

Audited Consolidated Financial Statements

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Management's Responsibility for Financial Reporting

The consolidated financial statements of National Bank of Canada (the Bank) have been prepared in accordance with section 308(4) of the *Bank Act* (Canada), which states that, except as otherwise specified by the Office of the Superintendent of Financial Institutions (Canada) (OSFI), the financial statements are to be prepared in accordance with International Financial Reporting Standards (IFRS), as issued by the International Accounting Standards Board (IASB). IFRS represent Canadian generally accepted accounting principles (GAAP). None of the OSFI accounting requirements are exceptions to IFRS.

Management maintains the accounting and internal control systems needed to discharge its responsibility, which is to provide reasonable assurance that the financial accounts are accurate and complete and that the Bank's assets are adequately safeguarded. Controls that are currently in place include quality standards on staff hiring and training; the implementation of organizational structures with clear divisions of responsibility and accountability for performance; the *Code of Professional Conduct*; and the communication of operating policies and procedures.

As Chief Executive Officer and as Chief Financial Officer, we have overseen the evaluation of the design and operation of the Bank's internal controls over financial reporting in accordance with *National Instrument 52-109 Certification of Disclosure in Issuers' Annual and Interim Filings* released by the Canadian Securities Administrators. Based on the evaluation work performed, we have concluded that the internal controls over financial reporting and the disclosure controls and procedures were effective as at October 31, 2020 and that they provide reasonable assurance that the financial information is reliable and that the Bank's consolidated financial statements have been prepared in accordance with IFRS.

The Board of Directors (the Board) is responsible for reviewing and approving the financial information contained in the Annual Report. Acting through the Audit Committee, the Board also oversees the presentation of the consolidated financial statements and ensures that accounting and control systems are maintained. Composed of directors who are neither officers nor employees of the Bank, the Audit Committee is responsible, through Internal Audit, for performing an independent and objective review of the Bank's internal control effectiveness, i.e., governance processes, risk management processes and control measures. Furthermore, the Audit Committee reviews the consolidated financial statements and recommends their approval to the Board.

The control systems are further supported by the presence of the Compliance Service, which exercises independent oversight and evaluation in order to assist managers in effectively managing regulatory compliance risk and to obtain reasonable assurance that the Bank is compliant with regulatory requirements.

Both the Senior Vice-President, Internal Audit and the Senior Vice-President, Chief Compliance Officer and Chief Anti-Money Laundering Officer have a direct functional link to the Chair of the Audit Committee and to the Chair of the Risk Management Committee. They both also have direct access to the President and Chief Executive Officer.

In accordance with the *Bank Act* (Canada), OSFI is mandated to protect the rights and interests of the depositors. Accordingly, OSFI examines and enquires into the business and affairs of the Bank, as deemed necessary, to ensure that the provisions of the *Bank Act* (Canada) are being satisfied and that the Bank is in sound financial condition.

The independent auditor, Deloitte LLP, whose report follows, was appointed by the shareholders on the recommendation of the Board. The auditor has full and unrestricted access to the Audit Committee to discuss audit and financial reporting matters.

Louis Vachon
President and Chief Executive Officer

Ghislain Parent
Chief Financial Officer and Executive Vice-President, Finance

Montreal, Canada, December 1, 2020

Independent Auditor's Report

To the Shareholders of National Bank of Canada,

Opinion

We have audited the consolidated financial statements of National Bank of Canada (the Bank), which comprise the consolidated balance sheets as at October 31, 2020 and 2019, and the consolidated statements of income, the consolidated statements of comprehensive income, the consolidated statements of changes in equity and the consolidated statements of cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies (collectively referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Bank as at October 31, 2020 and 2019, and its financial performance and its cash flows for the years then ended in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board (IFRS).

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards (Canadian GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Bank in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other Information

Management is responsible for the other information. The other information comprises:

- Management's Discussion and Analysis;
- The information, other than the financial statements and our auditor's report thereon, in the Annual Report.

Our opinion on the financial statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon. In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

We obtained Management's Discussion and Analysis and the Annual Report prior to the date of this auditor's report. If, based on the work we have performed on this other information, we conclude that there is a material misstatement of this other information, we are required to report that fact in this auditor's report. We have nothing to report in this regard.

Responsibilities of Management and Those Charged With Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with IFRS, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Bank's ability to continue as a going concern, disclosing, as applicable, matters related to a going concern and using the going concern basis of accounting unless management either intends to liquidate the Bank or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Bank's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian GAAS will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

Independent Auditor's Report (cont.)

As part of an audit in accordance with Canadian GAAS, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Bank's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Bank's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Bank to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the note disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Bank to express an opinion on the financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

The engagement partner on the audit resulting in this independent auditor's report is Carl Magnan.

/s/ Deloitte LLP¹

December 1, 2020
Montreal, Quebec

¹ CPA auditor, CA, public accountancy permit No. A121501

Consolidated Balance Sheets

As at October 31		2020	2019
Assets			
Cash and deposits with financial institutions		29,142	13,698
Securities	Notes 3, 4 and 6		
At fair value through profit or loss		78,326	61,823
At fair value through other comprehensive income		12,726	10,648
At amortized cost		11,079	9,755
		102,131	82,226
Securities purchased under reverse repurchase agreements and securities borrowed		14,512	17,723
Loans	Note 7		
Residential mortgage		64,959	57,171
Personal		37,613	36,944
Credit card		2,038	2,322
Business and government		54,422	50,599
		159,032	147,036
Customers' liability under acceptances		6,866	6,893
Allowances for credit losses		(1,158)	(678)
		164,740	153,251
Other			
Derivative financial instruments	Note 16	13,422	8,129
Investments in associates and joint ventures	Note 9	409	385
Premises and equipment	Note 10	1,155	490
Goodwill	Note 11	1,414	1,412
Intangible assets	Note 11	1,434	1,406
Other assets	Note 12	3,266	2,738
		21,100	14,560
		331,625	281,458
Liabilities and equity			
Deposits	Notes 4 and 13	215,878	189,566
Other			
Acceptances		6,866	6,893
Obligations related to securities sold short		16,368	12,849
Obligations related to securities sold under repurchase agreements and securities loaned ⁽¹⁾	Note 8	33,859	21,900
Derivative financial instruments	Note 16	12,923	6,852
Liabilities related to transferred receivables	Notes 4 and 8	22,855	21,312
Other liabilities	Note 14	5,718	6,177
		98,589	75,983
Subordinated debt	Note 15	775	773
Equity			
Equity attributable to the Bank's shareholders and holders of other equity instruments	Notes 18 and 22		
Preferred shares and other equity instruments		2,950	2,450
Common shares		3,057	2,949
Contributed surplus		47	51
Retained earnings		10,444	9,312
Accumulated other comprehensive income		(118)	16
		16,380	14,778
Non-controlling interests	Note 19	3	358
		16,383	15,136
		331,625	281,458

The accompanying notes are an integral part of these audited consolidated financial statements.

(1) As at October 31, 2020, *Obligations related to securities sold under repurchase agreements and securities loaned* include term repurchase transactions with the Bank of Canada, for which the underlying asset is a Bank issued security such as bearer deposit notes and covered bonds.

Louis Vachon
President and Chief Executive Officer

Karen Kinsley
Director

Consolidated Statements of Income

Year ended October 31		2020	2019
Interest income			
Loans		5,915	6,468
Securities at fair value through profit or loss		1,140	1,086
Securities at fair value through other comprehensive income		224	195
Securities at amortized cost		211	210
Deposits with financial institutions		88	215
		7,578	8,174
Interest expense			
Deposits		2,552	3,468
Liabilities related to transferred receivables		392	444
Subordinated debt		19	25
Other		360	641
		3,323	4,578
Net interest income⁽¹⁾		4,255	3,596
Non-interest income			
Underwriting and advisory fees		397	314
Securities brokerage commissions		195	178
Mutual fund revenues		477	449
Trust service revenues		675	609
Credit fees		467	417
Card revenues		138	175
Deposit and payment service charges		262	271
Trading revenues (losses)	Note 21	604	829
Gains (losses) on non-trading securities, net		93	77
Insurance revenues, net		128	136
Foreign exchange revenues, other than trading		104	96
Share in the net income of associates and joint ventures	Note 9	28	34
Other	Note 10	104	251
		3,672	3,836
Total revenues		7,927	7,432
Non-interest expenses			
Compensation and employee benefits		2,713	2,532
Occupancy	Note 14	291	298
Technology	Notes 10 and 11	805	704
Communications		58	62
Professional fees		244	249
Other		434	456
		4,545	4,301
Income before provisions for credit losses and income taxes		3,382	3,131
Provisions for credit losses	Note 7	846	347
Income before income taxes		2,536	2,784
Income taxes	Note 24	453	462
Net income		2,083	2,322
Net income attributable to			
Preferred shareholders and holders of other equity instruments		118	116
Common shareholders		1,923	2,140
Bank shareholders and holders of other equity instruments		2,041	2,256
Non-controlling interests		42	66
		2,083	2,322
Earnings per share (dollars)	Note 25		
Basic		5.73	6.39
Diluted		5.70	6.34
Dividends per common share (dollars)	Note 18	2.84	2.66

The accompanying notes are an integral part of these audited consolidated financial statements.

(1) *Net interest income* includes dividend income. For additional information, see Note 1 to these audited consolidated financial statements.

Consolidated Statements of Comprehensive Income

Year ended October 31	2020	2019
Net income	2,083	2,322
Other comprehensive income, net of income taxes		
Items that may be subsequently reclassified to net income		
Net foreign currency translation adjustments		
Net unrealized foreign currency translation gains (losses) on investments in foreign operations	43	(9)
Net foreign currency translation (gains) losses on investments in foreign operations reclassified to net income	56	(2)
Impact of hedging net foreign currency translation gains (losses)	(14)	4
Impact of hedging net foreign currency translation (gains) losses reclassified to net income	(20)	–
	65	(7)
Net change in debt securities at fair value through other comprehensive income		
Net unrealized gains (losses) on debt securities at fair value through other comprehensive income	240	54
Net (gains) losses on debt securities at fair value through other comprehensive income reclassified to net income	(155)	(53)
Change in allowances for credit losses on debt securities at fair value through other comprehensive income reclassified to net income	2	–
	87	1
Net change in cash flow hedges		
Net gains (losses) on derivative financial instruments designated as cash flow hedges	(271)	(137)
Net (gains) losses on designated derivative financial instruments reclassified to net income	(6)	(20)
	(277)	(157)
Share in the other comprehensive income of associates and joint ventures	3	3
Items that will not be subsequently reclassified to net income		
Remeasurements of pension plans and other post-employment benefit plans	238	(135)
Net gains (losses) on equity securities designated at fair value through other comprehensive income	(2)	(21)
Net fair value change attributable to credit risk on financial liabilities designated at fair value through profit or loss	(44)	5
	192	(151)
Total other comprehensive income (loss), net of income taxes	70	(311)
Comprehensive income	2,153	2,011
Comprehensive income attributable to		
Bank shareholders and holders of other equity instruments	2,099	1,946
Non-controlling interests	54	65
	2,153	2,011

The accompanying notes are an integral part of these audited consolidated financial statements.

Consolidated Statements of Comprehensive Income (cont.)

Income Taxes – Other Comprehensive Income

The following table presents the income tax expense or recovery for each component of other comprehensive income.

Year ended October 31	2020	2019
Net foreign currency translation adjustments		
Net unrealized foreign currency translation gains (losses) on investments in foreign operations	(13)	3
Net foreign currency translation (gains) losses on investments in foreign operations reclassified to net income	6	(1)
Impact of hedging net foreign currency translation gains (losses)	(4)	2
Impact of hedging net foreign currency translation (gains) losses reclassified to net income	(18)	2
	(29)	6
Net change in debt securities at fair value through other comprehensive income		
Net unrealized gains (losses) on debt securities at fair value through other comprehensive income	86	19
Net (gains) losses on debt securities at fair value through other comprehensive income reclassified to net income	(56)	(19)
Change in allowances for credit losses on debt securities at fair value through other comprehensive income reclassified to net income	1	–
	31	–
Net change in cash flow hedges		
Net gains (losses) on derivative financial instruments designated as cash flow hedges	(97)	(50)
Net (gains) losses on designated derivative financial instruments reclassified to net income	(2)	(7)
	(99)	(57)
Share in the other comprehensive income of associates and joint ventures	1	–
Remeasurements of pension plans and other post-employment benefit plans	86	(48)
Net gains (losses) on equity securities designated at fair value through other comprehensive income	–	(6)
Net fair value change attributable to credit risk on financial liabilities designated at fair value through profit or loss	(16)	2
	(26)	(103)

The accompanying notes are an integral part of these audited consolidated financial statements.

Consolidated Statements of Changes in Equity

Year ended October 31		2020	2019
Preferred shares and other equity instruments at beginning	Note 18	2,450	2,450
Issuances of preferred shares and other equity instruments		500	–
Preferred shares and other equity instruments at end		2,950	2,450
Common shares at beginning	Note 18	2,949	2,822
Issuances of common shares pursuant to the Stock Option Plan		111	122
Repurchases of common shares for cancellation		(5)	(40)
Impact of shares purchased or sold for trading		2	45
Common shares at end		3,057	2,949
Contributed surplus at beginning		51	57
Stock option expense	Note 22	9	11
Stock options exercised		(13)	(15)
Other		–	(2)
Contributed surplus at end		47	51
Retained earnings at beginning		9,312	8,472
Impact of adopting IFRS 15 on November 1, 2018		–	(4)
Net income attributable to the Bank's shareholders and holders of other equity instruments		2,041	2,256
Dividends on preferred shares and distributions on other equity instruments	Note 18	(119)	(116)
Dividends on common shares	Note 18	(953)	(892)
Premium paid on common shares repurchased for cancellation	Note 18	(25)	(241)
Issuance expenses for shares and other equity instruments, net of income taxes		(5)	–
Remeasurements of pension plans and other post-employment benefit plans		238	(135)
Net gains (losses) on equity securities designated at fair value through other comprehensive income		(2)	(21)
Net fair value change attributable to the credit risk on financial liabilities designated at fair value through profit or loss		(44)	5
Impact of a financial liability resulting from put options written to non-controlling interests		–	(12)
Other		1	–
Retained earnings at end		10,444	9,312
Accumulated other comprehensive income at beginning		16	175
Net foreign currency translation adjustments		53	(6)
Net change in unrealized gains (losses) on debt securities at fair value through other comprehensive income		87	1
Net change in gains (losses) on cash flow hedges		(277)	(157)
Share in the other comprehensive income of associates and joint ventures		3	3
Accumulated other comprehensive income at end		(118)	16
Equity attributable to the Bank's shareholders and holders of other equity instruments		16,380	14,778
Non-controlling interests at beginning	Note 19	358	379
Purchase of the non-controlling interest of the Advanced Bank of Asia Limited subsidiary		–	(30)
Redemption of trust units issued by NBC Asset Trust		(350)	–
Net income attributable to non-controlling interests		42	66
Other comprehensive income attributable to non-controlling interests		12	(1)
Distributions to non-controlling interests		(59)	(56)
Non-controlling interests at end		3	358
Equity		16,383	15,136

Accumulated Other Comprehensive Income

As at October 31		2020	2019
Accumulated other comprehensive income			
Net foreign currency translation adjustments		61	8
Net unrealized gains (losses) on debt securities at fair value through other comprehensive income		101	14
Net gains (losses) on instruments designated as cash flow hedges		(283)	(6)
Share in the other comprehensive income of associates and joint ventures		3	–
		(118)	16

The accompanying notes are an integral part of these audited consolidated financial statements.

Consolidated Statements of Cash Flows

Year ended October 31	2020	2019
Cash flows from operating activities		
Net income	2,083	2,322
Adjustments for		
Provisions for credit losses	846	347
Depreciation of premises and equipment, including right-of-use assets	196	104
Amortization of intangible assets	252	224
Gain on disposal of shares of Fiera Capital Corporation	Note 6	(79)
Remeasurement at fair value of an investment	Note 6	33
Provisions for onerous contracts	Note 14	45
Gain on disposal of premises and equipment	Note 10	(50)
Impairment losses on premises and equipment and on intangible assets	Notes 10 and 11	57
Foreign currency translation loss on disposal of subsidiaries	Note 30	–
Deferred taxes	(158)	(207)
Losses (gains) on sales of non-trading securities, net	(93)	(77)
Share in the net income of associates and joint ventures	(28)	(34)
Stock option expense	9	11
Change in operating assets and liabilities		
Securities at fair value through profit or loss	(16,503)	(6,006)
Securities purchased under reverse repurchase agreements and securities borrowed	3,211	436
Loans and acceptances, net of securitization	(10,883)	(6,221)
Deposits	26,312	18,736
Obligations related to securities sold short	3,519	(4,931)
Obligations related to securities sold under repurchase agreements and securities loaned	11,959	1,902
Derivative financial instruments, net	778	1,295
Securitization – Credit cards	(846)	1
Interest and dividends receivable and interest payable	(156)	(41)
Current tax assets and liabilities	(167)	(7)
Other items	(445)	420
	19,981	8,280
Cash flows from financing activities		
Issuances of preferred shares and other equity instruments	500	–
Issuances of common shares (including the impact of shares purchased for trading)	100	152
Repurchases of common shares for cancellation	(30)	(281)
Purchase of the non-controlling interest of the Advanced Bank of Asia Limited subsidiary	–	(84)
Redemption of trust units issued by NBC Asset Trust	Note 19	(350)
Repayments of lease liabilities	(88)	–
Issuance expenses for shares and other equity instruments	(5)	–
Dividends paid on shares and distributions on other equity instruments	(1,300)	(992)
Distributions to non-controlling interests	(59)	(56)
	(1,232)	(1,261)
Cash flows from investing activities		
Disposal of shares of Fiera Capital Corporation	Note 6	–
Disposal of premises and equipment, excluding right-of-use assets	Note 10	–
Net change in investments in associates and joint ventures	(4)	(16)
Purchases of non-trading securities	(16,247)	(16,355)
Maturities of non-trading securities	1,873	1,893
Sales of non-trading securities	11,543	8,413
Net change in premises and equipment, excluding right-of-use assets	(182)	(144)
Net change in intangible assets	(332)	(359)
	(3,349)	(6,253)
Impact of currency rate movements on cash and cash equivalents	44	176
Increase (decrease) in cash and cash equivalents	15,444	942
Cash and cash equivalents at beginning	13,698	12,756
Cash and cash equivalents at end⁽¹⁾	29,142	13,698
Supplementary information about cash flows from operating activities		
Interest paid	3,535	4,545
Interest and dividends received	7,634	8,100
Income taxes paid	536	520

The accompanying notes are an integral part of these audited consolidated financial statements.

(1) This item is the equivalent of Consolidated Balance Sheet item *Cash and deposits with financial institutions*. It includes an amount of \$5.9 billion as at October 31, 2020 (\$4.1 billion as at October 31, 2019) for which there are restrictions.

Notes to the Audited Consolidated Financial Statements

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Note 1 – Basis of Presentation and Summary of Significant Accounting Policies

National Bank of Canada (the Bank) is a financial institution incorporated and domiciled in Canada and whose shares are listed on the Toronto Stock Exchange. Its head office is located at 600 De La Gauchetière Street West in Montreal, Quebec, Canada. The Bank is a chartered bank under Schedule 1 of the *Bank Act* (Canada) and is regulated by the Office of the Superintendent of Financial Institutions Canada (OSFI).

National Bank of Canada offers financial services to individuals, businesses, institutional clients and governments throughout Canada as well as specialized services at the international level. It operates four business segments, namely, the Personal and Commercial segment, the Wealth Management segment, the Financial Markets segment, and the U.S. Specialty Finance and International (USSF&I) segment. Its full line of services includes banking and investing solutions for individuals and businesses, corporate banking and investment banking services, securities brokerage, insurance, and wealth management.

On December 1, 2020, the Board of Directors (the Board) authorized the publication of the Bank's audited annual consolidated financial statements (the consolidated financial statements) for the year ended October 31, 2020.

Basis of Presentation

The Bank's consolidated financial statements are prepared in accordance with International Financial Reporting Standards (IFRS), as issued by the International Accounting Standards Board (IASB). The financial statements also comply with section 308(4) of the *Bank Act* (Canada), which states that, except as otherwise specified by the Office of the Superintendent of Financial Institutions (Canada) (OSFI), the consolidated financial statements are to be prepared in accordance with IFRS. IFRS represent Canadian generally accepted accounting principles (GAAP). None of the OSFI accounting requirements are exceptions to IFRS.

The accounting policies covered in the Summary of Significant Accounting Policies section have been applied consistently to all periods presented except for the changes described hereafter in the Accounting Policy Changes section, which have been applied since November 1, 2019 following adoption of IFRS 16 – *Leases* (IFRS 16) as well as its early adoption of amendments to IFRS 7 – *Financial Instruments: Disclosures* (IFRS 7) and IAS 39 – *Financial Instruments: Recognition and Measurement* (IAS 39) arising from the first phase of the interest benchmark reform project. As permitted by IFRS 16, the Bank did not restate comparative consolidated financial statements.

