	2	
	0.15 to < 0.25	11,712	8,346	84%	21,924	0.20%	3,654	37.5%	2.61	7,408	33.8%	16	
	0.25 to < 0.50	9,906	4,930	90%	15,929	0.36%	2,388	35.1%	2.46	6,661	41.8%	20	
	0.50 to < 0.75	7,624	2,477	81%	11,092	0.56%	2,641	33.0%	2.21	4,953	44.6%	20	
	0.75 to < 2.50	14,225	3,081	83%	18,503	1.15%	6,180	33.4%	1.94	10,793	58.3%	72	
	2.50 to < 10.00	2,343	355	79%	2,929	4.65%	1,295	28.4%	1.66	2,244	76.6%	39	
	10.00 to < 100.00	215	27	70%	242	16.98%	61	32.6%	1.07	349	144.4%	14	
	100.00 (Default)	382	213	2%	599	100.00%	200	27.5%	1.23	580	96.9%	112	
	Sub-total	47,999	22,990	83%	76,658	1.51%	17,160	35.5%	2.29	34,382	44.8%	295	322
Sovereign	0.00 to < 0.15	28,939	4,470	97%	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	63	9	89%	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	29,002	4,479	97%	34,929	0.02%	579	8.9%	2.43	594	1.7%	1	2
Financial institutions	0.00 to < 0.15	2,901	388	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	83	90%	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	109	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	3,260	765	45%	4,199	0.11%	121	44.2%	1.43	880	21.0%	2	2
Total (all portfolio)		137,621	54,465	68%	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.

		Q2 2020	Q1 2020	Q4 2019	Q3 2019	Q2 2019	Q1 2019
		a	a	a	a	a	a
1	RWA at beginning	49,914	49,546	49,045	47,395	47,097	46,640
2	Book size ⁽¹⁾	3,668	391	544	1,511	93	721
3	Book quality ⁽²⁾	(59)	(41)	(2)	(127)	49	(254)
4	Model updates ⁽³⁾	112	(17)	(32)	397	30	-
5	Methodology and policy ⁽⁴⁾	-	_	_	_	_	-
6	Acquisitions and disposals ⁽⁵⁾	-	_	_	_	_	-
7	Foreign exchange movements ⁽⁶⁾	414	36	(9)	(131)	126	(10)
8	Other ⁽⁷⁾	-	_	_	_	-	-
9	RWA at end	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. During Q3 2019, the Bank updated its models for credit card portfolios and energy sector loans.

⁽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. During Q1 2020, the transitional arrangements for specific wrong-way risk and for the revised securitization framework expired. On November 1, 2019, the Bank had also adopted IFRS 16 and recognized right-of-use assets.

⁽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.

AIRB Credit Risk Exposure - Backtesting(1)

						20	20					
			Q2						Q1			
	PD average		LGD average	LGD	EAD	EAD	PD average		LGD average	LGD	EAD	EAD
-	estimated (%)	PD actual (%)	estimated (%) ⁽²⁾	actual (%) ⁽³⁾	estimated (%) ⁽⁴⁾	actual (%) ⁽⁴⁾	estimated (%)	PD actual (%)	estimated (%) ⁽²⁾	actual (%) ⁽³⁾	estimated (%) ⁽⁴⁾	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.