During the year ended October 31, 2020, the Bank modified the presentation of the Consolidated Statement of Income by adding the subtotal *Income before provisions for credit losses and income taxes*. Following this change, the Provisions for credit losses item was moved below this new subtotal and the comparative figures for the year ended October 31, 2019 were adjusted accordingly.

Unless otherwise indicated, all amounts are expressed in Canadian dollars, which is the Bank's functional and presentation currency.

Note 1 – Basis of Presentation and Summary of Significant Accounting Policies (cont.)

Accounting Policy Changes

The Bank adopted the following new and amended standards on November 1, 2019.

IFRS 16 – Leases

Effective November 1, 2019, the Bank adopted IFRS 16, which replaces IAS 17 – *Leases* (IAS 17) and related interpretations. The standard prescribes new guidance for identifying a lease as well as the recognition, measurement, presentation and disclosure of leases. IFRS 16 introduces a single on-balance-sheet accounting model for lessees. The distinction between operating and financing leases no longer applies. As for lessors, IFRS 16 substantially carries forward the lessor accounting in the previous accounting standard, with the distinction between operating leases and finance leases being retained. IFRS 16 requires a lessee to recognize a right-of-use asset representing its right to use the leased asset and a corresponding lease liability representing its obligation to make lease payments for all leases.

The Bank elected to adopt IFRS 16 using a modified retrospective approach and, accordingly, the information presented for 2019 remains as previously reported under IAS 17.

Impact of Transition to IFRS 16

On November 1, 2019, the Bank recognized right-of-use assets of \$648 million (\$668 million reduced by provisions for onerous lease contracts of \$20 million previously recorded in *Other liabilities – Other items* as at October 31, 2019) and lease liabilities of \$668 million.

The Bank used the following practical expedients when applying IFRS 16 to leases previously classified as operating leases. The Bank:

- excluded initial direct costs from the measurement of the right-of-use assets at the date of initial application;
- relied on previous assessments of whether or not a lease is an onerous contract;
- did not separate lease components and non-lease components and treated them as a single lease component;
- applied the recognition exemption to leases for which the lease term ends within 12 months of the transition date and to leases for which the underlying asset is of low value; and
- elected not to apply IFRS 16 to leases of intangible assets.

The following table presents a reconciliation of the Bank’s operating lease commitments as at October 31, 2019 to the lease liabilities recognized as at November 1, 2019.

Operating lease commitments as at October 31, 2019	691
Extension and termination options reasonably certain to be exercised	70
Impact of discounting using the Bank's incremental borrowing rate as at November 1, 2019	(93)
Lease liabilities recognized as at November 1, 2019	668

For additional information regarding leases, refer to the Summary of Significant Accounting Policies section and to Note 10 to the consolidated financial statements.

Interest Rate Benchmark Reform

Phase 1

In September 2019, in response to uncertainty arising from the phasing-out of benchmark interest rates such as interbank offered rates (IBORs), the IASB issued amendments to its new and former financial instrument standards, IFRS 9 – *Financial Instruments* (IFRS 9) and IAS 39 as well as to the related standard on disclosures, IFRS 7. On November 1, 2019, the Bank early adopted the amendments to IFRS 7 and IAS 39. When the Bank had adopted IFRS 9 on November 1, 2017, it had made an accounting policy choice to continue applying the IAS 39 hedge accounting requirements.

The amendments to IAS 39 provide temporary relief from applying specific hedge accounting requirements to all hedging relationships directly affected by interest rate benchmark reform. A hedging relationship is directly affected by interest rate benchmark reform only if the reform gives rise to uncertainties about (a) the interest rate benchmark (contractually or non-contractually specified) designated as a hedged risk; and/or (b) the timing or the amount of interest rate benchmark-based cash flows of the hedged item or of the hedging instrument. The amendments modify specific hedge accounting requirements so that entities would apply those hedge accounting requirements assuming that the interest rate benchmark is not altered as a result of the interest rate benchmark reform, thereby allowing hedge accounting to continue during the period of uncertainty prior to the transition to alternative benchmark rates. Mandatory application of the amendments ends at the earlier of the following: when the uncertainty arising from interest rate benchmark reform is no longer present and when the hedging relationship is discontinued. For additional information, refer to the Summary of Significant Accounting Policies section – Derivative Financial Instruments Designated as Hedging Instruments and to Note 17 to the consolidated financial statements.

For the Bank, the effective date of these amendments is November 1, 2020. However, early adoption is permitted. For additional information on Interest Rate Benchmark Reform – Phase 2, refer to Note 2 to the consolidated financial statements.

Summary of Significant Accounting Policies

Judgments, Estimates and Assumptions

In preparing consolidated financial statements in accordance with IFRS, management must exercise judgment and make estimates and assumptions that affect the reporting date carrying amounts of assets and liabilities, net income, and related information. Furthermore, certain accounting policies require complex judgments and estimates because they apply to matters that are inherently uncertain, in particular accounting policies applicable to the following: the fair value determination of financial instruments, the impairment of financial assets, the impairment of non-financial assets, pension plans and other post-employment benefits, income taxes, provisions, the consolidation of structured entities, and the classification of debt instruments. Descriptions of these judgments and estimates are provided in each of the notes related thereto in the consolidated financial statements. Actual results could therefore differ from these estimates, in which case the impacts are recognized in the consolidated financial statements of future fiscal periods. The accounting policies described in this note provide greater detail about the use of estimates and assumptions and reliance on judgment.

COVID-19 Pandemic Considerations

On March 11, 2020, COVID-19 was declared a global pandemic by the World Health Organization. As a result of the heightened uncertainty associated with the unprecedented nature of the COVID-19 pandemic, developing reliable estimates and applying judgment has become even more challenging. Accounting for expected credit losses (ECL) has become particularly difficult in the current circumstances and requires significant judgment. The ECL model is forward-looking and is based on a probability-weighted approach. Measurement of ECLs at each reporting period reflects reasonable and supportable information about past events, current conditions, and forecasts of future events and economic conditions. During this period of greater economic uncertainty, it is very difficult to forecast future events and the macroeconomic inputs used in ECL modelling. Determining macroeconomic scenarios and assigning probabilities to these scenarios requires significant judgment. Consideration is given both to the effects of COVID-19 and the significant government support measures. The Bank applies expert credit judgment to adjust modelled ECL results when it becomes evident that known or expected risk factors and information were not considered in the credit rating and modelling process. As a result of COVID-19 and the recent economic downturn, significant measurement uncertainty exists in determining ECLs, and measurement is subject to significant judgment. The uncertainty regarding key inputs used in measuring ECLs is outlined in Note 7 to the consolidated financial statements.

In response to the economic impact of COVID-19, the Canadian government has established, among other financial relief programs, the Canada Emergency Business Account (CEBA) program to provide interest-free loans of up to \$40,000 for small and medium-sized businesses and non-profit organizations. The Bank and several other financial institutions are authorized to implement the CEBA program in cooperation with Export Development Canada. This program is guaranteed by the Government of Canada and aims to help businesses cope with the economic challenges resulting from the COVID-19 crisis. Loans made by the Bank to its business clients under CEBA are not recognized on the Bank's Consolidated Balance Sheet, since the conditions of a qualifying pass-through arrangement have been met and the Bank has determined that substantially all the risks and rewards of ownership of the loans have been transferred to the Canadian government. The Bank receives an administration fee as reimbursement for the costs of administering this Canadian government program and this fee is recognized in the Consolidated Statement of Income as a reduction of *Non-interest expenses – Other*. As at October 31, 2020, loans of \$1.2 billion had been provided to the Bank's clients under the CEBA program.

Note 1 – Basis of Presentation and Summary of Significant Accounting Policies (cont.)

Basis of Consolidation

Subsidiaries

These consolidated financial statements include all the assets, liabilities, operating results and cash flows of the Bank and its subsidiaries, after elimination of intercompany transactions and balances. Subsidiaries are entities, including structured entities, controlled by the Bank. A structured entity is an entity created to accomplish a narrow and well-defined objective and is designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, such as when voting rights relate solely to administrative tasks and the relevant activities are directed by means of contractual arrangements.

Management must exercise judgment in determining whether the Bank must consolidate an entity. The Bank controls an entity only if the following three conditions are met:

- it has decision-making authority regarding the entity's relevant activities;
- it has exposure or rights to variable returns from its involvement with the entity; and
- it has the ability to use its power to affect the amount of the returns.

When determining decision-making authority, the Bank considers many factors, including the existence and effect of actual and potential voting rights held by the Bank that can be exercised as well as the holding of instruments that are convertible into voting shares. In addition, the Bank must determine whether, as an investor with decision-making rights, it acts as a principal or agent.

Based on these principles, an assessment of control is performed at the inception of a relationship between any entity and the Bank. When performing this assessment, the Bank considers all facts and circumstances, and it must reassess whether it still controls an investee if facts and circumstances indicate that there are changes to one or more of the three conditions of control.

The Bank consolidates the entities it controls from the date on which control is obtained and ceases to consolidate them from the date control ceases. The Bank uses the acquisition method to account for the acquisition of a subsidiary from a third party on the date control is obtained.

Non-Controlling Interests

Non-controlling interests in subsidiaries represent the equity interests held by third parties in the Bank's subsidiaries and are presented in total *Equity*, separately from *Equity attributable to the Bank's shareholders and holders of other equity instruments*. The non-controlling interests' proportionate shares of the net income and other comprehensive income of the Bank's subsidiaries are presented separately in the Consolidated Statement of Income and in the Consolidated Statement of Comprehensive Income, respectively.

With respect to units issued to third parties by mutual funds and certain other funds that are consolidated, they are presented at fair value in *Other liabilities* on the Consolidated Balance Sheet. Lastly, changes in ownership interests in subsidiaries that do not result in a loss of control are recognized as equity transactions. The difference between the adjustment in the carrying value of the non-controlling interest and the fair value of the consideration paid or received is recognized directly in *Equity attributable to the Bank's shareholders and holders of other equity instruments*.

Investments in Associates and Joint Ventures

The Bank exercises significant influence over an entity when it has the power to participate in the financial and operating policy decisions of the investee. The Bank has joint control when there's a contractually agreed sharing of control of an arrangement, and joint control exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

Investments in associates, i.e., entities over which the Bank exercises significant influence, and investments in joint ventures, i.e., entities over which the Bank has rights to the net assets and exercises joint control, are accounted for using the equity method. Under the equity method, the investment is initially recorded at cost and, following acquisition, the Bank's shares in the net income and in the other comprehensive income are recognized, respectively, in *Non-interest income* in the Consolidated Statement of Income and in *Other comprehensive income* in the Consolidated Statement of Comprehensive Income. The carrying value of the investment is adjusted by an equivalent amount on the Consolidated Balance Sheet and reduced by distributions received.

Translation of Foreign Currencies

The consolidated financial statements are presented in Canadian dollars, which is the Bank's functional and presentation currency. Each foreign operation of the Bank determines its own functional currency, and the items reported in the financial statements of each foreign operation are measured using that currency.

Monetary items and non-monetary items measured at fair value and denominated in foreign currencies are translated into the functional currency at exchange rates prevailing at the Consolidated Balance Sheet date. Non-monetary items not measured at fair value are translated into the functional currency at historical rates. Revenues and expenses denominated in foreign currencies are translated at the average exchange rates for the period. Translation gains and losses are recognized in *Non-interest income* in the Consolidated Statement of Income, except for equity instruments designated at fair value through other comprehensive income, for which unrealized gains and losses are recorded in *Other comprehensive income* and will not be subsequently reclassified to net income.

In the consolidated financial statements, the assets and liabilities of all foreign operations are translated into the Bank's functional currency at the exchange rates prevailing at the Consolidated Balance Sheet date, whereas the revenues and expenses of such foreign operations are translated into the Bank's functional currency at the average exchange rates for the period. Any goodwill resulting from the acquisition of a foreign operation that does not have the same functional currency as the parent company, and any fair value adjustments to the carrying amounts of assets and liabilities resulting from the acquisition, are treated as assets and liabilities of the foreign operation and translated at the exchange rates prevailing at the Consolidated Balance Sheet date. Unrealized translation gains and losses relating to foreign operations, along with the impact of hedges and income taxes on the related results, are presented in *Other comprehensive income*. On disposal of a foreign operation, any accumulated translation gains and losses, along with the related hedges, recorded in the *Accumulated other comprehensive income* item of this foreign operation, are reclassified to *Non-interest income* in the Consolidated Statement of Income.

Classification and Measurement of Financial Instruments

At initial recognition, all financial instruments are recorded at fair value on the Consolidated Balance Sheet. At initial recognition, financial assets must be classified as subsequently measured at fair value through other comprehensive income, at amortized cost, or at fair value through profit or loss. The Bank determines the classification based on the contractual cash flow characteristics of the financial assets and on the business model it uses to manage these financial assets. At initial recognition, financial liabilities are classified as subsequently measured at amortized cost or as at fair value through profit or loss.

For the purpose of classifying a financial asset, the Bank must determine whether the contractual cash flows associated with the financial asset are solely payments of principal and interest on the principal amount outstanding. The principal is generally the fair value of the financial asset at initial recognition. The interest consists of consideration for the time value of money, for the credit risk associated with the principal amount outstanding during a particular period, and for other basic lending risks and costs as well as of a profit margin. If the Bank determines that the contractual cash flows associated with a financial asset are not solely payments of principal and interest, the financial assets must be classified as measured at fair value through profit or loss.

When classifying financial assets, the Bank determines the business model used for each portfolio of financial assets that are managed together to achieve a same business objective. The business model reflects how the Bank manages its financial assets and the extent to which the financial asset cash flows are generated by the collection of the contractual cash flows, the sale of the financial assets, or both. The Bank determines the business model using scenarios that it reasonably expects to occur. Consequently, the business model determination is a matter of fact and requires the use of judgment and consideration of all the relevant evidence available at the date of determination.

A financial asset portfolio falls within a "hold to collect" business model when the Bank's primary objective is to hold these financial assets in order to collect contractual cash flows from them and not to sell them. When the Bank's objective is achieved both by collecting contractual cash flows and by selling the financial assets, the financial asset portfolio falls within a "hold to collect and sell" business model. In this type of business model, collecting contractual cash flows and selling financial assets are both integral components to achieving the Bank's objective for this financial asset portfolio. Financial assets are mandatorily measured at fair value through profit or loss if they do not fall within either a "hold to collect" business model or a "hold to collect and sell" business model.

Note 1 – Basis of Presentation and Summary of Significant Accounting Policies (cont.)

Financial Instruments Designated at Fair Value Through Profit or Loss

A financial asset may be irrevocably designated at fair value through profit or loss at initial recognition if certain conditions are met. The Bank may apply this option if, consistent with a documented risk management strategy, doing so eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise from measuring financial assets or liabilities or recognizing gains and losses on them on different bases and if the fair values are reliable. Financial assets thus designated are recognized at fair value, and any change in fair value is recorded in *Non-interest income* in the Consolidated Statement of Income. Interest income arising from these financial instruments designated at fair value through profit or loss is recorded in *Net interest income* in the Consolidated Statement of Income.

A financial liability may be irrevocably designated at fair value through profit or loss when it is initially recognized. Financial liabilities thus designated are recognized at fair value, and any changes in fair value attributable to changes in the Bank's own credit risk are recognized in *Other comprehensive income* unless these changes offset the amounts recognized in *Net income*. Fair value changes not attributable to the Bank's own credit risk are recognized in *Non-interest income* in the Consolidated Statement of Income. The amounts recognized in *Other comprehensive income* will not be subsequently reclassified to *Net income*. Interest expense arising from these financial liabilities designated at fair value through profit or loss is recorded in the *Net interest income* item of the Consolidated Statement of Income. The Bank may use this option in the following cases:

- if, consistent with a documented risk management strategy, using this option allows the Bank to eliminate or significantly reduce a measurement or recognition inconsistency that would otherwise arise from measuring financial assets or liabilities on different bases, and if the fair values are reliable.
- if a group of financial assets and financial liabilities to which an instrument belongs is managed and its performance is evaluated on a fair value basis, in accordance with the Bank's documented risk management or investment strategy, and information is provided on that basis to senior management. Consequently, the Bank may use this option if it has implemented a documented risk management strategy to manage a group of financial instruments together on the fair value basis, if it can demonstrate that significant financial risks are eliminated or significantly reduced, and if the fair values are reliable.
- for hybrid financial instruments with one or more embedded derivatives that would significantly modify the cash flows of the financial instruments and that would otherwise be bifurcated and accounted for separately.

Financial Instruments Designated at Fair Value Through Other Comprehensive Income

At initial recognition, an investment in an equity instrument that is neither held for trading nor a contingent consideration recognized in a business combination may be irrevocably designated as being at fair value through other comprehensive income. In accordance with this designation, any change in fair value is recognized in *Other comprehensive income* with no subsequent reclassification to net income. Dividend income is recorded in *Interest income* in the Consolidated Statement of Income.

Securities Measured at Fair Value Through Other Comprehensive Income

Securities measured at fair value through other comprehensive income include: (i) debt securities for which the contractual terms of the financial asset give rise, on specified dates, to cash flows that are solely payments of principal and interest on the principal amount outstanding and that fall within a "hold to collect and sell" business model and (ii) equity securities designated at fair value through other comprehensive income with no subsequent reclassification of gains and losses to net income.

The Bank recognizes securities transactions at fair value through other comprehensive income on the trade date, and the transaction costs are capitalized. Interest income and dividend income are recognized in *Interest income* in the Consolidated Statement of Income.

Debt Securities Measured at Fair Value Through Other Comprehensive Income

Debt securities measured at fair value through other comprehensive income are recognized at fair value. Unrealized gains and losses are recognized, net of expected credit losses and income taxes, and provided that they are not hedged by derivative financial instruments in a fair value hedging relationship, in *Other comprehensive income*. When the securities are sold, realized gains or losses, determined on an average cost basis, are reclassified to *Non-interest income – Gains (losses) on non-trading securities, net* in the Consolidated Statement of Income. Premiums, discounts and related transaction costs are amortized over the expected life of the instrument to interest income using the effective interest rate method.

Equity Securities Designated at Fair Value Through Other Comprehensive Income

Equity securities designated at fair value through other comprehensive income are recognized at fair value. Unrealized gains and losses are presented, net of income taxes, in *Other comprehensive income* with no subsequent reclassification of realized gains and losses to net income. Transaction costs incurred upon the purchase of such equity securities are not reclassified to net income upon the sale of the securities.

Securities Measured at Amortized Cost

Securities measured at amortized cost include debt securities for which the contractual terms give rise, on specified dates, to cash flows that are solely payments of principal and interest on the principal amount outstanding and that fall within a “hold to collect” business model.

The Bank recognizes these securities transactions at fair value on the trade date, and the transaction costs are capitalized. After initial recognition, debt securities in this category are recorded at amortized cost. Interest income is recognized in *Interest income* in the Consolidated Statement of Income. Premiums, discounts and related transaction costs are amortized over the expected life of the instrument to interest income using the effective interest rate method. Securities measured at amortized cost are presented net of allowances for credit losses on the Consolidated Balance Sheet.

Securities Measured at Fair Value Through Profit or Loss

Securities not classified or designated as measured at fair value through other comprehensive income or at amortized cost are classified as measured at fair value through profit or loss.

Securities measured at fair value through profit or loss include (i) securities held for trading, (ii) securities designated at fair value through profit or loss, (iii) all equity securities other than those designated as measured at fair value through other comprehensive income with no subsequent reclassifications of gains and losses to net income, and (iv) debt securities for which the contractual cash flows are not solely payments of principal and any interest on the principal amount outstanding.

The Bank recognizes securities transactions at fair value through profit or loss on the settlement date on the Consolidated Balance Sheet. Changes in fair value between the trade date and the settlement date are recognized in *Non-interest income* in the Consolidated Statement of Income.

Securities at fair value through profit or loss are recognized at fair value. Interest income, any transaction costs, as well as realized and unrealized gains or losses on securities held for trading are recognized in *Non-interest income – Trading revenues (losses)* in the Consolidated Statement of Income. Dividend income is recorded in *Interest income* in the Consolidated Statement of Income. Interest income on securities designated at fair value through profit or loss is recorded in *Interest income* in the Consolidated Statement of Income. Realized and unrealized gains or losses on these securities are recognized in *Non-interest income – Trading revenues (losses)* in the Consolidated Statement of Income.

Realized and unrealized gains or losses on equity securities at fair value through profit or loss, other than those held for trading, as well as debt securities for which the contractual cash flows are not solely payments of principal and interest on the principal amount outstanding, are recognized in *Non-interest income – Gains (losses) on non-trading securities, net* in the Consolidated Statement of Income. The dividend and interest income on these financial assets are recognized in *Interest income* in the Consolidated Statement of Income.

Securities Purchased Under Reverse Repurchase Agreements, Obligations Related to Securities Sold Under Repurchase Agreements, and Securities Borrowed and Loaned

The Bank recognizes these transactions at amortized cost using the effective interest rate method, except when they are designated at fair value through profit or loss and are recorded at fair value. These transactions are held within a business model whose objective is to collect contractual cash flows, i.e., cash flows that are solely payments of principal and interest on the principal amount outstanding. Securities sold under repurchase agreements remain on the Consolidated Balance Sheet, whereas securities purchased under reverse repurchase agreements are not recognized. Reverse repurchase agreements and repurchase agreements are treated as collateralized lending and borrowing transactions.

The Bank also borrows and lends securities. Securities loaned remain on the Consolidated Balance Sheet while securities borrowed are not recognized. As part of these transactions, the Bank pledges or receives collateral in the form of cash or securities. Collateral pledged in the form of securities remains on the Consolidated Balance Sheet. Collateral received in the form of securities is not recognized on the Consolidated Balance Sheet. Collateral pledged or received in the form of cash is recognized in financial assets or liabilities on the Consolidated Balance Sheet.

When the collateral is pledged or received in the form of cash, the interest income and expense are recorded in *Net interest income* in the Consolidated Statement of Income.

Note 1 – Basis of Presentation and Summary of Significant Accounting Policies (cont.)

Loans

Loans Measured at Amortized Cost

Loans classified as measured at amortized cost include loans originated or purchased by the Bank that are not classified as measured at fair value through profit or loss or designated at fair value through profit or loss. These loans are held within a business model whose objective is to collect contractual cash flows, i.e., cash flows that are solely payments of principal and interest on the principal amount outstanding. All loans originated by the Bank are recognized when cash is advanced to a borrower. Purchased loans are recognized when the cash consideration is paid by the Bank.

All loans are initially recognized at fair value plus directly attributable costs and are subsequently measured at amortized cost using the effective interest rate method, net of an allowance for expected credit losses. For purchased performing loans, the acquisition date fair value adjustment on each loan is amortized to interest income over the expected remaining life of the loan using the effective interest rate method. For purchased credit-impaired loans, the acquisition date fair value adjustment on each loan consists of management's estimate of the shortfall of principal and interest cash flows that the Bank expects to collect and of the time value of money. The time value of money component of the fair value adjustment is amortized to interest income over the remaining life of the loan using the effective interest rate method. Loans are presented net of allowances for credit losses on the Consolidated Balance Sheet.

Loans Measured at Fair Value Through Profit or Loss

Loans classified as measured at fair value through profit or loss, loans designated at fair value through profit or loss, and loans for which the contractual cash flows are not solely payments of principal and interest on the principal amount outstanding are recognized at fair value on the Consolidated Balance Sheet. The interest income on loans at fair value through profit or loss is recorded in *Interest Income* in the Consolidated Statement of Income.

Changes in the fair value of loans classified as at fair value through profit or loss and loans designated at fair value through profit or loss are recognized in *Non-interest income – Trading revenues (losses)* in the Consolidated Statement of Income. With respect to loans whose contractual cash flows are not solely payments of principal and interest on the principal amount outstanding, changes in fair value are recognized in *Non-interest income – Other* in the Consolidated Statement of Income.

Reclassification of Financial Assets

A financial asset, other than a derivative financial instrument or a financial asset that, at initial recognition, was designated as measured at fair value through profit or loss, is reclassified only in rare situations, i.e., when there is a change in the business model used to manage the financial asset. The reclassification is applied prospectively from the reclassification date.

Establishing Fair Value

The fair value of a financial instrument is the price that would be received to sell a financial asset or paid to transfer a financial liability in an orderly transaction in the principal market at the measurement date under current market conditions (i.e., an exit price).

Unadjusted quoted prices in active markets, based on bid prices for financial assets and offered prices for financial liabilities, provide the best evidence of fair value. A financial instrument is considered quoted in an active market when prices in exchange, dealer, broker or principal-to-principal markets are accessible at the measurement date. An active market is one where transactions occur with sufficient frequency and volume to provide quoted prices on an ongoing basis.

When there is no quoted price in an active market, the Bank uses another valuation technique that maximizes the use of relevant observable inputs and minimizes the use of unobservable inputs. The chosen valuation technique incorporates all the factors that market participants would consider when pricing a transaction. Judgment is required when applying a large number of acceptable valuation techniques and estimates to determine fair value. The estimated fair value reflects market conditions on the valuation date and, consequently, may not be indicative of future fair value.

The best evidence of the fair value of a financial instrument at initial recognition is the transaction price, i.e., the fair value of the consideration received or paid. If there is a difference between the fair value at initial recognition and the transaction price, and the fair value is determined using a valuation technique based on observable market inputs or, in the case of a derivative, if the risks are fully offset by other contracts entered into with third parties, this difference is recognized in the Consolidated Statement of Income. In other cases, the difference between the fair value at initial recognition and the transaction price is deferred on the Consolidated Balance Sheet. The amount of the deferred gain or loss is recognized over the term of the financial instrument. The unamortized balance is immediately recognized in net income when (i) observable market inputs can be obtained and support the fair value of the transaction, (ii) the risks associated with the initial contract are substantially offset by other contracts entered into with third parties, (iii) the gain or loss is realized through a cash receipt or payment, or (iv) the transaction matures or is cancelled before maturity.

In certain cases, measurement adjustments are recognized to address factors that market participants would use at the measurement date to determine fair value but that are not included in the measurement technique due to system limitations or uncertainty surrounding the measure. These factors include, but are not limited to, the unobservable nature of inputs used in the valuation model, assumptions about risk such as market risk, credit risk, or risk related to the valuation model, and future administration costs. The Bank may also consider market liquidity risk when determining the fair value of financial instruments when it believes these instruments could be disposed of for a consideration below the fair value otherwise determined due to a lack of market liquidity or an insufficient volume of transactions in a given market.

As permitted when certain criteria are met, the Bank has elected to determine fair value based on net exposure to credit risk or market risk for certain portfolios of financial instruments, mainly derivative financial instruments.

Impairment of Financial Assets

At the end of each reporting period, the Bank applies a three-stage impairment approach to measure the expected credit losses (ECL) on all debt instruments measured at amortized cost or at fair value through other comprehensive income and on loan commitments and financial guarantees that are not measured at fair value. The ECL model is forward looking. Measurement of ECLs at each reporting period reflects reasonable and supportable information about past events, current conditions, and forecasts of future events and economic conditions.

Determining the Stage

The ECL three-stage impairment approach is based on the change in the credit quality of financial assets since initial recognition. If, at the reporting date, the credit risk of non-impaired financial instruments has not increased significantly since initial recognition, these financial instruments are classified in Stage 1, and an allowance for credit losses that is measured, at each reporting date, in an amount equal to 12-month expected credit losses is recorded. When there is a significant increase in credit risk since initial recognition, these non-impaired financial instruments are migrated to Stage 2, and an allowance for credit losses that is measured, at each reporting date, in an amount equal to lifetime expected credit losses is recorded. In subsequent reporting periods, if the credit risk of the financial instrument improves such that there is no longer a significant increase in credit risk since initial recognition, the ECL model requires reverting to Stage 1, i.e., recognition of 12-month expected credit losses. When one or more events that have a detrimental impact on the estimated future cash flows of a financial asset have occurred, the financial asset is considered credit-impaired and is migrated to Stage 3, and an allowance for credit losses equal to lifetime expected losses continues to be recorded or the financial asset is written off. Interest income is calculated on the gross carrying amount for financial assets in Stages 1 and 2 and on the net carrying amount for financial assets in Stage 3.

Assessment of Significant Increase in Credit Risk

In determining whether credit risk has increased significantly, the Bank uses an internal credit risk grading system, external risk ratings, and forward-looking information to assess deterioration in credit quality of a financial instrument. To assess whether or not the credit risk of a financial instrument has increased significantly, the Bank compares the probability of default (PD) occurring over its expected life as at the reporting date with the PD occurring over its expected life on the date of initial recognition and considers reasonable and supportable information indicative of a significant increase in credit risk since initial recognition. The Bank includes relative and absolute thresholds in the definition of significant increase in credit risk and a backstop of 30 days past due. All financial instruments that are 30 days past due are migrated to Stage 2 even if other metrics do not indicate that a significant increase in credit risk has occurred. The assessment of a significant increase in credit risk requires significant judgment.

Measurement of Expected Credit Losses

ECLs are measured as the probability-weighted present value of all expected cash shortfalls over the remaining expected life of the financial instrument, and reasonable and supportable information about past events, current conditions and forecasts of future events and economic conditions is considered. The estimation and application of forward-looking information requires significant judgment. The cash shortfall is the difference between all contractual cash flows owed to the Bank and all cash flows that the Bank expects to receive.

The measurement of ECLs is primarily based on the product of the financial instrument's PD, loss given default (LGD), and exposure at default (EAD). Forward-looking macroeconomic factors such as unemployment rates, housing price indices, interest rates, and the gross domestic product (GDP) are incorporated into the risk parameters. The estimate of expected credit losses reflects an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes. The Bank incorporates three forward-looking macroeconomic scenarios in its ECL calculation process: a base scenario, an upside scenario and a downside scenario. Probability weights are attributed to each scenario. The scenarios and probability weights are reassessed quarterly and are subject to management review. The Bank applies experienced credit judgment to adjust the modelled ECL results when it becomes evident that known or expected risk factors and information were not considered in the credit risk rating and modelling process.

Note 1 – Basis of Presentation and Summary of Significant Accounting Policies (cont.)

ECLs for all financial instruments are recognized in *Provisions for credit losses* in the Consolidated Statement of Income. In the case of debt instruments measured at fair value through other comprehensive income, ECLs are recognized in *Provisions for credit losses* in the Consolidated Statement of Income, and a corresponding amount is recognized in *Other comprehensive income* with no reduction in the carrying amount of the asset on the Consolidated Balance Sheet. As for debt instruments measured at amortized cost, they are presented net of the related allowance for credit losses on the Consolidated Balance Sheet. Allowances for credit losses for off-balance-sheet credit exposures that are not measured at fair value are included in *Other liabilities* on the Consolidated Balance Sheet.

Purchased or Originated Credit-Impaired Financial Assets

On initial recognition of a financial asset, the Bank determines whether the asset is credit-impaired. For financial assets that are credit-impaired upon purchase or origination, the lifetime expected credit losses are reflected in the initial fair value. In subsequent reporting periods, the Bank recognizes only the cumulative changes in these lifetime ECLs since initial recognition as an allowance for credit losses. The Bank recognizes changes in ECLs in *Provisions for credit losses* in the Consolidated Statement of Income, even if the lifetime ECLs are less than ECLs that were included in the estimated cash flows on initial recognition.

Definition of Default

The definition of default used by the Bank to measure ECLs and transfer financial instruments between stages is consistent with the definition of default used for internal credit risk management purposes. The Bank considers a financial asset, other than a credit card receivable, to be credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred or when contractual payments are 90 days past due. Credit card receivables are considered credit-impaired and are fully written off at the earlier of the following: when a notice of bankruptcy is received, a settlement proposal is made, or contractual payments are 180 days past due.

Write-Offs

A financial asset and its related allowance for credit losses are normally written off in whole or in part when the Bank considers the probability of recovery to be non-existent and when all guarantees and other remedies available to the Bank have been exhausted or if the borrower is bankrupt or winding up and balances owing are not likely to be recovered.

Derecognition of Financial Assets and Securitization

A financial asset is considered for derecognition when the Bank has transferred contractual rights to receive the cash flows or assumed an obligation to transfer these cash flows to a third party. The Bank derecognizes a financial asset when it considers that substantially all the risks and rewards of ownership of the asset have been transferred or when the contractual rights to the cash flows of the financial asset expire. When the Bank considers that it has retained substantially all the risks and rewards of ownership of the transferred asset, it continues to recognize the financial asset and, if applicable, recognizes a financial liability on the Consolidated Balance Sheet. If, due to a derivative financial instrument, the transfer of a financial asset does not result in derecognition, the derivative financial instrument is not recognized on the Consolidated Balance Sheet.

When the Bank has neither transferred nor retained substantially all the risks and rewards of ownership of the financial asset, it derecognizes the financial asset if it no longer controls. Any rights and obligations retained following the asset transfer are recognized separately as an asset or liability. If the Bank retains control of the financial asset, it continues to recognize the asset to the extent of its continuing involvement in that asset, i.e., to the extent to which it is exposed to changes in the value of the transferred asset.

In order to diversify its funding sources, the Bank participates in two Canada Mortgage and Housing Corporation (CMHC) securitization programs: the Mortgage-Backed Securities Program under the *National Housing Act* (Canada) (NHA) and Canada Mortgage Bond (CMB) program. Under the first program, the Bank issues NHA securities backed by insured residential mortgages and, under the second, the Bank sells NHA securities to Canada Housing Trust (CHT). As part of these transactions, the Bank retains substantially all the risks and rewards related to ownership of the mortgage loans sold. Therefore, the insured mortgage loans securitized under the CMB program continue to be recognized in the *Loans* item of the Bank's Consolidated Balance Sheet and the liabilities for the considerations received from the transfer are recognized in *Liabilities related to transferred receivables* on the Consolidated Balance Sheet. Moreover, insured mortgage loans securitized and retained by the Bank continue to be recognized in *Loans* on the Consolidated Balance Sheet.

Derecognition of Financial Liabilities

A financial liability is derecognized when the obligation is discharged, cancelled or expires. The difference between the carrying value of the financial liability transferred and the consideration paid is recognized in the Consolidated Statement of Income.

Cash and Deposits With Financial Institutions

Cash and deposits with financial institutions consist of cash and cash equivalents, amounts pledged as collateral as well as amounts placed in escrow. Cash comprises cash and bank notes. Cash equivalents consist of deposits with the Bank of Canada, deposits with financial institutions, including net receivables related to cheques and other items in the clearing process as well as the net amount of cheques and other items in transit.

Acceptances and Customers' Liability Under Acceptances

The potential liability of the Bank under acceptances is recorded as a customer commitment liability on the Consolidated Balance Sheet. The Bank's potential recourse vis à vis clients is recorded as an equivalent offsetting asset. Fees are recorded in *Non-interest income* in the Consolidated Statement of Income.

Obligations Related to Securities Sold Short

This financial liability represents the Bank's obligation to deliver the securities it sold but did not own at the time of sale. Obligations related to securities sold short are recorded at fair value and presented as liabilities on the Consolidated Balance Sheet. Realized and unrealized gains and losses are recognized in *Non-interest income* in the Consolidated Statement of Income.

Derivative Financial Instruments

In the normal course of business, the Bank uses derivative financial instruments to meet the needs of its clients, to generate trading activity revenues, and to manage its exposure to interest rate risk, foreign exchange risk, credit risk and other market risks.

All derivative financial instruments are measured at fair value on the Consolidated Balance Sheet. Derivative financial instruments with a positive fair value are included in assets, and derivative financial instruments with a negative fair value are included in liabilities on the Consolidated Balance Sheet. Where there are offsetting financial assets and financial liabilities, the net fair value of certain derivative financial instruments is reported either as an asset or as a liability.

Embedded Derivative Financial Instruments

An embedded derivative is a component of a hybrid contract that also includes a non-derivative host, the effect being that some of the cash flows of the combined instrument vary in a way similar to a stand-alone derivative. An embedded derivative causes some or all of the cash flows that otherwise would be required by the contract to be modified according to a specified interest rate, financial instrument price, commodity price, foreign exchange rate, index of prices or rates, credit rating or credit index, or other variable, provided in the case of a non-financial variable that the variable is not specific to one of the parties to the contract.

A derivative embedded in a financial liability is separated from the host contract and treated as a separate derivative if, and only if, the following three conditions are met: the economic characteristics and risks of the embedded derivative are not closely related to those of the host contract, the embedded derivative is a separate instrument that meets the definition of a derivative financial instrument, and the hybrid contract is not measured at fair value through profit or loss.

Embedded derivatives that are separately accounted for are measured at fair value on the Consolidated Balance Sheet, and subsequent changes in fair value are recognized in *Non-interest income* in the Consolidated Statement of Income. In general, all embedded derivatives are presented on a combined basis with the host contract. However, certain embedded derivatives that are separated from the host contract are presented in *Derivative financial instruments* on the Consolidated Balance Sheet.

Held-for-Trading Derivative Financial Instruments

Derivative financial instruments are recognized at fair value, and the realized and unrealized gains and losses (including interest income and expense) are recorded in *Non-interest income* in the Consolidated Statement of Income.

Derivative Financial Instruments Designated as Hedging Instruments

Policy

The purpose of a hedging transaction is to modify the Bank's exposure to one or more risks by creating an offset between changes in the fair value of, or the cash flows attributable to, the hedged item and the hedging instrument. Hedge accounting ensures that offsetting gains, losses, revenues and expenses are recognized in the Consolidated Statement of Income in the same period or periods.

Documenting and Assessing Effectiveness

The Bank designates and formally documents each hedging relationship, at its inception, by detailing the risk management objective and the hedging strategy. The documentation identifies the specific asset, liability, or cash flows being hedged, the related hedging instrument, the nature of the specific risk exposure or exposures being hedged, the intended term of the hedging relationship, and the method for assessing the effectiveness or ineffectiveness of the hedging relationship. At the inception of the hedging relationship, and for every financial reporting period for which the hedge has been designated, the Bank ensures that the hedging relationship is highly effective and consistent with its originally documented risk management objective and strategy. When a hedging relationship meets the hedge accounting requirements, it is designated as either a fair value hedge, a cash flow hedge or a foreign exchange hedge of a net investment in a foreign operation.

Interest Rate Benchmark Reform

A hedging relationship is directly affected by interest rate benchmark reform such as Interbank Offered Rates (IBORs), only if the reform gives rise to uncertainties about (a) the interest rate benchmark (contractually or non-contractually specified) designated as a hedged risk; and/or (b) the timing or the amount of the interest-rate-benchmark-based cash flows of the hedged item or of the hedging instrument.

Note 1 – Basis of Presentation and Summary of Significant Accounting Policies (cont.)

For such hedging relationships, the following temporary exceptions apply during the period of uncertainty:

- when determining whether a forecast transaction is highly probable or expected to occur, it is assumed that the interest rate benchmark on which the hedged cash flows (contractually or non-contractually specified) are based is not altered as a result of interest rate benchmark reform;
- when assessing whether a hedge is expected to be highly effective, it is assumed that the interest rate benchmark on which the hedged cash flows and/or the hedged risk (contractually or non-contractually specified) are based, or the interest rate benchmark on which the cash flows of the hedging instrument are based, is not altered as a result of interest rate benchmark reform;
- a hedge is not required to be discontinued if the actual results of the hedge are outside an effectiveness range of 80–125 per cent as a result of interest rate benchmark reform;
- for a hedge of a non-contractually specified benchmark portion of interest rate risk, the requirement that the designated portion is separately identifiable need only be met at the inception of the hedging relationship.

Fair Value Hedges

For fair value hedges, the Bank mainly uses interest rate swaps to hedge changes in the fair value of a hedged item. The carrying amount of the hedged item is adjusted based on the effective portion of the gains or losses attributable to the hedged risk, which are recognized in the Consolidated Statement of Income, as well as the change in the fair value of the hedging instrument. The resulting ineffective portion is recognized in *Non-interest income* in the Consolidated Statement of Income.

The Bank prospectively discontinues hedge accounting if the hedging instrument is sold or expires or if the hedging relationship no longer qualifies for hedge accounting or if the Bank revokes the designation. When the designation is revoked, the hedged item is no longer adjusted to reflect changes in fair value, and the amounts previously recorded as cumulative adjustments with respect to the effective portion of gains and losses attributable to the hedged risk are amortized using the effective interest rate method and recognized in the Consolidated Statement of Income over the remaining useful life of the hedged item. If the hedged item is sold or terminated before maturity, the cumulative adjustments with respect to the effective portion of gains and losses attributable to the hedged risk are immediately recorded in the Consolidated Statement of Income.

Cash Flow Hedges

For cash flow hedges, the Bank mainly uses interest rate swaps and total return swaps to hedge variable cash flows attributable to the hedged risk related to a financial asset or liability (or to a group of financial assets or liabilities). The effective portion of changes in fair value of the hedging instrument is recognized in *Other comprehensive income* and the ineffective portion in *Non-interest income* in the Consolidated Statement of Income.

The amounts previously recorded in *Accumulated other comprehensive income* are reclassified to the Consolidated Statement of Income of the period or periods during which the cash flows of the hedged item affect the Consolidated Statement of Income. If the hedging instrument is sold or expires or if the hedging relationship no longer qualifies for hedge accounting or if the Bank cancels that designation, then the amounts previously recognized in *Accumulated other comprehensive income* are reclassified to the Consolidated Statement of Income in the period or periods during which the cash flows of the hedged item affect the Consolidated Statement of Income.

Hedges of Net Investments in Foreign Operations

Derivative and non-derivative financial instruments are used to hedge foreign exchange risk related to investments made in foreign operations whose functional currency is not the Canadian dollar. The effective portion of the gains and losses on the hedging instrument is recognized in *Other comprehensive income* and the ineffective portion in *Non-interest income* in the Consolidated Statement of Income. Upon the total or partial sale of a net investment in a foreign operation, amounts reported in *Accumulated other comprehensive income* are reclassified, in whole or in part, to *Non-interest income* in the Consolidated Statement of Income.