						20	19					
			Q4	ı					Q3	}		
	PD average		LGD average	LGD		EAD			LGD average			
	estimated (%)	PD actual (%)	estimated (%) ⁽²⁾	actual (%) ⁽³⁾	estimated (%) ⁽⁴⁾	actual (%) ⁽⁴⁾	estimated (%)	PD actual (%)	estimated (%) ⁽²⁾	actual (%)(3)	estimated (%) ⁽⁴⁾	actual (%) ⁽⁴⁾
Retail Portfolio ⁽⁵⁾												
Insured residential mortgages ⁽⁶⁾	0.78%	0.57%	2.64%	n.a.	n.a.	n.a.	0.77%	0.64%	2.64%	n.a.	n.a.	n.a.
Uninsured residential mortgages incl. HELOCs ⁽⁷⁾	0.33%	0.34%	20.79%	7.00%	95.92%	90.44%	0.33%	0.33%	21.11%	7.92%	94.97%	92.74%
Qualifying revolving retail	1.37%	1.21%	85.19%	79.63%	105.72%	102.80%	1.36%	1.23%	85.54%	79.16%	105.23%	102.40%
Other retail	1.62%	1.00%	66.54%	60.65%	95.31%	90.00%	1.60%	1.08%	66.58%	60.99%	95.66%	87.34%
Non-Retail Portfolio ⁽⁸⁾												
Corporate	1.03%	0.37%	37.64%	29.80%	82.09%	85.20%	1.02%	0.33%	36.58%	31.11%	81.15%	83.54%
Sovereign ⁽⁹⁾	0.05%	0.00%	11.54%	n.a.	88.30%	n.a.	0.05%	0.00%	11.54%	n.a.	88.30%	n.a.
Financial Institutions ⁽⁹⁾	0.37%	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 Q2 2020, estimated percentages are as of March 31, 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

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

			Q4 2019					Q3 2019		
	On-balance	Off-balance				On-balance	Off-balance			
	sheet amount	sheet amount	RW	Exposure amount	RWA	sheet amount	sheet amount	RW	Exposure amount	RWA
Equities under the materiality exemption	1,010	95	100%	1,057	1,121	964	98	100%	1,014	1,074

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.

				Q2 20	20					Q1 20	20		
		a	b	С	d	e	f	a	b	c	d	e	f
					Alpha						Alpha		
					used for						used for		1
			Potential		computing				Potential		computing		1
		Replacement	future		regulatory	EAD		Replacement	future		regulatory	EAD	
		cost	exposure	EEPE ⁽²⁾	EAD	post-CRM	RWA	cost	exposure	EEPE ⁽²⁾	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

				Q4 20	19					Q3 20	19		
		a	b	С	d	e	f	a	b	С	d	e	f
					Alpha						Alpha		
					used for						used for		
			Potential		computing				Potential		computing		
		Replacement	future		regulatory	EAD		Replacement	future		regulatory	EAD	
		cost	exposure	EEPE ⁽²⁾	EAD	post-CRM	RWA	cost	exposure	EEPE ⁽²⁾	EAD	post-CRM	RWA
1	SA-CCR (for derivatives)	2,033	6,845		1.4	12,429	3,568	2,203	6,696		1.4	12,459	4,060
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					6,933	1,071					7,501	1,079
6	Total						4,639						5,139

⁽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).

		Q2 2	020	Q1 2	020	Q4 2	2019	Q3 2	2019	Q2 2019	
		a b		a	b	а	b	a	b	a	b
		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	10,407	1,555	9,981	1,364	8,628	1,200	8,652	1,139	8,340	1,151
4	Total subject to the CVA capital charge	10,407	1,555	9,981	1,364	8,628	1,200	8,652	1,139	8,340	1,151

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).

		Q2 2020												Q1 202	0		-	
	a	b	С	d	е	f	g	h	i	a	b	С	d	е	f	g	h	i
									Total									Total
Risk weight									credit									credit
Regulatory portfolio	0%	10%	20%	50%	75%	100%	150%	Others	exposure	0%	10%	20%	50%	75%	100%	150%	Others	exposure
Sovereigns	-	_	-	-	-	_	-	_	-	-	-	1	-	-	-	-	-	-
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

		Q4 2019												Q3 201	9			
	a	b	С	d	e	f	g	h	i	a	b	С	d	е	f	g	h	i
									Total									Total
Risk weight									credit									credit
Regulatory portfolio	0%	10%	20%	50%	75%	100%	150%	Others	exposure	0%	10%	20%	50%	75%	100%	150%	Others	exposure
Sovereigns	_	_	-	_	_	_	_	_	_	_	_	-	-	-	-	-	-	_
Non-central government public sector entities (PSEs)	-	-	-	_	_	_	_	_	_	-	-	_	-	-	-	_	-	_
Multilateral development banks (MDBs)	7	_	-	_	_	_	_	_	7	11	-	-	-	-	-	_	-	11
Financial institutions	-	-	_	_	_	_	_	_	_	-	-	_	_	-	-	_	-	_
Securities firms	_	_	_	_	_	_	_	_	_	-	_	_	-	-	-	_	_	_
Corporates	-	-	_	_	_	454	_	_	454	-	-	_	_	-	648	_	-	648
Regulatory retail portfolios	-	_	_	_	_	_	_	_	_	-	-	_	_	-	-	_	-	-
Other assets ⁽¹⁾	_	-	_	_	-	_	_	_	_	_	_	_	_	_	_	-	_	_
Total	7	_	_	_	-	454	-	-	461	11	-	_	_	-	648	-	-	659

⁽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.

				Q2 2	020			
		a	b	С	d	e	f	g
	PD scale ⁽¹⁾	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	2,232	0.06%	478	48.8%	0.78	428	19.2%
	0.15 to < 0.25	2,913	0.18%	539	41.7%	2.18	949	32.6%
	0.25 to < 0.50	1,166	0.36%	256	39.4%	1.85	551	47.3%
	0.50 to < 0.75	857	0.56%	232	38.0%	1.95	444	51.8%
	0.75 to < 2.50	1,043	0.92%	634	45.4%	1.81	849	81.4%
	2.50 to < 10.00	200	4.38%	59	45.8%	1.41	278	139.0%
	10.00 to < 100.00	-	13.82%	3	46.5%	1.00	-	0%
	100.00 (Default)	12	100.00%	3	38.2%	1.16	17	141.7%
	Sub-total	8,423	0.55%	2,204	43.5%	1.67	3,516	41.7%
Sovereign	0.00 to < 0.15	7,968	0.03%	168	11.9%	1.18	154	1.9%
	0.15 to < 0.25	49	0.21%	1	11.6%	-	3	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	8,017	0.03%	169	11.9%	1.17	157	2.0%
Financial institutions	0.00 to < 0.15	6,235	0.06%	63	49.9%	0.53	909	14.6%
	0.15 to < 0.25	1,723	0.17%	41	47.0%	0.72	592	34.4%
	0.25 to < 0.50	36	0.36%	11	49.9%	0.12	15	41.7%
	0.50 to < 0.75	46	0.56%	13	47.6%	1.04	28	60.9%
	0.75 to < 2.50	38	1.04%	18	43.2%	1.47	32	84.2%
	2.50 to < 10.00	_	3.09%	1	51.0%	-	-	0%
	10.00 to < 100.00	_	0%	-	0%	-	-	0%
	100.00 (Default)	_	0%	-	0%	-	_	0%
	Sub-total	8,078	0.09%	147	49.2%	0.58	1,576	19.5%
Total (sum of portfolios)		24,518	0.23%	2,520	35.0%	1.09	5,249	21.4%

⁽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)

				Q4 2	2019			
		a	b	С	d	e	f	g
	PD scale ⁽¹⁾	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%	ı	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.

			Q2 :	2020					Q1 :	2020	-	
	a	b	С	d	e	f	a	b	С	d	e	f
		Collateral u	sed in derivati	ve transactions	Collatera	al used in SFTs		Collateral u	sed in derivati	ve transactions	Collater	al used in SFTs
	Fair val	Fair value of collateral received Fair value of posted collateral regated Unsegregated Segregated Unsegregated				Fair value of posted		ue of collateral received		value of posted collateral	Tun value of	Fair value of posted
	Segregated	Unsegregated	Segregated	Unsegregated	collateral received ⁽¹⁾	collateral ⁽¹⁾		Unsegregated	Segregated	Unsegregated	received	
Cash	-	6,954	-	2,205	28,305	19,721	_	6,714	-	857	26,402	16,037
Securities issued or guaranteed by												i '
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												i '
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	7,650	_	4,517	165,456	167,430	59	6,863	_	1,863	160,067	163,828