Offsetting of Financial Assets and Liabilities

Financial assets and liabilities are offset, and the net amount is presented on the Consolidated Balance Sheet when the Bank has a legally enforceable right to set off the recognized amounts and intends to settle on a net basis or to realize the asset and settle the liability simultaneously.

Premises and Equipment

Premises and equipment, except for land and the head office building under construction, are recognized at cost less accumulated depreciation and accumulated impairment losses, if any. Land and the head office building under construction are recorded at cost less any accumulated impairment losses. Right-of-use assets are presented in *Premises and equipment* on the Consolidated Balance Sheet. For the accounting policy regarding right-of-use assets, refer to the section on *Leases* presented hereafter.

Buildings, equipment and furniture are systematically depreciated over their estimated useful lives. The depreciation period for leasehold improvements is the lesser of the estimated useful life of the leasehold improvements or the non-cancellable period of the lease plus the first renewal option. Depreciation methods and estimated useful lives are reviewed on an annual basis. The depreciation expense is recorded in *Non-interest expenses* in the Consolidated Statement of Income.

	Method	Useful life
Buildings	5% declining balance	
Computer equipment	Straight-line	3-4 years
Equipment and furniture	Straight-line	1-8 years
Leasehold improvements	Straight-line	(1)

(1) The depreciation period is the lesser of the estimated useful life or the non-cancellable period of the lease plus the first renewal option.

Leases for the year ended October 31, 2020

At the inception date of a contract, the Bank assesses whether the contract is, or contains, a lease. A contract is, or contains, a lease if it conveys the right to control the use of an identified asset for a period of time in exchange for consideration. When the Bank is a lessee, it recognizes a right-of-use asset and a corresponding lease liability at the lease commencement date except for short-term leases (defined as leases with terms of 12 months or less) other than real estate leases and leases for which the underlying asset is of low value. For such leases, the Bank recognizes the lease payments as a non-interest expense on a straight-line basis over the lease term. As a practical expedient, the Bank elected for real estate leases not to separate non-lease components from lease components and instead account for them as a single lease component. When the Bank is the lessor, the leased assets remain on the Consolidated Balance Sheet and are reported in *Premises and equipment*, and the rental income is recognized net of related expenses in *Non-interest income* in the Consolidated Statement of Income.

Right-of-use assets are initially measured at cost, and subsequently measured at cost less accumulated depreciation and accumulated impairment losses, if any, and adjusted for certain remeasurements of lease liabilities. The cost of a right-of-use asset comprises the amount of the initial measurement of the lease liability, any lease payments made at or before the commencement date, any initial direct costs incurred when entering into the lease, and an estimate of costs to dismantle the asset or restore the site, less any lease incentives received. Right-of-use assets are depreciated on a straight-line basis over the lesser of the lease term and the estimated useful life of the asset. Right-of-use assets are presented in *Premises and equipment* on the Consolidated Balance Sheet. The depreciation expense and impairment losses, if any, are recorded in *Non-interest expenses* in the Consolidated Statement of Income.

The lease liability is initially measured at the present value of future lease payments net of lease incentives not yet received. The present value of lease payments is determined using the Bank's incremental borrowing rate. The lease liability is subsequently measured at amortized cost using the effective interest method. In determining the lease term, the Bank considers all the facts and circumstances that create an economic incentive to exercise an extension option or not to exercise a termination option. The lease term determined by the Bank comprises the non-cancellable period of lease contracts, the periods covered by an option to extend the lease if the Bank is reasonably certain to exercise that option, and the periods covered by an option to terminate the lease if the Bank is reasonably certain not to exercise that option. The Bank reassesses the lease term if a significant event or change in circumstances occurs and that is within its control. The Bank applies judgment to determine the lease term when the lease includes extension and termination options. Lease liabilities are presented in *Other liabilities* on the Consolidated Balance Sheet, and the interest expense is presented in the *Interest expense – Other* item of the Consolidated Statement of Income.

Leases for the year ended October 31, 2019

A lease is an agreement whereby the lessor conveys to the lessee the right to use an asset for an agreed period of time in return for a payment or series of payments. A finance lease is a lease that transfers substantially all the risks and rewards incidental to ownership of the leased asset to the lessee. Title may or may not eventually be transferred. An operating lease is a lease other than a finance lease. The Bank primarily enters into operating leases.

When the Bank is the lessee under an operating lease, the rental expense is recognized on a straight-line basis over the lease term in *Non-interest expenses* in the Consolidated Statement of Income. When the Bank is the lessor, the lease assets remain on the Consolidated Balance Sheet and are reported in premises and equipment, and the rental income is recognized net of related expenses in *Non-interest income* in the Consolidated Statement of Income.

Note 1 – Basis of Presentation and Summary of Significant Accounting Policies (cont.)

Goodwill

The Bank uses the acquisition method to account for business combinations. The consideration transferred in a business combination is measured at the acquisition-date fair value, and the transaction costs related to the acquisition are expensed as incurred. When the Bank acquires control of a business, all of the identifiable assets and liabilities of the acquiree, including intangible assets, are recorded at fair value. The interests previously held in the acquiree are also measured at fair value. Goodwill represents the excess of the purchase consideration and all previously held interests over the fair value of the identifiable net assets of the acquiree. If the fair value of the identifiable net assets exceeds the purchase consideration and all previously held interests, the difference is immediately recognized as a gain on a bargain purchase.

Non-controlling interests in the net assets of consolidated subsidiaries are identified separately from the Bank's ownership interest and can be initially measured at either fair value or at the non-controlling interest's proportionate share of the acquiree's identifiable net assets. The measurement basis is selected on a case-by-case basis. Following an acquisition, non-controlling interests consist of the value assigned to those interests at initial recognition plus the non-controlling interests' share of changes in equity since the date of the acquisition.

Intangible Assets

Intangible Assets With Finite Useful Lives

Software and certain other intangible assets are recognized at cost less accumulated amortization and accumulated impairment losses. These intangible assets are systematically amortized on a straight-line basis over their useful lives, which vary between four and ten years. The amortization expense is recorded in *Non-interest expenses* in the Consolidated Statement of Income.

Intangible Assets With Indefinite Useful Lives

The Bank's intangible assets with indefinite useful lives come from the acquisition of subsidiaries or groups of assets and consist of management contracts and a trademark. They are recognized at the acquisition-date fair value. The management contracts are for the management of open-ended funds. At the end of each reporting period, the Bank reviews the useful lives to determine whether events and circumstances continue to support an indefinite useful life assessment. Intangible assets are deemed to have an indefinite useful life following an examination of all relevant factors, in particular: (a) the contracts do not have contractual maturities; (b) the stability of the business segment to which the intangible assets belong; (c) the Bank's capacity to control the future economic benefits of the intangible assets; and (d) the continued economic benefits generated by the intangible assets.

Impairment of Non-Financial Assets

Premises and equipment and intangible assets with finite useful lives are tested for impairment when events or changes in circumstances indicate that their carrying value may not be recoverable. At the end of each reporting period, the Bank determines whether there is an indication that premises and equipment or intangible assets with finite useful lives may be impaired. Goodwill and intangible assets that are not yet available for use or that have indefinite useful lives are tested for impairment annually or more frequently if there is an indication that the asset might be impaired.

An asset is tested for impairment by comparing its carrying amount with its recoverable amount. The recoverable amount must be estimated for the individual asset. Where it is not possible to estimate the recoverable amount of an individual asset, the recoverable amount of the cash-generating unit (CGU) to which the asset belongs will be determined. A CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. The Bank uses judgment to identify CGUs.

An asset's recoverable amount is the higher of fair value less costs to sell and the value in use of the asset or CGU. Value in use is the present value of expected future cash flows from the asset or CGU. The recoverable amount of the CGU is determined using valuation models that consider various factors such as projected future cash flows, discount rates, and growth rates. The use of different estimates and assumptions in applying the impairment tests could have a significant impact on income.

Corporate assets, such as the head office building and computer equipment, do not generate cash inflows that are largely independent of the cash inflows generated by other assets or groups of assets. Therefore, the recoverable amount of an individual corporate asset cannot be determined unless management has decided to dispose of the asset. However, if there is an indication that a corporate asset may be impaired, the recoverable amount is determined for the CGU or group of CGUs to which the corporate asset belongs, and that recoverable amount is compared with the carrying amount of this CGU or group of CGUs.

Goodwill is always tested for impairment at the level of a CGU or group of CGUs. For impairment testing purposes, from the acquisition date, goodwill resulting from a business combination must be allocated to the CGU or group of CGUs expected to benefit from the synergies of the business combination. Each CGU or group of CGUs to which goodwill is allocated must represent the lowest level for which the goodwill is monitored internally at the Bank and must not be larger than an operating segment. The allocation of goodwill to a CGU or group of CGUs involves management's judgment. If an impairment loss is to be recognized, the Bank does so by first reducing the carrying amount of goodwill allocated to the CGU or group of CGUs and then reducing the carrying amounts of the other assets of the CGU or group of CGUs in proportion to the carrying amount of each asset in the CGU or group of CGUs.

If the recoverable amount of an asset or a CGU is less than its carrying amount, the carrying amount is reduced to its recoverable amount and an impairment loss is recognized in *Non-interest expenses* in the Consolidated Statement of Income. An impairment loss recognized in prior periods for an asset other than goodwill must be reversed if, and only if, there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment was recognized. If this is the case, the carrying amount of the asset is increased, given that the impairment loss was reversed, but shall not exceed the carrying amount that would have been determined, net of amortization, had no impairment loss been recognized for this asset in previous years.

Provisions

Provisions are liabilities of uncertain timing and amount. A provision is recognized when the Bank has a present obligation (legal or constructive) arising from a past event, when it is probable that an outflow of economic resources will be required to settle the obligation and when the amount of the obligation can be reliably estimated. Provisions are based on the Bank's best estimates of the economic resources required to settle the present obligation, given all relevant risks and uncertainties, and, when it is significant, the effect of the time value of money. Provisions are reviewed at the end of each reporting period. Provisions are presented in *Other liabilities* on the Consolidated Balance Sheet.

Interest Income and Expense

Interest income and expense, except for the interest income on securities classified as at fair value through profit or loss, are recognized in *Net interest income* and calculated using the effective interest method.

The effective interest rate is the rate that exactly discounts estimated future cash inflows and outflows through the expected life of the financial asset or financial liability to the gross carrying amount of a financial asset or to the amortized cost of a financial liability. When calculating the effective interest rate, the Bank estimates expected cash flows by considering all the contractual terms of the financial instrument but does not consider expected credit losses. The calculation includes all fees and points paid or received between the parties to the contract that are an integral part of the effective interest rate, transaction costs, and all other premiums or discounts. Interest income is calculated by applying the effective interest rate to the gross carrying amount of a financial asset except for purchased or originated credit-impaired financial assets and financial assets that were not impaired upon their purchase or origination but became impaired thereafter. For purchased or originated credit-impaired financial assets, the Bank applies the credit-adjusted effective interest rate to the amortized cost of the financial asset from initial recognition. The credit-adjusted effective interest rate reflects expected credit losses. As for loans that have subsequently become credit-impaired, interest income is calculated by applying the effective interest rate to the net carrying amount (net of allowances for credit losses) rather than to the carrying amount.

Loan origination fees, including commitment, restructuring, and renegotiation fees, are considered an integral part of the yield earned on the loan. They are deferred and amortized using the effective interest method, and the amortization is recognized in *Interest income* over the term of the loan. Direct costs for originating a loan are netted against the loan origination fees. If it is likely that a commitment will result in a loan, commitment fees receive the same accounting treatment, i.e., they are deferred and amortized using the effective interest rate method and the amortization is recognized in *Interest income* over the term of the loan. Otherwise, they are recorded in *Non-interest income* over the term of the commitment.

Loan syndication fees are recorded in *Non-interest income* unless the yield on the loan retained by the Bank is less than that of other comparable lenders involved in the financing. In such cases, an appropriate portion of the fees is deferred and amortized using the effective interest rate method, and the amortization is recognized in *Interest income* over the term of the loan. Certain mortgage loan prepayment fees are recognized in *Interest income* in the Consolidated Statement of Income when earned.

Dividend Income

Dividends from an equity instrument are recognized in *Net interest income* in the Consolidated Statement of Income when the Bank's right to receive payment is established.

Note 1 – Basis of Presentation and Summary of Significant Accounting Policies (cont.)

Fee and Commission Income

Fee and commission income is recognized when, or as, a performance obligation is satisfied, i.e., when control of a promised service is transferred to a customer and in an amount that reflects the consideration that the entity expects to be entitled to receive in exchange for the service. The revenue may therefore be recognized at a point in time, upon completion of the service, or over time as services are provided.

The Bank must also determine whether its performance obligation is to provide the service itself or to arrange for another party to provide the service (in other words, whether the Bank is acting as a principal or agent). A principal may itself satisfy its performance obligation to provide the specified good or service or it may engage another party to satisfy some or all of the performance obligation on its behalf. A principal also has the primary responsibility for fulfilling the promise to provide the good or service to the customer and has discretion in establishing the price for the service. If the Bank is acting as a principal, revenue is recognized on a gross basis in an amount corresponding to the consideration to which the Bank expects to be entitled. If the Bank is acting as an agent, then revenue is recognized net of the service fees and other costs incurred in relation to the commission and fees earned.

Underwriting and Advisory Fees

Underwriting and advisory fees include underwriting fees, financial advisory fees, and loan syndication fees. These fees are mainly earned in the Financial Markets segment and are recognized at a point in time as revenue upon successful completion of the engagement. Financial advisory fees are fees earned for assisting customers with transactions related to mergers and acquisitions and financial restructurings. Loan syndication fees represent fees earned as the agent or lead lender responsible for structuring, arranging, and administering a loan syndication and are recorded in *Non-interest income* unless the yield on the loan retained by the Bank is less than that of other comparable lenders involved in the financing. In such cases, an appropriate portion of the fees is deferred and amortized using the effective interest rate method, and the amortization is recognized in *Interest income* over the term of the loan.

Securities Brokerage Commissions

Securities brokerage commissions are earned in the Wealth Management segment and are recognized at a point in time when the transaction is executed.

Mutual Fund and Trust Service Revenues

Mutual fund and trust service revenues include management and administration fees. These fees are earned in the Wealth Management segment. Management fees are primarily calculated on assets under management and are recorded over the period the services are performed. Administration fees are generally based on assets under administration or management and are recorded over the period the services are performed.

Card Revenues

Card revenues are earned in the Personal and Commercial segment and include card fees such as annual and transactional fees as well as interchange fees. Interchange fees are recognized when a card transaction is settled. Card fees are recognized on the transaction date except for annual fees, which are recorded evenly throughout the year. Reward costs are recorded as a reduction to interchange fees.

Credit Fees and Deposit and Payment Service Charges

Credit fees and deposit and payment service charges are earned in the Personal and Commercial, Financial Markets, and U.S. Specialty Finance and International segments. Credit fees are generally recognized in income over the period the services are provided. Deposit and payment service charges include fees related to account maintenance activities and transaction-based service charges. Fees related to account maintenance activities are recognized over the period the services are provided, whereas transaction-based service charges are recognized at a point in time when the transaction is completed.

Insurance Revenues

Insurance contracts, including reinsurance contracts, are arrangements under which one party accepts significant insurance risk by agreeing to compensate the policyholder if a specified uncertain future event was to occur. Gross premiums, net of premiums transferred under reinsurance contracts, are recognized when they become due. Royalties received from reinsurers are recognized when earned. Claims are recognized when received and an amount is estimated as they are being processed. All these amounts are recognized on a net basis in *Non-interest income* in the Consolidated Statement of Income.

Upon recognition of a premium, a reinsurance asset and insurance liability are recognized, respectively, in *Other assets* and in *Other liabilities* on the Consolidated Balance Sheet. Subsequent changes in the carrying value of the reinsurance asset and insurance liability are recognized on a net basis in *Non-interest income* in the Consolidated Statement of Income.

Income Taxes

Income taxes include current taxes and deferred taxes and are recorded in net income except for income taxes generated by items recognized in *Other comprehensive income* or directly in equity.

Current tax is the amount of income tax payable on the taxable income for a period. It is calculated using the enacted or substantively enacted tax rates prevailing on the reporting date, and any adjustments recognized in the period for the current tax of prior periods. Current tax assets and liabilities are offset, and the net balance is presented in either *Other assets* or *Other liabilities* on the Consolidated Balance Sheet when the Bank has a legally enforceable right to set off the recognized amounts and intends to settle on a net basis or to simultaneously realize the asset and settle the liability.

Deferred tax is established based on temporary differences between the carrying values and the tax bases of assets and liabilities, in accordance with enacted or substantively enacted income tax laws and rates that will apply on the date the differences will reverse. Deferred tax is not recognized for temporary differences related to the following:

- the initial accounting of goodwill;
- the initial accounting of an asset or liability in a transaction that is not a business combination and that, at the time of the transaction, affects neither accounting income nor taxable income;
- investments in subsidiaries, associates and joint ventures when it is probable that the temporary difference will not reverse in the foreseeable future and that the Bank controls the timing of the reversal of the temporary difference;
- investments in subsidiaries, associates and joint ventures when it is probable that the temporary difference will not reverse in the foreseeable future and that there will not be taxable income to which the temporary difference can be recognized.

Deferred tax assets are tax benefits in the form of deductions that the Bank may claim to reduce its taxable income in future years. At the end of each reporting period, the carrying amount of deferred tax assets is revised, and it is reduced to the extent that it is no longer probable that sufficient taxable income will be available to allow the benefit of the deferred tax asset to be utilized.

Deferred tax assets and liabilities are offset, and the net balance is presented in either *Other assets* or *Other liabilities* on the Consolidated Balance Sheet when the Bank has a legally enforceable right to set off the current tax assets and liabilities and if the deferred tax assets and liabilities relate to taxes levied by the same taxation authority on the same taxable entity or on different taxable entities that intend to settle current tax assets and liabilities based on their net amount.

The Bank makes assumptions to estimate income taxes as well as deferred tax assets and liabilities. This process includes estimating the actual amount of current taxes and evaluating tax loss carryforwards and temporary differences arising from differences between the values of items reported for accounting and for income tax purposes. Deferred tax assets and liabilities presented on the Consolidated Balance Sheet are calculated according to the tax rates to be applied in future periods. Previously recorded deferred tax assets and liabilities must be adjusted when the date of the future event is revised based on current information.

The Bank is subject to the jurisdictions of various tax authorities. In the normal course of its business, the Bank is involved in a number of transactions for which the tax impacts are uncertain. As a result, the Bank accounts for provisions for uncertain tax positions that adequately represent the tax risk stemming from tax matters under discussion or being audited by tax authorities or from other matters involving uncertainty. The amounts of these provisions reflect the best possible estimates of the amounts that may have to be paid based on qualitative assessments of all relevant factors. The provisions are estimated at the end of each reporting period. However, it is possible that, at a future date, a provision might need to be adjusted following an audit by the tax authorities. When the final assessment differs from the initially provisioned amounts, the difference will impact the income taxes of the period in which the assessment was made.

Financial Guarantee Contracts

A financial guarantee contract is a contract or indemnification agreement that could require the Bank to make specified payments (in cash, financial instruments, other assets, Bank shares, or provisions of services) to reimburse a beneficiary in the event of a loss resulting from a debtor defaulting on the original or amended terms of a debt instrument.

To reflect the fair value of the obligation assumed at the inception of a financial guarantee, a liability is recorded in *Other liabilities* on the Consolidated Balance Sheet. After initial recognition, the Bank must measure financial guarantee contracts at the higher of the allowance for credit losses determined using the ECL model and of the initially recognized amount less, where applicable, the cumulative amount of income recognized. This revenue is recognized in *Credit fees* in the Consolidated Statement of Income.

Employee Benefits – Pension Plans and Other Post-Employment Benefits

The Bank offers defined benefit pension plans and other post-employment benefit plans to eligible employees. Other post-employment benefit plans include post-employment medical, dental, and life insurance coverage. While pension plans are funded, the other plans are not.

Plan expenses and obligations are actuarially determined based on the projected benefit method prorated on service. The calculations use management's best estimates of various actuarial assumptions such as discount rates, rates of compensation increase, health care cost trend rates, mortality rates, and retirement age.

Note 1 – Basis of Presentation and Summary of Significant Accounting Policies (cont.)

The net asset or net liability of pension plans and other post-employment benefit plans are calculated separately for each plan as the difference between the present value of the future benefits earned by employees in respect of current- and prior-period service and the fair value of plan assets. The net asset or net liability is included in either the *Other assets* or *Other liabilities* item of the Consolidated Balance Sheet.

The expense related to pension plans and other post-employment benefit plans consists of the following items: current service cost, net interest on the net plan asset or liability, administration costs, and past service cost, if any, recognized when a plan is amended. This expense is recognized in *Compensation and employee benefits* in the Consolidated Statement of Income. The net amount of interest income and expense is determined by applying a discount rate to the net plan asset or liability amount.

Remeasurements resulting from pension plans and other post-employment benefit plans represent actuarial gains and losses related to the defined benefit obligation and the actual return on plan assets, excluding net interest determined by applying a discount rate to the net asset or liability of the plans. Remeasurements are immediately recognized in *Other comprehensive income* and will not be subsequently reclassified to net income; these cumulative gains and losses are reclassified to *Retained earnings*.