			Q4 2	2019					Q3 :	2019		
	a	b	С	d	e	f	а	b	С	d	e	f
		Collateral u	sed in derivativ	e transactions	Collatera	al used in SFTs		Collateral u	sed in derivati	ve transactions	Collatera	al used in SFTs
	Fair val	ue of collateral	Fair v	alue of posted	Fair value of	Fair value of	Fair val	ue of collateral	Fair	value of posted	Fair value of	Fair value of
		received		collateral	collateral	posted		received		collateral	collateral	posted
	Segregated	Unsegregated	Segregated	Unsegregated	received	collateral	Segregated	Unsegregated	Segregated	received	collateral	
Cash	-	5,506	_	1,315	25,066	20,889	-	5,732	_	545	19,764	13,928
Securities issued or guaranteed by												
Canadian government	28	36	_	952	16,794	13,141	-	35	-	1,106	10,593	11,486
Canadian provincial and municipal governments	-	78	_	10	11,702	13,953	-	75	-	66	11,464	14,587
U.S. Treasury, other U.S. agencies and other												
foreign governments	64	54	_	-	33,609	29,870	63	71	_	_	34,661	30,461
Other debt securities	_	29	_	_	1,875	691	-	15	_	_	1,691	446
Equity securities	_	_	_	_	53,522	67,085	_	_	_	_	59,136	69,240
Total	92	5,703	-	2,277	142,568	145,629	63	5,928	-	1,717	137,309	140,148

⁽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.

	Q2 2	2020	Q1 2	020	Q4 2	019	Q3 2	2019	Q2 2	2019
	a	b	a	b	a	b	a	b	a	b
	Protection									
	purchased	sold								
Notionals										
Credit default swaps										
Indices, singles names and other	6,271	4,319	4,923	2,211	3,959	1,878	3,481	1,255	3,005	936
Tranches on indices	_	_	_	_	-	_	-	-	-	-
Total return swaps	-	_	-	_	142	_	150	-	162	_
Credit options	_	_	_	_	-	_	-	-	-	-
Other credit derivatives	_	_	-	_	-	ı	-	-	_	_
Total notionals	6,271	4,319	4,923	2,211	4,101	1,878	3,631	1,255	3,167	936
Fair values										
Positive fair value (asset)	50	34	-	52	-	45	-	34	1	27
Negative fair value (liability)	(50)	(3)	(120)	_	(101)	-	(93)	-	(78)	_

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.

		Q2 2	020	Q1 2	2020	Q4 2	019	Q3 2	019	Q2 2	019
		a	b	a	b	a	b	a	b	a	b
		EAD		EAD		EAD		EAD		EAD	
		(post-CRM)	RWA	(post-CRM)	RWA	(post-CRM)	RWA	(post-CRM)	RWA	(post-CRM)	RWA
1	Exposures to QCCPs (total)		115		174		161		193		181
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	1,356	27	1,794	35	1,797	36	1,401	29	1,182	24
3	(i) OTC derivatives	92	2	74	1	63	1	25	1	36	1
4	(ii) Exchange-traded derivatives	1,174	23	1,602	32	1,680	34	1,292	26	1,077	22
5	(iii) Securities financing transactions	90	2	118	2	54	1	84	2	69	1
6	(iv) Netting sets where cross-product netting has been approved	-	-	-	-	-	-	-	-	-	-
7	Segregated initial margin	6,078		1,802		733		764		2,117	
8	Non-segregated initial margin	696	_	51	-	46	-	44	_	45	-
9	Pre-funded default fund contributions	493	88	159	139	168	125	235	164	389	157
10	Unfunded default fund contributions	-	-	-	_	-	_	-	_	_	-

⁽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.

						Q2 2020				
		a	b	С	e	f	g	i	j	k
			Ва	ank acts as originator		I	Bank acts as sponsor		Ва	nks 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	1	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	-	ı	ı	_	_	_	ı	-	_
6	Non-Retail	ı	I	I	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	1	1	1	_	-	_	-	-	_

			_		_	Q1 2020			=	
		a	b	С	e	f	g	i	j	k
			Ba	ınk acts as originator			Bank acts as sponsor		Bai	nks acts as investor ⁽¹⁾
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	653	1	653	2,587	1	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	ı	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.