Share-Based Payments

The Bank has several share-based compensation plans: the Stock Option Plan, the Stock Appreciation Rights (SAR) Plan, the Deferred Stock Unit (DSU) Plan, the Restricted Stock Unit (RSU) Plan, the Performance Stock Unit (PSU) Plan, the Deferred Compensation Plan (DCP) of National Bank Financial, and the Employee Share Ownership Plan.

Compensation expense is recognized over the service period required for employees to become fully entitled to the award. This period is generally the same as the vesting period, except where the required service period begins before the award date. Compensation expense related to awards granted to employees eligible to retire on the award date is immediately recognized on the award date. Compensation expense related to awards granted to employees who will become eligible to retire during the vesting period is recognized over the period from the award date to the date the employee becomes eligible to retire. For all of these plans, as of the first year of recognition, the expense includes cancellation and forfeiture estimates. These estimates are subsequently revised as necessary. The Bank uses derivative financial instruments to hedge the risks associated with some of these plans. The compensation expense for these plans, net of related hedges, is recognized in the Consolidated Statement of Income.

Under the Stock Option Plan, the Bank uses the fair value method to account for stock options awarded. The options vest at 25% per year, and each tranche is treated as though it was a separate award. The fair value of each of the tranches is measured on the award date using the Black-Scholes model, and this fair value is recognized in *Compensation and employee benefits* and *Contributed surplus*. When the options are exercised, the *Contributed surplus* amount is credited to *Equity – Common shares* on the Consolidated Balance Sheet. The proceeds received from the employees when these options are exercised are also credited to *Equity – Common shares* on the Consolidated Balance Sheet.

SARs are recorded at fair value when awarded and their fair value is remeasured at the end of each reporting period until they are exercised. The cost is recognized in *Compensation and employee benefits* in the Consolidated Statement of Income and in *Other liabilities* on the Consolidated Balance Sheet. The obligation that results from the change in fair value at each period is recognized in net income gradually over the vesting period, and periodically thereafter, until the SARs are exercised. When a SAR is exercised, the Bank makes a cash payment equal to the increase in the stock price since the date of the award.

The obligation that results from the award of a DSU, RSU, PSU and DCP unit is recognized in net income, and the corresponding amount is included in *Other liabilities* on the Consolidated Balance Sheet. For the DSU, RSU and DCP plans, the change in the obligation attributable to variations in the share price and dividends paid on common shares for these plans is recognized in *Compensation and employee benefits* in the Consolidated Statement of Income for the period in which the variations occur. On the redemption date, the Bank makes a cash payment equal to the value of the common shares on that date. For the PSU Plan, the change in the obligation attributable to changes in the stock price, adjusted upward or downward depending on the relative result of the performance criteria, and the change in the obligation attributable to dividends paid on the shares awarded under the plan, are recognized in *Compensation and employee benefits* in the Consolidated Statement of Income for the period in which the changes occur. On the redemption date, the Bank makes a cash payment equal to the value of the common shares on that date, adjusted upward or downward according to the performance criteria.

The Bank's contributions to the employee share ownership plan are expensed as incurred.

Note 2 – Future Accounting Policy Changes

The Bank closely monitors both new accounting standards and amendments to existing accounting standards issued by the IASB. The following standards have been issued but are not yet effective. The Bank is currently assessing the impact of the application of these standards on the consolidated financial statements.

Effective Date – November 1, 2020

Conceptual Framework for Financial Reporting

On March 29, 2018, the IASB published *Conceptual Framework for Financial Reporting* to replace its 2010 conceptual framework. For the IASB, the revised conceptual framework has been in effect since its publication date.

Effective Date – November 1, 2021

Interest Rate Benchmark Reform – Phase 2

In August 2020, the IASB finalized its response to the ongoing reform of interbank offered rates (IBOR) and other interest rate benchmarks by issuing amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 – *Insurance Contracts* and IFRS 16. The amendments complement those issued in 2019 and focus on the effects on financial statements once existing benchmark rates are replaced with alternative benchmark rates. The amendments in this final phase relate to changes to contractual cash flows, hedge accounting, and disclosures. The effective date for the amendments will be annual periods beginning on or after January 1, 2021, with early application permitted.

Effective Date – November 1, 2023

IFRS 17 – Insurance Contracts

In May 2017, the IASB issued IFRS 17 – *Insurance Contracts* (IFRS 17), a new standard that replaces IFRS 4, the current insurance contract accounting standard. IFRS 17 introduces a new accounting framework that will improve the comparability and quality of financial information. IFRS 17 provides guidance on the recognition, measurement, presentation and disclosure of insurance contracts. In June 2020, amendments to IFRS 17 were issued and included a two-year deferral of the effective date along with other changes aimed at addressing concerns and implementation challenges identified after IFRS 17 was published in 2017. IFRS 17, as amended, is effective retrospectively for annual periods beginning on or after January 1, 2023, with earlier application permitted. If full retrospective application to a group of insurance contracts is impractical, the modified retrospective approach or the fair value approach may be used.

Note 3 – Fair Value of Financial Instruments

Fair Value and Carrying Value of Financial Instruments by Category

Financial assets and financial liabilities are recognized on the Consolidated Balance Sheet at fair value or at amortized cost in accordance with the categories set out in the accounting framework for financial instruments.

	As at October 31, 2020							
	Carrying value and fair value				Carrying value	Fair value		
	Financial instruments classified as at fair value through profit or loss	Financial instruments designated at fair value through profit or loss	Debt securities classified as at fair value through other comprehensive income	Equity securities designated at fair value through other comprehensive income	Financial instruments at amortized cost, net	Financial instruments at amortized cost, net	Total carrying value	Total fair value
Financial assets								
Cash and deposits with financial institutions	–	–	–	–	29,142	29,142	29,142	29,142
Securities	75,647	2,679	12,107	619	11,079	11,290	102,131	102,342
Securities purchased under reverse repurchase agreements and securities borrowed	–	–	–	–	14,512	14,512	14,512	14,512
Loans and acceptances, net of allowances	8,109	–	–	–	156,631	159,473	164,740	167,582
Other								
Derivative financial instruments	13,422	–	–	–	–	–	13,422	13,422
Other assets	–	–	–	–	1,153	1,153	1,153	1,153
Financial liabilities								
Deposits	–	11,418			204,460 ⁽¹⁾	205,337	215,878	216,755
Other								
Acceptances	–	–			6,866	6,866	6,866	6,866
Obligations related to securities sold short	16,368	–			–	–	16,368	16,368
Obligations related to securities sold under repurchase agreements and securities loaned	–	–			33,859	33,859	33,859	33,859
Derivative financial instruments	12,923	–			–	–	12,923	12,923
Liabilities related to transferred receivables	–	8,762			14,093	14,432	22,855	23,194
Other liabilities	–	–			1,892	1,894	1,892	1,894
Subordinated debt	–	–			775	787	775	787

(1) Includes embedded derivative financial instruments.

As at October 31, 2019

	Financial instruments classified as at fair value through profit or loss	Financial instruments designated at fair value through profit or loss	Debt securities classified as at fair value through other comprehensive income	Equity securities designated at fair value through other comprehensive income	Carrying value and fair value	Carrying value	Fair value		
					Financial instruments at amortized cost, net	Financial instruments at amortized cost, net	Total carrying value	Total fair value	
Financial assets									
Cash and deposits with financial institutions	–	–	–	–	13,698	13,698	13,698	13,698	
Securities	58,556	3,267	10,026	622	9,755	9,824	82,226	82,295	
Securities purchased under reverse repurchase agreements and securities borrowed	–	87	–	–	17,636	17,636	17,723	17,723	
Loans and acceptances, net of allowances	6,798	–	–	–	146,453	147,051	153,251	153,849	
Other									
Derivative financial instruments	8,129	–	–	–	–	–	8,129	8,129	
Other assets	–	–	–	–	1,193	1,193	1,193	1,193	
Financial liabilities									
Deposits	–	11,203			178,363 ⁽¹⁾	178,861	189,566	190,064	
Other									
Acceptances	–	–			6,893	6,893	6,893	6,893	
Obligations related to securities sold short	12,849	–			–	–	12,849	12,849	
Obligations related to securities sold under repurchase agreements and securities loaned	–	–			21,900	21,900	21,900	21,900	
Derivative financial instruments	6,852	–			–	–	6,852	6,852	
Liabilities related to transferred receivables	–	8,215			13,097	13,186	21,312	21,401	
Other liabilities	24	–			3,018	3,019	3,042	3,043	
Subordinated debt	–	–			773	765	773	765	

(1) Includes embedded derivative financial instruments.

Establishing Fair Value

The fair value of a financial instrument is the price that would be received to sell a financial asset or paid to transfer a financial liability in an orderly transaction in the principal market at the measurement date under current market conditions (i.e., an exit price).

Unadjusted quoted prices in active markets provide the best evidence of fair value. When there is no quoted price in an active market, the Bank applies other valuation techniques that maximize the use of relevant observable inputs and that minimize the use of unobservable inputs. Such valuation techniques include the following: using information available from recent market transactions, referring to the current fair value of a comparable financial instrument, applying discounted cash flow analysis, applying option pricing models, or relying on any other valuation technique that is commonly used by market participants and has proven to yield reliable estimates. Judgment is required when applying many of the valuation techniques. The Bank's valuation was based on its assessment of the conditions prevailing as at October 31, 2020 and may change in the future. Furthermore, there may be valuation uncertainty resulting from the choice of valuation model used.

Note 3 – Fair Value of Financial Instruments (cont.)

Valuation Governance

Fair value is established in accordance with a rigorous control framework. The Bank has policies and procedures that govern the process for determining fair value. These policies are documented and periodically reviewed by the Risk Management Group. All valuation models are validated, and controls have been implemented to ensure that they are applied.

The fair value of existing or new products is determined and validated by functions independent of the risk-taking team. Complex fair value matters are reviewed by valuation committees made up of experts from various specialized functions.

For financial instruments classified in Level 3 of the fair value hierarchy, the Bank has documented the classification policies to determine the hierarchy, and there are controls in place to ensure that fair value is measured appropriately, reliably, and consistently. Valuation methods and the underlying assumptions are reviewed on a regular basis.

Valuation Methods and Assumptions

Financial Instruments Whose Fair Value Equals Carrying Value

The carrying value of the following financial instruments is a reasonable approximation of fair value:

- cash and deposits with financial institutions;
- securities purchased under reverse repurchase agreements and securities borrowed;
- obligations related to securities sold under repurchase agreements and securities loaned;
- customers' liability under acceptances;
- acceptances;
- certain items of other assets and other liabilities.

Securities and Obligations Related to Securities Sold Short

These financial instruments, except for securities at amortized cost, are recognized at fair value on the Consolidated Balance Sheet. Their fair value is based on quoted prices in active markets, i.e., bid prices for financial assets and offered prices for financial liabilities. If there are no quoted prices in an active market, fair value is estimated using prices for securities that, in substance, are identical. If such prices are not available, fair value is determined using valuation techniques that incorporate assumptions based primarily on observable market inputs such as current market prices, the contractual prices of the underlying instruments, the time value of money, credit risk, interest rate yield curves and currency rates.

When one or more significant inputs are not observable in the markets, fair value is established primarily on the basis of internal estimates and data that consider the valuation policies in effect at the Bank, economic conditions, the specific characteristics of the financial asset or liability, and other relevant factors.

Securities Issued or Guaranteed by Governments

Securities issued or guaranteed by governments include government debt securities of the governments of Canada (federal, provincial and municipal) as well as debt securities of the U.S. government (U.S. Treasury), of other U.S. agencies and of other foreign governments. The fair value of these securities is based on unadjusted quoted prices in active markets. For those classified in Level 2, quoted prices for identical or similar instruments in active markets are used to determine fair value. In the absence of an observable market, valuation techniques such as the discounted cash flow method could be used, incorporating assumptions on benchmark yields (CDOR, LIBOR and other) and the risk spreads of similar securities.

Equity Securities and Other Debt Securities

The fair value of equity securities is determined primarily by using quoted prices in active markets. For equity securities and other debt securities classified in Level 2, a valuation technique based on quoted prices of identical and similar instruments in an active market is used to determine fair value. In the absence of observable inputs, valuation techniques such as the discounted cash flow method could be used, incorporating assumptions on benchmark yields (CDOR, LIBOR and other) and the risk spreads of similar securities. For those classified in Level 3, fair value can be determined based on the net asset value, which represents the estimated value of a security based on valuations received from investment or fund managers or the general partners of the limited partnerships. Fair value can also be determined using internal valuation techniques adjusted for risk factors related to the financial instruments and for economic conditions.

Derivative Financial Instruments

Derivative financial instruments are recorded at fair value on the Consolidated Balance Sheet. For exchange-traded derivative financial instruments, fair value is based on the quoted price in an active market.

For over-the-counter (OTC) derivative financial instruments, fair value is determined using well established valuation techniques that incorporate assumptions based primarily on observable market inputs such as current market prices and the contractual prices of the underlying instruments, the time value of money, interest rate yield curves, credit curves, currency rates as well as price and rate volatility factors. In establishing the fair value of OTC derivative financial instruments, the Bank also incorporates the following factors:

Credit Valuation Adjustment (CVA)

The CVA is a valuation adjustment applied to derivative financial instruments to reflect the credit risk of the counterparty. For each counterparty, the CVA is based on the expected positive exposure and probabilities of default through time. The exposures are determined by incorporating relevant factors such as current and potential future market values, master netting arrangements, collateral agreements and expected recovery rates. The default probabilities are inferred using credit default swap (CDS) spreads. When unavailable, relevant proxies are used. While the general methodology currently assumes independence between expected positive exposures and probabilities of default, adjustments are applied to certain types of transactions where there is a direct link between the exposure at default and the default probabilities.

Debit Valuation Adjustment (DVA)

The DVA reflects the Bank's own credit risk in the valuation of derivative financial instruments. The DVA is based on the expected negative exposure and probabilities of default of the Bank over time. The exposures are determined by incorporating relevant factors such as current and potential future market values, master netting arrangements, collateral agreements and expected recovery rates. The market-implied spreads of the Bank are used in the calculation of the DVA.

Funding Valuation Adjustment (FVA)

The FVA is a valuation adjustment applied to derivative financial instruments to reflect the market-implied cost or benefits of funding collateral for uncollateralized or partly collateralized transactions. The expected exposures are determined using methodologies consistent with the CVA and DVA framework. The funding level used to determine the FVA is based on the average funding level of relevant market participants.

When the valuation techniques incorporate one or more significant inputs that are not observable in the markets, the fair value of OTC derivative financial instruments is established primarily on the basis of internal estimates and data that consider the valuation policies in effect at the Bank, economic conditions, the specific characteristics of the financial asset or financial liability and other relevant factors.

Loans

The fair value of fixed-rate mortgage loans is determined by discounting expected future contractual cash flows, adjusted for several factors, including prepayment options, current market interest rates for similar loans, and other relevant variables where applicable. The fair value of variable-rate mortgage loans is deemed to equal carrying value.

The fair value of other fixed-rate loans is determined by discounting expected future contractual cash flows using current market interest rates charged for similar new loans. The fair value of other variable-rate loans is deemed to equal carrying value.

Deposits

The fair value of fixed-term deposits is determined primarily by discounting expected future contractual cash flows and considering several factors such as redemption options and market interest rates currently offered for financial instruments with similar conditions. For certain term funding instruments, fair value is determined using market prices for similar instruments. The fair value of demand deposits and notice deposits is deemed to equal carrying value.

The fair value of structured deposit notes is established using valuation models that maximize the use of observable inputs when available, such as benchmark indices, and also incorporates the DVA, which reflects the Bank's own credit risk. In calculating DVA, the market implied spreads of the Bank are used to infer its probabilities of default. Lastly, when fair value is determined using option pricing models, the valuation techniques are similar to those described for derivative financial instruments.

Liabilities Related to Transferred Receivables

These liabilities arise from sale transactions to Canada Housing Trust (CHT) of securities backed by insured residential mortgages and other securities under the Canada Mortgage Bond (CMB) program. These transactions do not qualify for derecognition. They are recorded as guaranteed borrowings, which results in the recording of liabilities on the Consolidated Balance Sheet. The fair value of these liabilities is established using valuation techniques based on observable market inputs such as Canada Mortgage Bond prices.

Note 3 – Fair Value of Financial Instruments (cont.)

Other Liabilities and Subordinated Debt

The fair value of these financial liabilities is based on quoted market prices in an active market. If there is no active market, fair value is determined by discounting contractual cash flows using the current market interest rates offered for similar financial instruments that have the same term to maturity.

Hierarchy of Fair Value Measurements

Determining the Levels of the Fair Value Measurement Hierarchy

IFRS establishes a fair value measurement hierarchy that classifies the inputs used in financial instrument fair value measurement techniques according to three levels. This fair value hierarchy requires observable market inputs to be used whenever such inputs exist. According to the hierarchy, the highest level of inputs are unadjusted quoted prices in active markets for identical instruments and the lowest level of inputs are unobservable inputs. If inputs from different levels of the hierarchy are used, the financial instrument is classified in the same level as the lowest level input that is significant to the fair value measurement. The fair value hierarchy has the following levels:

Level 1

Inputs corresponding to unadjusted quoted prices in active markets for identical assets and liabilities and accessible to the Bank at the measurement date. These instruments consist primarily of equity securities, derivative financial instruments traded in active markets, and certain highly liquid debt securities actively traded in over-the-counter markets.

Level 2

Valuation techniques based on inputs, other than the quoted prices included in Level 1 inputs, that are directly or indirectly observable in the market for the asset or liability. These inputs are quoted prices of similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; inputs other than quoted prices used in a valuation model that are observable for that instrument; and inputs that are derived principally from or corroborated by observable market inputs by correlation or other means. These instruments consist primarily of certain loans, certain deposits, derivative financial instruments traded in over-the-counter markets, certain debt securities, certain equity securities whose value is not directly observable in an active market, liabilities related to transferred receivables and certain other liabilities.

Level 3

Valuation techniques based on one or more significant inputs that are not observable in the market for the asset or liability. The Bank classifies financial instruments in Level 3 when the valuation technique is based on at least one significant input that is not observable in the markets. The valuation technique may also be partly based on observable market inputs.

Financial instruments whose fair values are classified in Level 3 consist of the following:

- financial instruments measured at fair value through profit or loss: investments in hedge funds for which there are certain restrictions on unit or security redemptions, equity securities and debt securities of private companies, as well as certain derivative financial instruments whose fair value is established using internal valuation models that are based on significant unobservable market inputs;
- securities at fair value through other comprehensive income: equity and debt securities of private companies;
- certain loans and certain deposits (structured deposit notes) whose fair value is established using internal valuation models that are based on significant unobservable market inputs.

Transfers Between the Fair Value Hierarchy Levels

Transfers of financial instruments between Levels 1 and 2 and transfers to (or from) Level 3 are deemed to have taken place at the beginning of the quarter in which the transfer occurred. Significant transfers can occur between the fair value hierarchy levels due to new information on inputs used to determine fair value and the observable nature of those inputs.

During fiscal 2020, \$15 million in securities classified as at fair value through profit or loss were transferred from Level 2 to Level 1 resulting from changing market conditions (\$50 million in securities classified as at fair value through profit or loss and \$1 million in obligations related to securities sold short in fiscal 2019). In addition, during fiscal 2020, \$10 million in securities classified as at fair value through profit or loss were transferred from Level 1 to Level 2 (for fiscal 2019, \$20 million in securities classified as at fair value through profit or loss and \$2 million in obligations related to securities sold short).

During fiscal years 2020 and 2019, financial instruments were transferred to (or from) Level 3 due to changes in the availability of observable market inputs resulting from changing market conditions.

Financial Instruments Recorded at Fair Value on the Consolidated Balance Sheet

The following tables show financial instruments recorded at fair value on the Consolidated Balance Sheet according to the fair value hierarchy.

	As at October 31, 2020			Total financial assets/liabilities at fair value
	Level 1	Level 2	Level 3	
Financial assets				
Securities				
At fair value through profit or loss				
Securities issued or guaranteed by				
Canadian government	1,852	7,632	–	9,484
Canadian provincial and municipal governments	–	9,105	–	9,105
U.S. Treasury, other U.S. agencies and other foreign governments	7,852	996	–	8,848
Other debt securities	–	2,048	40	2,088
Equity securities	47,941	443	417	48,801
	57,645	20,224	457	78,326
At fair value through other comprehensive income				
Securities issued or guaranteed by				
Canadian government	877	3,535	–	4,412
Canadian provincial and municipal governments	–	4,154	–	4,154
U.S. Treasury, other U.S. agencies and other foreign governments	2,165	284	–	2,449
Other debt securities	–	1,092	–	1,092
Equity securities	–	246	373	619
	3,042	9,311	373	12,726
Loans	–	7,737	372	8,109
Other				
Derivative financial instruments	343	13,049	30	13,422
	61,030	50,321	1,232	112,583
Financial liabilities				
Deposits⁽¹⁾	–	11,575	(2)	11,573
Other				
Obligations related to securities sold short	11,575	4,793	–	16,368
Derivative financial instruments	242	12,680	1	12,923
Liabilities related to transferred receivables	–	8,762	–	8,762
	11,817	37,810	(1)	49,626

(1) The amount classified in Level 3 represents the fair value of embedded derivative financial instruments related to deposits.