SEC1 – Securitization Exposures in the Banking Book (continued)

				-		Q4 2019		_	-	
		a	b	С	e	f	g	i	j	k
			Ва	ank acts as originator			Bank acts as sponsor		Ва	nks acts as investor ⁽¹⁾
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	668	-	668	2,319	1	2,319	759	-	759
	Of which :									
2	Residential mortgages	-	-	_	1,792	-	1,792	247	-	247
3	Credit card	668	-	668	_	-	_	12	-	12
4	Other retail exposures	-	-	_	527	-	527	500	-	500
5	Re-securitization	_	ı	ı	-	-	ı	-	-	_
6	Non-Retail	-	I	I	289	1	289	729	-	729
	Of which:									
7	Loans to corporates	-	-	_	-	-	-	-	-	_
8	Commercial mortgage	-	-	_	-	-	-	9	-	9
9	Lease and receivables	_	-	_	275	-	275	720	-	720
10	Other wholesale	_	-	_	14	-	14	-	-	_
11	Re-securitization	_	-	_	_	-	_	-	_	_

						Q3 2019			_	
		a	b	С	e	f	g	i	j	k
			Ва	ınk acts as originator		E	Bank acts as sponsor		Bai	nks acts as investor ⁽¹⁾
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	671	-	671	2,452	-	2,452	1,082	-	1,082
	Of which:									
2	Residential mortgages	-	-	-	1,940	-	1,940	270	-	270
3	Credit card	671	-	671	_	-	-	12	-	12
4	Other retail exposures	-	-	-	512	-	512	800	-	800
5	Re-securitization	_	-	_	_	-	_	_	_	_
6	Non-Retail	-	_	_	282	-	282	729	-	729
	Of which:									
7	Loans to corporates	-	-	-	_	-	-	-	-	-
8	Commercial mortgage	-	-	-	_	-	-	9	-	9
9	Lease and receivables	-	-	-	270	-	270	720	-	720
10	Other wholesale	_	-	-	12	-	12	-	-	_
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.

						Q2 2020				
		a	b	С	е	f	g	i	j	k
			Ва	ank acts as originator		[Bank acts as sponsor		Ва	nks acts as investor ⁽¹⁾
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	1	ı	ı	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	-	ı	ı	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	С	e	f	g	i	j	k
			Ba	nk acts as originator			Bank acts as sponsor		Ва	nks 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	-	-	-	ı	ı	-	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.

SEC2 – Securitization Exposures in the Trading Book (continued)

						Q4 2019				
		a	b	С	e	f	g	i	j	k
			В	ank acts as originator		I	Bank acts as sponsor		Ва	nks acts as investor ⁽¹⁾
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	5	-	5	12	1	12	13	-	13
	Of which:									
2	Residential mortgages	_	-	_	9	-	9	7	_	7
3	Credit card	5	-	5	-	-	_	6	_	6
4	Other retail exposures	-	-	-	3	-	3	-	-	-
5	Re-securitization	_	ı	_	_	-	ı	-	_	-
6	Non-Retail	1	ı	1	1	-	1	15	_	15
	Of which:									
7	Loans to corporates	-	-	-	-	-	-	-	_	-
8	Commercial mortgage	-	-	-	-	-	_	12	-	12
9	Lease and receivables	-	-	-	1	-	1	3	-	3
10	Other wholesale	_	-	-	-	-	_	-	-	-
11	Re-securitization	_	-	_	_	-	_	-	_	-

						Q3 2019				
		a	b	С	e	f	g	i	j	k
			Ba	nk acts as originator			Bank acts as sponsor		Ва	nks acts as investor ⁽¹⁾
		Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total	Traditional	Synthetic ⁽²⁾	Sub-total
1	Retail	1	-	1	2	-	2	19	-	19
	Of which:									
2	Residential mortgages	-	-	-	2	-	2	13	-	13
3	Credit card	1	-	1	-	-	-	6	-	6
4	Other retail exposures	-	-	-	-	-	-	_	-	-
5	Re-securitization	_	-	_	_	-	-	_	-	_
6	Non-Retail	-	-	-	ı	-	-	21	-	21
	Of which:									
7	Loans to corporates	-	-	-	-	-	-	-	-	-
8	Commercial mortgage	-	-	-	_	-	-	12	-	12
9	Lease and receivables	-	-	-	-	-	-	9	-	9
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.

										Q2 2020								
		a	b	С	d	e	f	50	h	i	j	k	l	m	n	0	р	q
				Exposure	values (by	RW bands)	Exposu	re values (b	y regulatory	approach)		RWA (by	regulatory a	pproach)(2)		C	apital charg	e after cap
					>100% to													
			> 20% to			1250%												
		≤ 20% RW	50% RW	100% RW	RW	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								
		а	b	С	d	е	f	g	h	i	j	k	l	m	n	0	р	q
				Exposure	values (by	RW bands)	Exposu	re values (by	regulatory	approach)		RWA (by	regulatory a	pproach)(2)		С	apital charg	ge after cap
					>100% to													
		≤ 20% RW	> 20% to 50% RW	>50% to 100% 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	1	-	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 3 – Securitization Exposures in the Banking Book and Associated Regulatory Capital Requirements⁽¹⁾ – Bank Acting as Originator or as Sponsor (continued)

				-	-			-	_	Q4 2019	-							
		a	b	С	d	e	f	g	h	i	j	k	l	m	n	0	р	q
				Exposure	e values (by	RW bands)	Exposu	re values (b	y regulatory	approach)		RWA (by	regulatory a	pproach)(2)		C	Capital charg	ge after cap
		≤ 20% RW	> 20% to 50% RW	>50% to 100% RW		1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%
1	Total exposures	3,223	_	28	25	-	_	3,276	_	_	-	385	ı	-	_	31	_	_
2	Traditional securitization	3,223	-	28	25	_	-	3,276	-	-	-	385	ı	_	-	31	_	_
3	Of which securitization	3,223	-	28	25	-	-	3,276	-	-	-	385	1	_	-	31	_	_
4	Of which retail underlying	2,934	_	28	25	_	-	2,987	-	_	_	356	_	_	ı - '	29	_	-
5	Of which wholesale	289	_	_	_	_	_	289	-	_	-	29	_	_	ı - '	2	_	-
6	Of which re-securitization	-	_	_	_	_	_	_	-	_	-	_	_	_	ı - '	-	_ !	-
7	Of which senior	-	_	_	_	_	_	_	-	_	-	_	_	_	ı - '	-	_ !	-
8	Of which non-senior	_	_	_	_	_	_	_	_	_	_	_	_	_	'	_	_	_

										Q3 2019								
		a	b	С	d	е	f	g	h	i	i	k	l	m	n	0	р	q
				Exposure	values (by	RW bands)	Exposu	re values (b	y regulatory	/ approach)		RWA (by	regulatory a	pproach)(2)		C	apital charg	ge after cap
					>100% to													ĺ
			> 20% to	>50% to	1250%	1250%												i
		≤ 20% RW	50% RW	100% RW	RW	RW	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%
1	Total exposures	3,351	-	28	26	-	-	3,405	-	-	-	398	-	-	_	32	-	_
2	Traditional securitization	3,351	ı	28	26	_		3,405	-	_	ı	398	_	_	-	32	-	_
3	Of which securitization	3,351	-	28	26	-	1	3,405	-	-	-	398	-	-	-	32	-	- 1
4	Of which retail underlying	3,069	_	28	26	-	_	3,123	-	_	_	370	-	_	-	30	_	i - I
5	Of which wholesale	282	_	_	-	-	_	282	-	_	_	28	-	_	-	2	_	i - I
6	Of which re-securitization	_	_	_	-	-	_	_	-	_	_	_	-	_	-	-	_	i - I
7	Of which senior	_	_	_	-	-	_	_	-	_	_	_	-	_	-	-	_	i - I
8	Of which non-senior	_	ı	_	-	-	_	-	-	_	_	ı	_	_	-	-	_	-

⁽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.