Note 3 – Fair Value of Financial Instruments (cont.)

	As at October 31, 2019			Total financial assets/liabilities at fair value
	Level 1	Level 2	Level 3	
Financial assets				
Securities				
At fair value through profit or loss				
Securities issued or guaranteed by				
Canadian government	2,102	8,321	–	10,423
Canadian provincial and municipal governments	–	6,762	–	6,762
U.S. Treasury, other U.S. agencies and other foreign governments	1,770	90	–	1,860
Other debt securities	–	2,666	27	2,693
Equity securities	38,836	818	431	40,085
	42,708	18,657	458	61,823
At fair value through other comprehensive income				
Securities issued or guaranteed by				
Canadian government	196	4,236	–	4,432
Canadian provincial and municipal governments	–	1,674	–	1,674
U.S. Treasury, other U.S. agencies and other foreign governments	3,471	75	–	3,546
Other debt securities	–	374	–	374
Equity securities	53	207	362	622
	3,720	6,566	362	10,648
Securities purchased under reverse repurchase agreements and securities borrowed	–	87	–	87
Loans	–	6,438	360	6,798
Other				
Derivative financial instruments	179	7,924	26	8,129
	46,607	39,672	1,206	87,485
Financial liabilities				
Deposits	–	11,383	–	11,383
Other				
Obligations related to securities sold short	8,352	4,497	–	12,849
Derivative financial instruments	156	6,674	22	6,852
Liabilities related to transferred receivables	–	8,215	–	8,215
Other liabilities	–	24	–	24
	8,508	30,793	22	39,323

Financial Instruments Classified in Level 3

The Bank classifies financial instruments in Level 3 when the valuation technique is based on at least one significant input that is not observable in the markets. The valuation technique may also be based, in part, on observable market inputs. The following table shows the significant unobservable inputs used for the fair value measurements of financial instruments classified in Level 3 of the hierarchy.

As at October 31, 2020					
	Fair value	Primary valuation techniques	Significant unobservable inputs	Range of input values	
				Low	High
Financial assets					
Securities					
Equity securities and other debt securities	830	Net asset value	Net asset value	100 %	100 %
		Market comparable	EV/EBITDA ⁽¹⁾ multiple	18 x	20 x
		Discounted cash flows	Credit spread	460 Bps ⁽²⁾	705 Bps ⁽²⁾
		Discounted cash flows	Discount rate	4.50 %	19.00 %
Loans					
Loans at fair value through profit or loss	372	Discounted cash flows	Discount rate	3.54 %	9.84 %
		Discounted cash flows	Liquidity premium	3.11 %	9.56 %
Other					
Derivative financial instruments					
Interest rate contracts	11	Discounted cash flows	Discount rate	2.20 %	2.20 %
Equity contracts	6	Option pricing model	Long-term volatility	7 %	91 %
			Market correlation	29 %	93 %
Credit derivative contracts	13	Discounted cash flows	Liquidity premium	(6) %	6 %
	1,232				
Financial liabilities					
Deposits					
Structured deposit notes ⁽³⁾	(2)	Option pricing model	Long-term volatility	8 %	49 %
			Market correlation	(68) %	94 %
Other					
Derivative financial instruments					
Credit derivative contracts	1	Discounted cash flows	Liquidity premium	(2) %	2 %
	(1)				

As at October 31, 2019					
	Fair value	Primary valuation techniques	Significant unobservable inputs	Range of input values	
				Low	High
Financial assets					
Securities					
Equity securities and other debt securities	820	Net asset value	Net asset value	100 %	100 %
		Market comparable	EV/EBITDA ⁽¹⁾ multiple	13 x	16 x
		Discounted cash flows	Credit spread	460 Bps ⁽²⁾	705 Bps ⁽²⁾
		Discounted cash flows	Discount rate	4.50 %	14.38 %
Loans					
Loans at fair value through profit or loss	360	Discounted cash flows	Discount rate	5.26 %	8.89 %
		Discounted cash flows	Liquidity premium	3.56 %	7.34 %
Other					
Derivative financial instruments					
Interest rate contracts	6	Discounted cash flows	Discount rate	2.20 %	2.20 %
Equity contracts	20	Option pricing model	Long-term volatility	4 %	35 %
			Market correlation	21 %	31 %
	1,206				
Financial liabilities					
Other					
Derivative financial instruments					
Equity contracts	22	Option pricing model	Long-term volatility	5 %	49 %
			Market correlation	(29) %	89 %
	22				

(1) EV/EBITDA means Enterprise Value/Earnings Before Interest, Taxes, Depreciation and Amortization.

(2) Bps or basis point is a unit of measure equal to 0.01%.

(3) The amount represents the fair value of the embedded derivative financial instruments related to structured deposit notes.

Note 3 – Fair Value of Financial Instruments (cont.)

Significant Unobservable Inputs Used for Fair Value Measurements of Financial Instruments Classified in Level 3

Net Asset Value

Net asset value is the estimated value of a security based on valuations received from the investment or fund managers, the administrators of the conduits or the general partners of the limited partnerships. The net asset value of a fund is the total fair value of assets less liabilities.

EV/EBITDA (Enterprise Value/Earnings Before Interest, Taxes, Depreciation and Amortization) Multiple and Price Equivalent

Private equity valuation inputs include earnings multiples, which are determined based on comparable companies, and a higher multiple will translate into a higher fair value. Price equivalent is a percentage of the market price based on the liquidity of the security.

Credit Spread

A credit spread (yield) is the difference between the instrument's yield and a benchmark yield. Benchmark instruments have high credit quality ratings with similar maturities. The credit spread therefore represents the discount rate used to determine the present value of future cash flows of an asset to reflect the market return required for credit quality in the estimated cash flows. A higher credit spread will result in a lower value.

Discount Rate

The discount rate is the input used to bring future cash flows to their present value. A higher discount rate will translate into a lower fair value.

Liquidity Premium

A liquidity premium may be applied when few or no transactions exist to support the valuations. A higher liquidity premium will result in a lower value.

Long-Term Volatility

Volatility is a measure of the expected future variability of market prices. Volatility is generally observable in the market through options prices. However, the long-term volatility of options with a longer maturity might not be observable. An increase (decrease) in long-term volatility is generally associated with an increase (decrease) in long-term correlation. Higher long-term volatility may increase or decrease an instrument's fair value depending on its terms.

Market Correlation

Correlation is a measure of the inter-relationship between two different variables. A positive correlation means that the variables tend to move in the same direction; a negative correlation means that the variables tend to move in opposite directions. Correlation is used to measure financial instruments whose future returns depend on several variables. Changes in correlation will either increase or decrease a financial instrument's fair value depending on the terms of its contractual payout.

Sensitivity Analysis of Financial Instruments Classified in Level 3

The Bank performs sensitivity analyses for the fair value measurements of financial instruments classified in Level 3, substituting unobservable inputs with one or more reasonably possible alternative assumptions.

For equity securities and other debt securities, the Bank varies significant unobservable inputs such as net asset values, EV/EBITDA multiples, or price equivalents and establishes a reasonable fair value range that could result in a \$102 million increase or decrease in the fair value recorded as at October 31, 2020 (a \$121 million increase or decrease as at October 31, 2019).

For the loans, the Bank varies unobservable inputs such as a liquidity premium and establishes a reasonable fair value range that could result in a \$57 million increase or decrease in the fair value recorded as at October 31, 2020 (\$54 million increase or decrease as at October 31, 2019).

For derivative financial instruments and embedded derivative financial instruments related to structured deposit notes, the Bank varies long-term volatility, market correlation inputs and the liquidity premium, and establishes a reasonable fair value range. As at October 31, 2020, for derivative financial instruments, the net fair value could result in a \$12 million increase or decrease (\$1 million increase or decrease as at October 31, 2019), whereas for structured deposit notes, the net fair value could result in a \$1 million increase or decrease (no sensitivity analysis as at October 31, 2019 since no structured deposit note was classified in Level 3).

For all Level 3 financial instruments, the reasonable fair value ranges could result in an 8% increase or decrease in net income as at October 31, 2020 (an 8% increase or decrease in net income as at October 31, 2019).

Change in the Fair Value of Financial Instruments Classified in Level 3

The Bank may hedge the fair value of financial instruments classified in the various levels through offsetting hedge positions. Gains and losses for financial instruments classified in Level 3 presented in the following tables do not reflect the inverse gains and losses on financial instruments used for economic hedging purposes that may have been classified in Level 1 or 2 by the Bank. In addition, the Bank may hedge the fair value of financial instruments classified in Level 3 using other financial instruments classified in Level 3. The effect of these hedges is not included in the net amount presented in the following tables. The gains and losses presented hereafter may comprise changes in fair value based on observable and unobservable inputs.

	Year ended October 31, 2020				
	Securities at fair value through profit or loss	Securities at fair value through other comprehensive income	Loans	Derivative financial instruments ⁽¹⁾	Deposits ⁽²⁾
Fair value as at October 31, 2019	458	362	360	4	–
Total realized and unrealized gains (losses) included in <i>Net income</i> ⁽³⁾	8	–	(17)	(10)	5
Total realized and unrealized gains (losses) included in <i>Other comprehensive income</i>	–	7	–	–	–
Purchases	26	4	–	–	–
Sales	(35)	–	–	–	–
Issuances	–	–	12	–	(18)
Settlements and other	–	–	(160)	(1)	–
Financial instruments transferred into Level 3	–	–	177	29	(9)
Financial instruments transferred out of Level 3	–	–	–	7	24
Fair value as at October 31, 2020	457	373	372	29	2
Change in unrealized gains and losses included in <i>Net income</i> with respect to financial assets and financial liabilities held as at October 31, 2020 ⁽⁴⁾	21	–	(17)	(10)	5

	Year ended October 31, 2019				
	Securities at fair value through profit or loss	Securities at fair value through other comprehensive income	Loans	Derivative financial instruments ⁽¹⁾	Deposits
Fair value as at October 31, 2018	313	233	386	(7)	(11)
Total realized and unrealized gains (losses) included in <i>Net income</i> ⁽⁵⁾	(69)	–	12	16	–
Total realized and unrealized gains (losses) included in <i>Other comprehensive income</i>	–	(4)	–	–	–
Purchases ⁽⁶⁾	253	133	–	–	–
Sales	(39)	–	–	–	–
Issuances	–	–	6	–	–
Settlements and other	–	–	(44)	3	–
Financial instruments transferred into Level 3	–	–	–	(10)	–
Financial instruments transferred out of Level 3	–	–	–	2	11
Fair value as at October 31, 2019	458	362	360	4	–
Change in unrealized gains and losses included in <i>Net income</i> with respect to financial assets and financial liabilities held as at October 31, 2019 ⁽⁷⁾	(76)	–	12	16	–

(1) The derivative financial instruments include assets and liabilities presented on a net basis.

(2) The amounts represent the fair value of embedded derivative financial instruments related to deposits.

(3) Total gains (losses) included in *Non-interest income* was a loss of \$14 million.

(4) Total unrealized gains (losses) included in *Non-interest income* was an unrealized loss of \$1 million.

(5) Total gains (losses) included in *Non-interest income* was a loss of \$41 million.

(6) On June 30, 2019, the Bank concluded that it had lost significant influence over NSIA Participations (NSIA), an associate entity in the Ivory Coast, and therefore ceased using the equity method to account for the investment. The Bank designated its investment in NSIA as a financial asset (securities) measured at fair value through other comprehensive income in an amount of \$128 million.

(7) Total unrealized gains (losses) included in *Non-interest income* was an unrealized loss of \$48 million.

Note 3 – Fair Value of Financial Instruments (cont.)

Financial Instruments Not Recorded at Fair Value on the Consolidated Balance Sheet

The following tables show the financial instruments that have not been recorded at fair value on the Consolidated Balance Sheet according to the fair value hierarchy, except for those whose carrying value is a reasonable approximation of fair value.

	As at October 31, 2020			Total
	Level 1	Level 2	Level 3	
Financial assets				
Securities at amortized cost				
Securities issued or guaranteed by				
Canadian government	–	6,298	–	6,298
Canadian provincial and municipal governments	–	2,416	–	2,416
U.S. Treasury, other U.S. agencies and other foreign governments	–	21	–	21
Other debt securities	–	2,555	–	2,555
	–	11,290	–	11,290
Loans, net of allowances	–	62,486	90,214	152,700
Financial liabilities				
Deposits	–	205,337	–	205,337
Other				
Liabilities related to transferred receivables	–	14,432	–	14,432
Other liabilities	–	67	–	67
Subordinated debt	–	787	–	787
	–	220,623	–	220,623

	As at October 31, 2019			Total
	Level 1	Level 2	Level 3	
Financial assets				
Securities at amortized cost				
Securities issued or guaranteed by				
Canadian government	–	5,292	–	5,292
Canadian provincial and municipal governments	–	1,805	–	1,805
U.S. Treasury, other U.S. agencies and other foreign governments	–	138	–	138
Other debt securities	–	2,589	–	2,589
	–	9,824	–	9,824
Loans, net of allowances	–	59,857	80,301	140,158
Financial liabilities				
Deposits	–	178,861	–	178,861
Other				
Liabilities related to transferred receivables	–	13,186	–	13,186
Other liabilities	–	912	–	912
Subordinated debt	–	765	–	765
	–	193,724	–	193,724

Note 4 – Financial Instruments Designated at Fair Value Through Profit or Loss

The Bank chose to designate certain financial instruments at fair value through profit or loss according to the criteria presented in Note 1 to these consolidated financial statements. Consistent with its risk management strategy and in accordance with the fair value option, which permits the designation if it eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise from measuring financial assets and liabilities or recognizing the gains and losses thereon on different bases, the Bank designated at fair value through profit or loss certain securities, certain securities purchased under reverse repurchase agreements, and certain liabilities related to transferred receivables. The fair value of liabilities related to transferred receivables does not include credit risk, as the holders of these liabilities are not exposed to the Bank's credit risk. The Bank also designated certain deposits that include embedded derivative financial instruments at fair value through profit or loss.

To determine a change in fair value arising from a change in the credit risk of deposits designated at fair value through profit or loss, the Bank calculates, at the beginning of the period, the present value of the instrument's contractual cash flows using the following rates: first, using an observed discount rate for similar securities that reflects the Bank's credit spread and, then, using a rate that excludes the Bank's credit spread. The difference obtained between the two values is then compared to the difference obtained using the same rates at the end of the period.

Information about the financial assets and financial liabilities designated at fair value through profit or loss is provided in the following tables.

	Carrying value as at October 31, 2020	Unrealized gains (losses) for the year ended October 31, 2020	Unrealized gains (losses) since the initial recognition of the instrument
Financial assets designated at fair value through profit or loss			
Securities	2,679	68	93
	2,679	68	93
Financial liabilities designated at fair value through profit or loss			
Deposits ⁽¹⁾⁽²⁾	11,418	628	592
Liabilities related to transferred receivables	8,762	(150)	(223)
	20,180	478	369

	Carrying value as at October 31, 2019	Unrealized gains (losses) for the year ended October 31, 2019	Unrealized gains (losses) since the initial recognition of the instrument
Financial assets designated at fair value through profit or loss			
Securities	3,267	86	26
Securities purchased under reverse repurchase agreements	87	–	–
	3,354	86	26
Financial liabilities designated at fair value through profit or loss			
Deposits ⁽¹⁾⁽²⁾	11,203	(789)	(204)
Liabilities related to transferred receivables	8,215	(163)	(75)
	19,418	(952)	(279)

(1) For the year ended October 31, 2020, the change in the fair value of deposits designated at fair value through profit or loss attributable to credit risk, and recorded in *Other comprehensive income*, resulted in a loss of \$60 million (\$7 million gain for the year ended October 31, 2019).

(2) The amount at maturity that the Bank will be contractually required to pay to the holders of these deposits varies and will differ from the reporting date fair value.

Note 5 – Offsetting Financial Assets and Financial Liabilities

Financial assets and liabilities are offset and the net amount is presented on the Consolidated Balance Sheet when the Bank has a legally enforceable right to set off the recognized amounts and intends to settle on a net basis or to realize the asset and settle the liability simultaneously.

Generally, over-the-counter financial derivatives subject to master netting arrangements of the International Swaps & Derivatives Association, Inc. or other similar agreements do not meet the netting criteria on the Consolidated Balance Sheet because the right of set-off is legally enforceable only in the event of default, insolvency or bankruptcy.

Generally, securities purchased under reverse repurchase agreements and securities borrowed as well as obligations related to securities sold under repurchase agreements and securities loaned, subject to master agreements, do not meet the netting criteria if they confer only a right of set-off that is enforceable only in the event of default, insolvency or bankruptcy.

However, the above-mentioned transactions may be subject to contractual netting agreements concluded with clearing houses. If the netting criteria are met, these transactions are netted on the Consolidated Balance Sheet. In addition, as part of these transactions, the Bank may give or receive cash or other financial instruments used as collateral.

The following tables present information on financial assets and financial liabilities that are netted on the Consolidated Balance Sheet because they meet the netting criteria and on those that are not netted and are subject to an enforceable master netting arrangement or similar agreement.

As at October 31, 2020						
	Gross amounts recognized	Amounts set off on the Consolidated Balance Sheet	Net amounts reported on the Consolidated Balance Sheet	Associated amounts not set off on the Consolidated Balance Sheet		Net amounts
				Financial instruments ⁽¹⁾	Financial assets received/pledged as collateral ⁽²⁾⁽³⁾	
Financial assets						
Securities purchased under reverse repurchase agreements and securities borrowed	15,471	959	14,512	3,596	10,852	64
Derivative financial instruments	19,332	5,910	13,422	6,204	3,308	3,910
	34,803	6,869	27,934	9,800	14,160	3,974
Financial liabilities						
Obligations related to securities sold under repurchase agreements and securities loaned	34,818	959	33,859	3,596	30,181	82
Derivative financial instruments	18,833	5,910	12,923	6,204	3,993	2,726
	53,651	6,869	46,782	9,800	34,174	2,808

As at October 31, 2019						
	Gross amounts recognized	Amounts set off on the Consolidated Balance Sheet	Net amounts reported on the Consolidated Balance Sheet	Associated amounts not set off on the Consolidated Balance Sheet		Net amounts
				Financial instruments ⁽¹⁾	Financial assets received/pledged as collateral ⁽²⁾	
Financial assets						
Securities purchased under reverse repurchase agreements and securities borrowed	20,889	3,166	17,723	4,493	13,192	38
Derivative financial instruments	10,947	2,818	8,129	3,415	2,529	2,185
	31,836	5,984	25,852	7,908	15,721	2,223
Financial liabilities						
Obligations related to securities sold under repurchase agreements and securities loaned	25,066	3,166	21,900	4,493	17,327	80
Derivative financial instruments	9,670	2,818	6,852	3,415	2,051	1,386
	34,736	5,984	28,752	7,908	19,378	1,466

(1) Carrying amount of financial instruments that are subject to an enforceable master netting agreement or similar agreement but that do not satisfy offsetting criteria.

(2) Excludes non-financial instruments collateral.

(3) As of October 31, 2020, the financial assets pledged as collateral to the Bank of Canada included bearer deposit notes and covered bonds issued by the Bank.

Note 6 – Securities

Residual Contractual Maturities of Securities

As at October 31					2020	2019
	1 year or less	Over 1 year to 5 years	Over 5 years	No specified maturity	Total	Total
Securities at fair value through profit or loss						
Securities issued or guaranteed by						
Canadian government	1,711	5,584	2,189	–	9,484	10,423
Canadian provincial and municipal governments	1,077	1,797	6,231	–	9,105	6,762
U.S. Treasury, other U.S. agencies and other foreign governments	8,421	266	161	–	8,848	1,860
Other debt securities	440	816	832	–	2,088	2,693
Equity securities	–	–	–	48,801	48,801	40,085
	11,649	8,463	9,413	48,801	78,326	61,823
Securities at fair value through other comprehensive income						
Securities issued or guaranteed by						
Canadian government	812	3,577	23	–	4,412	4,432
Canadian provincial and municipal governments	186	1,326	2,642	–	4,154	1,674
U.S. Treasury, other U.S. agencies and other foreign governments	1,198	1,091	160	–	2,449	3,546
Other debt securities	123	312	657	–	1,092	374
Equity securities	–	–	–	619	619	622
	2,319	6,306	3,482	619	12,726	10,648
Securities at amortized cost⁽¹⁾						
Securities issued or guaranteed by						
Canadian government	1,034	5,090	39	–	6,163	5,248
Canadian provincial and municipal governments	217	1,444	692	–	2,353	1,788
U.S. Treasury, other U.S. agencies and other foreign governments	20	–	1	–	21	139
Other debt securities	1,356	1,134	52	–	2,542	2,580
	2,627	7,668	784	–	11,079	9,755

(1) As at October 31, 2020, securities at amortized cost are presented net of \$1 million in allowances for credit losses (\$1 million as at October 31, 2019).

Credit Quality

As at October 31, 2020 and 2019, securities at fair value through other comprehensive income and securities at amortized cost are classified in Stage 1, with their credit quality falling mostly in the “Excellent” category according to the Bank’s internal risk-rating categories. For additional information on the reconciliation of allowances for credit losses, see Note 7 to these consolidated financial statements.

Note 6 – Securities (cont.)

Gross Gains (Losses) on Securities at Fair Value Through Other Comprehensive Income

	As at October 31, 2020			
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Carrying value ⁽¹⁾
Securities issued or guaranteed by				
Canadian government	4,302	110	–	4,412
Canadian provincial and municipal governments	4,013	142	(1)	4,154
U.S. Treasury, other U.S. agencies and other foreign governments	2,430	19	–	2,449
Other debt securities	1,051	42	(1)	1,092
Equity securities	633	13	(27)	619
	12,429	326	(29)	12,726

	As at October 31, 2019			
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Carrying value ⁽¹⁾
Securities issued or guaranteed by				
Canadian government	4,411	26	(5)	4,432
Canadian provincial and municipal governments	1,614	60	–	1,674
U.S. Treasury, other U.S. agencies and other foreign governments	3,521	25	–	3,546
Other debt securities	364	11	(1)	374
Equity securities	649	2	(29)	622
	10,559	124	(35)	10,648

(1) The allowances for credit losses on securities at fair value through other comprehensive income, representing \$3 million as at October 31, 2020 (a negligible amount as at October 31, 2019), are reported in *Other comprehensive income*. For additional information, see Note 7 to these consolidated financial statements.

Equity Securities Designated at Fair Value Through Other Comprehensive Income

The Bank designated certain equity securities, the main business objective of which is to generate dividend income, at fair value through other comprehensive income without subsequent reclassification of gains and losses to net income. During the year ended October 31, 2020, an amount of \$21 million in dividend income was recognized for these investments (\$25 million for the year ended October 31, 2019), including an amount of \$2 million for investments that were sold during the year ended October 31, 2020 (\$1 million for investments that were sold during the year ended October 31, 2019).

	Year ended October 31, 2020			Year ended October 31, 2019		
	Equity securities of private companies	Equity securities of public companies	Total	Equity securities of private companies	Equity securities of public companies	Total
Fair value at beginning	362	260	622	233	118	351
Change in fair value	7	(9)	(2)	(4)	(23)	(27)
Designated at fair value through other comprehensive income ⁽¹⁾⁽²⁾	4	91	95	133	253	386
Sales ⁽³⁾	–	(96)	(96)	–	(88)	(88)
Fair value at end	373	246	619	362	260	622

- (1) On June 30, 2019, the Bank concluded that it had lost significant influence over NSIA Participations (NSIA), an associate entity in the Ivory Coast, and therefore ceased using the equity method to account for this investment. The Bank had designated its investment in NSIA as a financial asset measured at fair value through other comprehensive income in an amount of \$128 million. Following the fair value measurement, a \$33 million loss was recorded in the *Non-Interest income – Other* item of the Consolidated Statement of Income for the year ended October 31, 2019 and reported in the *Other* heading of segment results.
- (2) On May 9, 2019, after disposing of a portion of its investment in Fiera Capital Corporation (Fiera Capital), the Bank designated the retained interest as a financial asset measured at fair value through other comprehensive income. On the transaction date, a gain on disposal of Fiera Capital shares of \$79 million, including a \$31 million gain on remeasurement at fair value of the retained interest, was recognized in the *Non-Interest income – Other* item of the Consolidated Statement of Income for the year ended October 31, 2019 and reported in the *Other* heading of segment results.
- (3) The Bank disposed of public company equity securities for economic reasons.

Gains (Losses) on Disposals of Securities at Amortized Cost

During the years ended October 31, 2020 and 2019, the Bank sold certain debt securities measured at amortized cost. The carrying value of these securities upon disposal was \$258 million for the year ended October 31, 2020 (\$461 million for the year ended October 31, 2019), and the Bank recognized gains of \$6 million for the year ended October 31, 2020 (\$9 million for the year ended October 31, 2019) in *Non-interest income – Gains (losses) on non-trading securities, net* in the Consolidated Statement of Income.

Note 7 – Loans and Allowances for Credit Losses

Loans are recognized either at fair value through profit or loss or at amortized cost using the financial asset classification criteria defined in IFRS 9.

Determining and Measuring Expected Credit Losses (ECL)

Determining Expected Credit Losses

Expected credit losses are determined using a three-stage impairment approach that is based on the change in the credit quality of financial assets since initial recognition.

Stage 1

Financial assets that have experienced no significant increase in credit risk between initial recognition and the reporting date and for which 12-month expected credit losses are recorded at the reporting date are classified in Stage 1.

Stage 2

Financial assets that have experienced a significant increase in credit risk between initial recognition and the reporting date, and for which lifetime expected credit losses are recorded at the reporting date, are classified in Stage 2.

Stage 3

Financial assets for which there is objective evidence of impairment, for which one or more events have had a detrimental impact on the estimated future cash flows of these financial assets at the reporting date, and for which lifetime expected credit losses are recorded, are classified in Stage 3.

POCI

Financial assets that are credit-impaired when purchased or originated (POCI) are classified in the POCI category.

Impairment Governance

A rigorous control framework is applied to the determination of expected credit losses. The Bank has policies and procedures that govern impairments arising from credit risk. These policies are documented and periodically reviewed by the Risk Management group. All models used to calculate expected credit losses are validated, and controls are in place to ensure they are applied.

These models are validated by groups that are independent of the team that prepares the calculations. Complex questions on measurement methodologies and assumptions are reviewed by a group of experts from various functions. Furthermore, the inputs and assumptions used to determine expected credit losses are reviewed on a regular basis.

Measurement of Expected Credit Losses (ECL)

Expected credit losses are estimated using three main variables: (1) probability of default (PD), (2) loss given default (LGD) and (3) exposure at default (EAD). For accounting purposes, 12-month PD and lifetime PD are the probabilities of a default occurring over the next 12 months or over the life of a financial instrument, respectively, based on conditions existing at the balance sheet date and on future economic conditions that have, or will have, an impact on credit risk. LGD reflects the losses expected should default occur and considers such factors as the mitigating effects of collateral, the realizable value thereof, and the time value of money. EAD is the expected balance owing at default and considers such factors as repayments of principal and interest between the balance sheet date and the time of default as well as any amounts expected to be drawn on a committed facility. Twelve-month expected credit losses are estimated by multiplying 12-month PD by LGD and by EAD. Lifetime expected credit losses are estimated using the lifetime PD.

For most financial instruments, expected credit losses are measured on an individual basis. Financial instruments that have credit losses measured on a collective basis are grouped according to similar credit risk characteristics such as type of instrument, geographic location, comparable risk level, and business sector or industry.

Inputs, Assumptions and Estimation Techniques

The Bank's approach to calculating expected credit losses consists essentially of leveraging existing regulatory models and then adjusting their parameters for IFRS 9 purposes. These models have the advantage of having been thoroughly tested and validated. In addition, using the same base models, regardless of the purpose, provides consistency across risk assessments. These models use inputs, assumptions and estimation techniques that require a high degree of management judgment. The main factors that contribute to changes in ECL that are subject to significant judgment include the following:

- calibration of regulatory parameters in order to obtain point-in-time and forward-looking parameters;
- forecasts of macroeconomic variables for multiple scenarios and the probability weighting of the scenarios;
- determination of the significant increases in credit risk (SICR) of a loan.

Note 7 – Loans and Allowances for Credit Losses (cont.)

Main Parameters

PD Estimates

Since the objective of the regulatory calibration of PD is to align historical data to the long-run default rate, adjustments are required to obtain a point-in-time, forward-looking PD, as required by IFRS 9. The Bank performs the following: (1) A point-in-time calibration, where the PD of the portfolio is aligned with the appropriate default rate. The resulting PD estimate generally equals the prior-year default rate. The prior-year default rate is selected for the calibration performed at this stage, as it often reflects one of the most accurate and appropriate estimates of the current-year default rate; (2) Forward-looking adjustments are incorporated through, among other measures, a calibration factor based on forecasts produced by the stress testing team's analyses. The team considers three macroeconomic scenarios, and, for each scenario, produces a forward-looking assessment covering the three upcoming years.

LGD Estimates

The LGD estimation method consists of using, for each of the three macroeconomic scenarios, expected LGD based on the LGD values observed using backtesting, the economic LGD estimated and used to calculate economic capital, and lastly, the estimated downturn LGD used to calculate regulatory capital.

EAD Estimates

For term loans, the Bank uses expected EAD, which is the outstanding balance anticipated at each point in time. Expected EAD decreases over time according to contractual repayments and to prepayments. For revolving loans, the EAD percentage is based on the percentage estimated by the corresponding regulatory model and, thereafter, is converted to dollars according to the authorized balance.

Expected Life

For most financial instruments, the expected life used when measuring expected credit losses is the remaining contractual life. For revolving financial instruments where there is no contractual maturity, such as credit cards or lines of credit, the expected life is based on the behavioural life of clients who have defaulted or closed their account.

Incorporation of Forward-Looking Information

The Bank's Economy and Strategy Group is responsible for developing three macroeconomic scenarios and for recommending probability weights for each scenario. Macroeconomic scenarios are not developed for specific portfolios, as the Economy and Strategy Group provides a set of variables for each of the defined scenarios for the next three years. The PDs are also adjusted to incorporate economic assumptions (interest rates, unemployment rates, GDP forecasts, oil prices, housing price indices, etc.) that can be statistically tied to PD changes that will have an impact beyond the next 12 months. These statistical relationships are determined using the processes developed for stress testing. In addition, the group considers other relevant factors that may not be adequately reflected in the information used to calculate the PDs (including late payments and whether the financial asset is subject to additional monitoring within the watchlist process for business and government loan portfolios).

Determination of a Significant Increase in the Credit Risk of a Financial Instrument

At each reporting period, the Bank determines whether credit risk has increased significantly since initial recognition by examining the change in the risk of default occurring over the remaining life of the financial instrument. First, the Bank compares the point-in-time forward-looking remaining lifetime PD at the reporting date with the expected point-in-time forward-looking remaining lifetime PD established at initial recognition. Based on this comparison, the Bank determines whether the loan has deteriorated when compared to the initial conditions. Because the comparison includes an adjustment based on origination-date forward-looking information and reporting-date forward-looking information, the deterioration may be caused by the following factors: (i) deterioration of the economic outlook used in the forward-looking assessment; (ii) deterioration of the borrower's conditions (payment defaults, worsening financial ratios, etc.); or (iii) a combination of both factors. The quantitative criteria used to determine a significant increase in credit risk are a series of relative and absolute thresholds, and a backstop is also applied. All financial instruments that are over 30 days past due but below 90 days past due are migrated to Stage 2, even if the other criteria do not indicate a significant increase in credit risk.

Credit Quality of Loans

The following tables present the gross carrying amounts of loans as at October 31, 2020 and 2019, according to credit quality and ECL impairment stage of each loan category at amortized cost, and according to credit quality for loans at fair value through profit or loss. For additional information on credit quality according to the Advanced Internal Rating-Based (AIRB) categories, see the Internal Default Risk Ratings table on page 80 in the Credit Risk Management section of the MD&A for the year ended October 31, 2020.

As at October 31, 2020						
	Non-impaired loans ⁽¹⁾		Impaired loans		Loans at fair value through profit or loss ⁽²⁾	Total
	Stage 1	Stage 2	Stage 3	POCI		
Residential mortgage						
Excellent	23,139	29	–	–	–	23,168
Good	15,753	108	–	–	–	15,861
Satisfactory	10,418	741	–	–	–	11,159
Special mention	730	299	–	–	–	1,029
Substandard	283	174	–	–	–	457
Default	–	–	149	–	–	149
AIRB approach	50,323	1,351	149	–	–	51,823
Standardized approach	4,993	31	44	531	7,537	13,136
Gross carrying amount	55,316	1,382	193	531	7,537	64,959
Allowances for credit losses ⁽³⁾	63	23	35	(56)	–	65
Carrying amount	55,253	1,359	158	587	7,537	64,894
Personal						
Excellent	15,072	40	–	–	–	15,112
Good	9,680	1,039	–	–	–	10,719
Satisfactory	4,395	2,024	–	–	–	6,419
Special mention	300	696	–	–	–	996
Substandard	116	185	–	–	–	301
Default	–	–	140	–	–	140
AIRB approach	29,563	3,984	140	–	–	33,687
Standardized approach	3,532	48	22	324	–	3,926
Gross carrying amount	33,095	4,032	162	324	–	37,613
Allowances for credit losses ⁽³⁾	87	145	76	(10)	–	298
Carrying amount	33,008	3,887	86	334	–	37,315
Credit card						
Excellent	385	–	–	–	–	385
Good	307	–	–	–	–	307
Satisfactory	660	28	–	–	–	688
Special mention	335	205	–	–	–	540
Substandard	29	64	–	–	–	93
Default	–	–	–	–	–	–
AIRB approach	1,716	297	–	–	–	2,013
Standardized approach	25	–	–	–	–	25
Gross carrying amount	1,741	297	–	–	–	2,038
Allowances for credit losses ⁽³⁾	45	124	–	–	–	169
Carrying amount	1,696	173	–	–	–	1,869
Business and government⁽⁴⁾						
Excellent	4,732	–	–	–	289	5,021
Good	21,380	10	–	–	163	21,553
Satisfactory	19,421	7,037	–	–	73	26,531
Special mention	218	1,915	–	–	–	2,133
Substandard	10	246	–	–	–	256
Default	–	–	361	–	–	361
AIRB approach	45,761	9,208	361	–	525	55,855
Standardized approach	5,122	163	101	–	47	5,433
Gross carrying amount	50,883	9,371	462	–	572	61,288
Allowances for credit losses ⁽³⁾	135	250	241	–	–	626
Carrying amount	50,748	9,121	221	–	572	60,662
Total loans						
Gross carrying amount	141,035	15,082	817	855	8,109	165,898
Allowances for credit losses ⁽³⁾	330	542	352	(66)	–	1,158
Carrying amount	140,705	14,540	465	921	8,109	164,740

(1) In response to the COVID-19 pandemic, the Bank has approved certain payment deferrals for all types of loans. As at October 31, 2020, the gross carrying value of loans for which deferrals have been approved totalled \$695 million for residential mortgages and \$1,182 million for business and government loans. These loans are presented in the stage in which they were positioned immediately prior to application of the payment deferral.

(2) Not subject to expected credit losses.

(3) The allowances for credit losses do not include the amounts related to undrawn commitments reported in the *Other liabilities* item of the Consolidated Balance Sheet.

(4) Includes customers' liability under acceptances.

Note 7 – Loans and Allowances for Credit Losses (cont.)

As at October 31, 2019						
	Non-impaired loans		Impaired loans		Loans at fair value through profit or loss ⁽¹⁾	Total
	Stage 1	Stage 2	Stage 3	POCI		
Residential mortgage						
Excellent	21,840	–	–	–	–	21,840
Good	14,375	11	–	–	–	14,386
Satisfactory	8,178	674	–	–	–	8,852
Special mention	413	497	–	–	–	910
Substandard	101	248	–	–	–	349
Default	–	–	117	–	–	117
AIRB approach	44,907	1,430	117	–	–	46,454
Standardized approach	3,686	19	27	553	6,432	10,717
Gross carrying amount	48,593	1,449	144	553	6,432	57,171
Allowances for credit losses ⁽²⁾	37	12	25	(53)	–	21
Carrying amount	48,556	1,437	119	606	6,432	57,150
Personal						
Excellent	14,331	–	–	–	–	14,331
Good	10,119	206	–	–	–	10,325
Satisfactory	4,973	1,477	–	–	–	6,450
Special mention	416	711	–	–	–	1,127
Substandard	109	199	–	–	–	308
Default	–	–	139	–	–	139
AIRB approach	29,948	2,593	139	–	–	32,680
Standardized approach	3,545	83	23	613	–	4,264
Gross carrying amount	33,493	2,676	162	613	–	36,944
Allowances for credit losses ⁽²⁾	64	103	69	(4)	–	232
Carrying amount	33,429	2,573	93	617	–	36,712
Credit card						
Excellent	370	–	–	–	–	370
Good	316	–	–	–	–	316
Satisfactory	786	20	–	–	–	806
Special mention	421	241	–	–	–	662
Substandard	22	112	–	–	–	134
Default	–	–	–	–	–	–
AIRB approach	1,915	373	–	–	–	2,288
Standardized approach	34	–	–	–	–	34
Gross carrying amount	1,949	373	–	–	–	2,322
Allowances for credit losses ⁽²⁾	26	102	–	–	–	128
Carrying amount	1,923	271	–	–	–	2,194
Business and government⁽³⁾						
Excellent	4,783	–	–	–	112	4,895
Good	22,951	4	–	–	53	23,008
Satisfactory	22,367	1,346	–	–	72	23,785
Special mention	87	1,131	–	–	–	1,218
Substandard	45	255	–	–	–	300
Default	–	–	306	–	–	306
AIRB approach	50,233	2,736	306	–	237	53,512
Standardized approach	3,779	–	72	–	129	3,980
Gross carrying amount	54,012	2,736	378	–	366	57,492
Allowances for credit losses ⁽²⁾	58	99	140	–	–	297
Carrying amount	53,954	2,637	238	–	366	57,195
Total loans						
Gross carrying amount	138,047	7,234	684	1,166	6,798	153,929
Allowances for credit losses ⁽²⁾	185	316	234	(57)	–	678
Carrying amount	137,862	6,918	450	1,223	6,798	153,251

(1) Not subject to expected credit losses.

(2) The allowances for credit losses do not include the amounts related to undrawn commitments reported in the *Other liabilities* item of the Consolidated Balance Sheet.

(3) Includes customers' liability under acceptances.

The following table presents the credit risk exposures of off-balance-sheet commitments as at October 31, 2020 and 2019 according to credit quality and ECL impairment stage.

As at October 31	2020				2019			
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Off-balance-sheet commitments⁽¹⁾								
Retail								
Excellent	15,255	43	–	15,298	12,088	2	–	12,090
Good	3,967	309	–	4,276	3,585	51	–	3,636
Satisfactory	1,273	255	–	1,528	1,328	180	–	1,508
Special mention	84	69	–	153	114	82	–	196
Substandard	4	12	–	16	5	19	–	24
Default	–	–	3	3	–	–	4	4
Non-retail								
Excellent	10,616	–	–	10,616	10,050	–	–	10,050
Good	17,442	343	–	17,785	14,640	1	–	14,641
Satisfactory	5,013	3,450	–	8,463	6,165	513	–	6,678
Special mention	28	324	–	352	17	161	–	178
Substandard	2	84	–	86	167	29	–	196
Default	–	–	6	6	–	–	16	16
AIRB approach	53,684	4,889	9	58,582	48,159	1,038	20	49,217
Standardized approach	10,335	5	1	10,341	6,154	–	1	6,155
Total exposure	64,019	4,894	10	68,923	54,313	1,038	21	55,372
Allowances for credit losses	115	61	–	176	53	20	1	74
Total exposure, net of allowances	63,904	4,833	10	68,747	54,260	1,018	20	55,298

(1) Represent letters of guarantee and documentary letters of credit, undrawn commitments, and backstop liquidity and credit enhancement facilities.

Loans Past Due But Not Impaired⁽¹⁾

As at October 31	2020 ⁽²⁾				2019			
	Residential mortgage	Personal	Credit card	Business and government ⁽³⁾	Residential mortgage	Personal	Credit card	Business and government ⁽³⁾
Past due but not impaired								
31 to 60 days	58	74	20	22	92	82	27	31
61 to 90 days	24	27	9	10	34	34	13	21
Over 90 days ⁽⁴⁾	–	–	24	–	–	–	28	–
	82	101	53	32	126	116	68	52

(1) Loans less than 31 days past due are not presented as they are not considered past due from an administrative standpoint.

(2) In response to the COVID-19 pandemic, the Bank has approved certain payment deferrals for all types of loans. These loans are presented in the loan category in which they were positioned immediately prior to the application of the payment deferral.

(3) Includes customers' liability under acceptances.

(4) All loans more than 90 days past due, except for credit card receivables, are considered impaired (Stage 3).

Note 7 – Loans and Allowances for Credit Losses (cont.)

Impaired Loans

As at October 31	2020			2019		
	Gross	Allowances for credit losses	Net	Gross	Allowances for credit losses	Net
Loans – Stage 3						
Residential mortgage	193	35	158	144	25	119
Personal	162	76	86	162	69	93
Credit card ⁽¹⁾	–	–	–	–	–	–
Business and government ⁽²⁾	462	241	221	378	140	238
	817	352	465	684	234	450
Loans – POCI	855	(66)	921	1,166	(57)	1,223
	1,672	286	1,386	1,850	177	1,673

(1) Credit card receivables are considered impaired, at the latest, when payment is 180 days past due, and they are written off at that time.