				-						Q2 2020	_	_					_	
		a	b	С	d	е	f	g	h	i	j	k	l	m	n	0	р	q
				Exposure	e values (by I	RW bands)	Exposu	re values (by	/ regulatory	approach)		RWA (by	regulatory a	pproach) ⁽²⁾		С	apital charg	e after cap
					>100% to													
		≤ 20% RW	> 20% to 50% RW	>50% to 100% RW	1	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	С	d	e	f	g	h	i	j	k	l	m	n	0	р	q
				Exposure	values (by	RW bands)	Exposu	re values (by	regulatory	approach)		RWA (by	regulatory a	pproach) ⁽²⁾		С	apital charg	ge after cap
					>100% to													
			> 20% to			1250%												l
		\leq 20% RW	50% RW	100% RW	RW	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	ı	_	237	789	500	-	36	110	80	_	3	9	6	_
2	Traditional securitization	1,469		57	ı	_	237	789	500	-	36	110	80	-	3	9	6	_
3	Of which securitization	1,469	1	57	-	-	237	789	500	-	36	110	80	-	3	9	6	-
4	Of which retail underlying	749	_	_	-	-	237	12	500	-	36	2	80	-	3	_	6	- I
5	Of which wholesale	720	_	57	-	-	-	777	_	_	_	108	_	-	_	9	_	-
6	Of which re-securitization	_	_	_	-	-	-	-	_	-	-	-	_	-	_	_	_	-
7	Of which senior	_	_	_	-	-	-	-	_	-	-	-	_	-	_	_	_	-
8	Of which non-senior	_	_	_	_	-	-	_	_	_	_	_	_	_	_	_	_	ı – I

⁽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)

				-	-			=		Q4 2019	-						-	
		a	b	С	d	e	f	g	h	i	j	k	l	m	n	0	р	q
				Exposure	e values (by	RW bands)	Exposu	re values (b	y regulatory	approach)		RWA (by	egulatory a	pproach)(2)		С	apital charg	e after cap
			> 20% to	\F00/ to	>100% to 1250%	1250%												
		≤ 20% RW		>50% to 100% RW		1250% RW	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%
1	Total exposures	1,479	-	9	_	_	231	757	500	-	37	78	76	_	3	6	6	_
2	Traditional securitization	1,479	-	9	_	_	231	757	500	-	37	78	76	_	3	6	6	_
3	Of which securitization	1,479	-	9	_	-	231	757	500	-	37	78	76	-	3	6	6	-
4	Of which retail underlying	759	_	_	_	-	231	28	500	_	37	2	76	_	3	_	6	-
5	Of which wholesale	720	_	9	_	-	_	729	_	_	_	76	_	_	_	6	_	-
6	Of which re-securitization	-	_	_	_	-	_	-	_	_	_	_	_	_	_	-	_	-
7	Of which senior	-	_	_	_	-	_	-	_	_	_	_	_	_	_	-	_	-
8	Of which non-senior	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	l –

										Q3 2019			-				_	
		а	b	С	d	е	f	g	h	i	j	k	l	m	n	0	р	q
				Exposure	values (by	RW bands)	Exposu	re values (by	, regulatory	approach)		RWA (by	regulatory a	pproach)(2)		C	apital charg	ge after cap
					>100% to													
			> 20% to															
		≤ 20% RW	50% RW	100% RW	RW	RW	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%	IRBA	ERBA/IAA	SA/SSFA	1250%
1	Total exposures	1,802	_	9	-	-	254	757	800	-	40	79	126	-	3	6	10	_
2	Traditional securitization	1,802	_	9	_	_	254	757	800	_	40	79	126	_	3	6	10	_
3	Of which securitization	1,802	-	9	-	-	254	757	800	-	40	79	126	_	3	6	10	-
4	Of which retail underlying	1,082	_	_	-	-	254	28	800	-	40	2	126	-	3	-	10	_
5	Of which wholesale	720	_	9	-	-	_	729	_	-	_	77	-	-	-	6	-	_
6	Of which re-securitization	_	_	_	-	-	_	_	_	-	_	-	-	-	-	-	-	_
7	Of which senior	-	_	_	-	-	_	_	_	-	_	_	_	-	-	-	-	-
8	Of which non-senior	-	_	ı	_	_	_	_	ı	_	_	ı	_	_	-	-	-	_

⁽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.