(2) Includes customers' liability under acceptances.

Maximum Exposure to Credit Risk on Impaired Loans

The following table presents the maximum exposure to credit risk of impaired loans, the percentage of exposure covered by guarantees, and the main types of collateral and guarantees held for each loan category.

As at October 31	2020		2019		Types of collateral and guarantees
	Gross impaired loans	Percentage covered by guarantees ⁽¹⁾	Gross impaired loans	Percentage covered by guarantees ⁽¹⁾	
Loans – Stage 3					
Residential mortgage	193	100 %	144	100 %	Residential buildings
Personal	162	49 %	162	46 %	Buildings and automobiles
Business and government ⁽²⁾	462	65 %	378	53 %	Buildings, equipment, government and bank guarantees
Loans – POCI	855	31 %	1,166	28 %	Buildings and automobiles

(1) For gross impaired loans, the ratio is calculated on a weighted average basis using the estimated value of the collateral and guarantees held for each loan category presented. The value of the collateral and guarantees held for a specific loan may exceed the balance of the loan; when this is the case, the ratio is capped at 100%.

(2) Includes customers' liability under acceptances.

Allowances for Credit Losses

The following tables present a reconciliation of the allowances for credit losses by Consolidated Balance Sheet item and by type of off-balance-sheet commitment.

	Year ended October 31, 2020					Allowances for credit losses as at October 31, 2020
	Allowances for credit losses as at October 31, 2019	Provisions for credit losses	Write-offs ⁽¹⁾	Disposals	Recoveries and other	
Balance sheet						
Cash and deposits with financial institutions⁽²⁾⁽³⁾	2	3	–	–	–	5
Securities⁽³⁾						
At fair value through other comprehensive income ⁽⁴⁾	–	3	–	–	–	3
At amortized cost ⁽²⁾	1	–	–	–	–	1
Securities purchased under reverse repurchase agreements and securities borrowed⁽²⁾⁽³⁾	–	–	–	–	–	–
Loans⁽⁵⁾						
Residential mortgage	21	48	(6)	–	2	65
Personal	232	168	(121)	–	19	298
Credit card	128	116	(90)	–	15	169
Business and government	268	342	(77)	–	–	533
Customers' liability under acceptances	29	64	–	–	–	93
	678	738	(294)	–	36	1,158
Other assets⁽²⁾⁽³⁾	–	–	–	–	–	–
Off-balance-sheet commitments⁽⁶⁾						
Letters of guarantee and documentary letters of credit	6	9	–	–	–	15
Undrawn commitments	66	91	–	–	–	157
Backstop liquidity and credit enhancement facilities	2	2	–	–	–	4
	74	102	–	–	–	176
	755	846	(294)	–	36	1,343

	Year ended October 31, 2019					Allowances for credit losses as at October 31, 2019
	Allowances for credit losses as at October 31, 2018	Provisions for credit losses	Write-offs ⁽¹⁾	Disposals	Recoveries and other	
Balance sheet						
Cash and deposits with financial institutions⁽²⁾⁽³⁾	1	1	–	–	–	2
Securities⁽³⁾						
At fair value through other comprehensive income ⁽⁴⁾	–	–	–	–	–	–
At amortized cost ⁽²⁾	1	–	–	–	–	1
Securities purchased under reverse repurchase agreements and securities borrowed⁽²⁾⁽³⁾	–	–	–	–	–	–
Loans⁽⁵⁾						
Residential mortgage	1	26	(7)	–	1	21
Personal	259	137	(188)	–	24	232
Credit card	129	88	(104)	–	15	128
Business and government	249	66	(52)	(1)	6	268
Customers' liability under acceptances	20	9	–	–	–	29
	658	326	(351)	(1)	46	678
Other assets⁽²⁾⁽³⁾	–	–	–	–	–	–
Off-balance-sheet commitments⁽⁶⁾						
Letters of guarantee and documentary letters of credit	3	3	–	–	–	6
Undrawn commitments	49	17	–	–	–	66
Backstop liquidity and credit enhancement facilities	2	–	–	–	–	2
	54	20	–	–	–	74
	714	347	(351)	(1)	46	755

(1) The contractual amount outstanding on financial assets that were written off during the year ended October 31, 2020 and that are still subject to enforcement activity was \$155 million (\$166 million for the year ended October 31, 2019).

(2) These financial assets are presented net of the allowances for credit losses on the Consolidated Balance Sheet.

(3) As at October 31, 2020 and 2019, these financial assets were mainly classified in Stage 1 and their credit quality fell mostly within the *Excellent* category.

(4) The allowances for credit losses are reported in the *Accumulated other comprehensive income* item of the Consolidated Balance Sheet.

(5) The allowances for credit losses are reported in the *Allowances for credit losses* item of the Consolidated Balance Sheet.

(6) The allowances for credit losses are reported in the *Other liabilities* item of the Consolidated Balance Sheet.

Note 7 – Loans and Allowances for Credit Losses (cont.)

The following tables present the reconciliation of allowances for credit losses for each loan category at amortized cost according to ECL impairment stage.

Year ended October 31	2020					2019				
	Allowances for credit losses on non-impaired loans		Allowances for credit losses on impaired loans		Total	Allowances for credit losses on non-impaired loans		Allowances for credit losses on impaired loans		Total
	Stage 1	Stage 2	Stage 3	POCI ⁽¹⁾		Stage 1	Stage 2	Stage 3	POCI ⁽¹⁾	
Residential mortgage										
Balance at beginning	37	12	25	(53)	21	31	13	21	(64)	1
Originations or purchases	11	–	–	–	11	17	–	–	–	17
Transfers ⁽²⁾ :										
to Stage 1	32	(23)	(9)	–	–	13	(10)	(3)	–	–
to Stage 2	(3)	5	(2)	–	–	(1)	2	(1)	–	–
to Stage 3	–	(4)	4	–	–	–	(4)	4	–	–
Net remeasurement of loss allowances ⁽³⁾	(12)	35	21	(3)	41	(22)	12	10	11	11
Derecognitions ⁽⁴⁾	(2)	(2)	–	–	(4)	(1)	(1)	–	–	(2)
Changes to models	–	–	–	–	–	–	–	–	–	–
Provisions for credit losses	26	11	14	(3)	48	6	(1)	10	11	26
Write-offs	–	–	(6)	–	(6)	–	–	(7)	–	(7)
Disposals	–	–	–	–	–	–	–	–	–	–
Recoveries	–	–	2	–	2	–	–	2	–	2
Foreign exchange movements and other	–	–	–	–	–	–	–	(1)	–	(1)
Balance at end	63	23	35	(56)	65	37	12	25	(53)	21
Includes:										
Amounts drawn	63	23	35	(56)	65	37	12	25	(53)	21
Undrawn commitments ⁽⁵⁾	–	–	–	–	–	–	–	–	–	–
Personal										
Balance at beginning	65	104	69	(4)	234	72	121	71	(3)	261
Originations or purchases	39	–	–	–	39	48	–	–	–	48
Transfers ⁽²⁾ :										
to Stage 1	87	(79)	(8)	–	–	72	(64)	(8)	–	–
to Stage 2	(19)	22	(3)	–	–	(19)	23	(4)	–	–
to Stage 3	(4)	(53)	57	–	–	(7)	(91)	98	–	–
Net remeasurement of loss allowances ⁽³⁾	(69)	165	64	(4)	156	(91)	127	81	(1)	116
Derecognitions ⁽⁴⁾	(10)	(12)	(3)	–	(25)	(11)	(11)	(5)	–	(27)
Changes to models	1	–	–	–	1	–	–	–	–	–
Provisions for credit losses	25	43	107	(4)	171	(8)	(16)	162	(1)	137
Write-offs	–	–	(121)	–	(121)	–	–	(188)	–	(188)
Disposals	–	–	–	–	–	–	–	–	–	–
Recoveries	–	–	24	–	24	–	–	27	–	27
Foreign exchange movements and other	(1)	1	(3)	(2)	(5)	1	(1)	(3)	–	(3)
Balance at end	89	148	76	(10)	303	65	104	69	(4)	234
Includes:										
Amounts drawn	87	145	76	(10)	298	64	103	69	(4)	232
Undrawn commitments ⁽⁵⁾	2	3	–	–	5	1	1	–	–	2

(1) The total amount of undiscounted initially expected credit losses on the POCI loans acquired for the year ended October 31, 2020 was \$66 million (\$92 million for the year ended October 31, 2019). The expected credit losses reflected in the purchase price were discounted.

(2) Represent stage transfers deemed to have taken place at the beginning of the quarter in which the transfer occurred.

(3) Includes the net remeasurement of loss allowances (after transfers) attributable mainly to changes in volumes and in the credit quality of existing loans as well as to changes in risk parameters.

(4) Represent reversals to loss allowances arising from full loan repayments (excluding write-offs and disposals).

(5) The allowances for credit losses on undrawn commitments are reported in the *Other liabilities* item of the Consolidated Balance Sheet.

Year ended October 31	2020									2019	
	Allowances for credit losses on non-impaired loans		Allowances for credit losses on impaired loans		Total	Allowances for credit losses on non-impaired loans		Allowances for credit losses on impaired loans			Total
	Stage 1	Stage 2	Stage 3	POCI ⁽¹⁾		Stage 1	Stage 2	Stage 3	POCI ⁽¹⁾		
Credit card											
Balance at beginning	47	113	–	–	160	40	115	–	–	155	
Originations or purchases	10	–	–	–	10	8	–	–	–	8	
Transfers ⁽²⁾ :											
to Stage 1	111	(111)	–	–	–	97	(97)	–	–	–	
to Stage 2	(18)	18	–	–	–	(15)	15	–	–	–	
to Stage 3	(1)	(40)	41	–	–	(2)	(39)	41	–	–	
Net remeasurement of loss allowances ⁽³⁾	(78)	159	34	–	115	(89)	128	48	–	87	
Derecognitions ⁽⁴⁾	(3)	(2)	–	–	(5)	(4)	(2)	–	–	(6)	
Changes to models	–	–	–	–	–	12	(7)	–	–	5	
Provisions for credit losses	21	24	75	–	120	7	(2)	89	–	94	
Write-offs	–	–	(90)	–	(90)	–	–	(104)	–	(104)	
Disposals	–	–	–	–	–	–	–	–	–	–	
Recoveries	–	–	15	–	15	–	–	15	–	15	
Foreign exchange movements and other	–	–	–	–	–	–	–	–	–	–	
Balance at end	68	137	–	–	205	47	113	–	–	160	
Includes:											
Amounts drawn	45	124	–	–	169	26	102	–	–	128	
Undrawn commitments ⁽⁵⁾	23	13	–	–	36	21	11	–	–	32	
Business and government⁽⁶⁾											
Balance at beginning	83	105	141	–	329	65	89	135	1	290	
Originations or purchases	93	–	–	–	93	29	–	–	–	29	
Transfers ⁽²⁾ :											
to Stage 1	28	(23)	(5)	–	–	27	(19)	(8)	–	–	
to Stage 2	(46)	51	(5)	–	–	(8)	18	(10)	–	–	
to Stage 3	–	(49)	49	–	–	(1)	(4)	5	–	–	
Net remeasurement of loss allowances ⁽³⁾	77	235	142	–	454	(19)	26	75	–	82	
Derecognitions ⁽⁴⁾	(20)	(32)	(5)	–	(57)	(10)	(5)	(10)	–	(25)	
Changes to models	–	–	–	–	–	–	–	–	–	–	
Provisions for credit losses	132	182	176	–	490	18	16	52	–	86	
Write-offs	–	–	(77)	–	(77)	–	–	(52)	–	(52)	
Disposals	–	–	–	–	–	–	–	–	(1)	(1)	
Recoveries	–	–	3	–	3	–	–	8	–	8	
Foreign exchange movements and other	(1)	–	(2)	–	(3)	–	–	(2)	–	(2)	
Balance at end	214	287	241	–	742	83	105	141	–	329	
Includes:											
Amounts drawn	135	250	241	–	626	58	99	140	–	297	
Undrawn commitments ⁽⁵⁾	79	37	–	–	116	25	6	1	–	32	
Total allowances for credit losses at end⁽⁷⁾	434	595	352	(66)	1,315	232	334	235	(57)	744	
Includes:											
Amounts drawn	330	542	352	(66)	1,158	185	316	234	(57)	678	
Undrawn commitments ⁽⁵⁾	104	53	–	–	157	47	18	1	–	66	

(1) The total amount of undiscounted initially expected credit losses on the POCI loans acquired during the year ended October 31, 2020 was \$66 million (\$92 million for the year ended October 31, 2019). The expected credit losses reflected in the purchase price were discounted.

(2) Represent stage transfers deemed to have taken place at the beginning of the quarter in which the transfer occurred.

(3) Includes the net remeasurement of loss allowances (after transfers) attributable mainly to changes in volumes and in the credit quality of existing loans as well as to changes in risk parameters.

(4) Represent reversals to loss allowances arising from full loan repayments (excluding write-offs and disposals).

(5) The allowances for credit losses on undrawn commitments are reported in the *Other liabilities* item of the Consolidated Balance Sheet.

(6) Includes customers' liability under acceptances.

(7) Excludes allowances for credit losses on other financial assets at amortized cost and on off-balance-sheet commitments other than undrawn commitments.

Note 7 – Loans and Allowances for Credit Losses (cont.)

Distribution of Gross and Impaired Loans by Borrower Category
Under the Basel Asset Classes

	2020					2019				
	As at October 31			Year ended October 31		As at October 31			Year ended October 31	
	Gross loans ⁽¹⁾	Impaired loans ⁽¹⁾	Allowances for credit losses on impaired loans ⁽¹⁾⁽²⁾	Provisions for credit losses	Write-offs	Gross loans ⁽¹⁾	Impaired loans ⁽¹⁾	Allowances for credit losses on impaired loans ⁽¹⁾⁽²⁾	Provisions for credit losses	Write-offs
Retail										
Residential mortgage ⁽³⁾	81,543	234	40	17	8	74,448	183	28	10	8
Qualifying revolving retail ⁽⁴⁾	3,599	20	16	94	112	4,099	24	15	112	127
Other retail ⁽⁵⁾	11,569	83	54	85	97	11,606	84	49	139	164
	96,711	337	110	196	217	90,153	291	92	261	299
Non-retail										
Agriculture	6,696	79	8	3	–	6,308	77	4	(3)	–
Oil and gas and pipelines	5,052	80	57	40	17	4,329	63	32	4	21
Mining	756	–	–	–	–	758	–	–	–	–
Utilities	4,352	30	20	21	–	3,372	–	–	–	–
Non-real-estate construction ⁽⁶⁾	1,079	37	16	19	4	1,168	–	–	–	–
Manufacturing	5,545	32	27	11	10	6,303	50	28	7	3
Wholesale	2,206	36	14	4	–	2,221	28	10	7	3
Retail	2,955	33	18	15	1	3,289	4	2	(1)	1
Transportation	1,528	9	7	8	1	1,682	9	1	7	6
Communications	1,184	25	18	12	7	1,614	27	11	5	7
Finance and insurance	4,347	6	1	1	–	4,335	12	1	–	–
Real estate services and real estate construction ⁽⁷⁾	14,171	38	15	4	3	11,635	32	14	10	3
Professional services	1,490	11	6	2	1	1,846	8	5	1	3
Education and health care	3,800	3	2	15	32	3,520	62	21	14	–
Other services	5,296	55	32	20	1	4,937	20	12	(1)	5
Government	1,160	–	–	–	–	1,071	–	–	–	–
Other	6,715	6	1	1	–	4,222	1	1	1	–
	68,332	480	242	176	77	62,610	393	142	51	52
Stages 1 and 2⁽⁸⁾			1,057	481				578	25	
POCI	855	855	(66)	(7)		1,166	1,166	(57)	10	
	165,898	1,672	1,343	846	294	153,929	1,850	755	347	351

- (1) Includes customers' liability under acceptances.
- (2) Allowances for credit losses on drawn amounts.
- (3) Includes residential mortgages on one-to-four-unit dwellings (Basel definition) and home equity lines of credit.
- (4) Includes lines of credit and credit card receivables.
- (5) Includes consumer loans and other retail loans but excludes SME loans.
- (6) Includes civil engineering loans, public-private partnership loans, and project finance loans.
- (7) Includes residential mortgages on dwellings of five or more units and SME loans.
- (8) Includes other financial assets at amortized cost and off-balance-sheet commitments. As at October 31, 2019, the allowances for credit losses on off-balance-sheet commitments include an amount of \$1 million for undrawn Stage 3 commitments related to business and government loans.

Main Macroeconomic Factors

The following tables show the main macroeconomic factors used to estimate the allowances for credit losses on loans. For each scenario, namely, the base case, upside scenario and downside scenario, the average values of the factors over the next 12 months (used for Stage 1 credit loss calculations) and over the remaining forecast period (used for Stage 2 credit loss calculations) are presented.

	As at October 31, 2020					
	Base scenario		Upside scenario		Downside scenario	
	Next 12 months	Remaining forecast period	Next 12 months	Remaining forecast period	Next 12 months	Remaining forecast period
Macroeconomic factors⁽¹⁾						
GDP growth ⁽²⁾	3.0 %	2.6 %	3.7 %	2.8 %	0.4 %	2.7 %
Unemployment rate	8.9 %	8.0 %	8.4 %	7.3 %	10.4 %	9.8 %
Housing price index growth ⁽²⁾	(5.2) %	2.4 %	(1.5) %	2.9 %	(9.9) %	(0.1) %
BBB spread ⁽³⁾	2.0 %	1.9 %	1.8 %	1.8 %	2.9 %	2.4 %
S&P/TSX growth ⁽²⁾⁽⁴⁾	(1.1) %	3.3 %	6.9 %	3.2 %	(15.6) %	5.1 %
WTI oil price ⁽⁵⁾ (US\$ per barrel)	41	54	51	64	26	32

	As at October 31, 2019					
	Base scenario		Upside scenario		Downside scenario	
	Next 12 months	Remaining forecast period	Next 12 months	Remaining forecast period	Next 12 months	Remaining forecast period
Macroeconomic factors⁽¹⁾						
GDP growth ⁽²⁾	1.5 %	1.6 %	2.0 %	2.1 %	(2.0) %	1.6 %
Unemployment rate	5.8 %	5.7 %	5.6 %	5.3 %	6.8 %	7.5 %
Housing price index growth ⁽²⁾	3.1 %	3.1 %	6.1 %	2.3 %	(10.9) %	(0.3) %
BBB spread ⁽³⁾	1.6 %	1.6 %	1.5 %	1.4 %	2.7 %	2.6 %
S&P/TSX growth ⁽²⁾⁽⁴⁾	4.9 %	2.4 %	8.5 %	2.9 %	(14.1) %	6.6 %
WTI oil price ⁽⁵⁾ (US\$ per barrel)	61	60	71	69	39	39

(1) All macroeconomic factors are based on the Canadian economy unless otherwise indicated.

(2) Growth rate is annualized.

(3) Yield on corporate BBB bonds less yield on Canadian federal government bonds with 10-year maturity.

(4) Main stock index in Canada.

(5) The West Texas Intermediate (WTI) index is commonly used as a benchmark for the price of oil.

The main macroeconomic factors used for the personal credit portfolio are unemployment rate and housing price index growth, based on the economy of Canada or Quebec. The main macroeconomic factors used for the business and government credit portfolio are unemployment rate, BBB spread, S&P/TSX growth, and WTI oil price.

An increase in unemployment rate or spread on corporate BBB bonds will generally correlate with higher allowances for credit losses, whereas an increase in the other macroeconomic factors (GDP, S&P/TSX, housing price index and WTI oil price) will generally correlate with lower allowances for credit losses.

Note 7 – Loans and Allowances for Credit Losses (cont.)

During the year ended October 31, 2020, certain macroeconomic factors were revised positively while others were revised negatively.

According to the base scenario, the Canadian economy will continue to recover next year, but the unemployment rate will be 8.6% at the end of 2021, significantly above its pre-recession level (5.7%). Given a difficult labour market and reduced immigration, housing prices will decline. The S&P/TSX will end 2021 at 16,200 points and the price of oil at US\$48.

According to the upside scenario, the economy will rebound more strongly thanks to medical breakthroughs that help fight COVID-19. Fiscal and monetary stimulus measures will limit the damage arising from destroyed production capacity. The unemployment rate at year-end 2021 will be more favourable than the base scenario (5 tenths lower). Housing prices will only decline slightly, the S&P/TSX will end 2021 at 17,500 points and the price of oil at US\$58.

According to the downside scenario, delays in the discovery of an effective vaccine will cause increased stress in the financial markets. This will lead to an economic meltdown and a more significant destruction of capacity. The unemployment rate will therefore trend upward, reaching 10.6% at the end of 2021. Housing prices will decrease considerably. The S&P/TSX will end 2021 at 13,900 points and the price of oil at US\$24.

Given uncertainty surrounding the key inputs used to measure credit losses, the Bank has applied expert credit judgment to adjust the modelled ECL results.

Sensitivity Analysis of Allowances for Credit Losses on Non-Impaired Loans

Scenarios

The following table shows a comparison of the Bank's allowances for credit losses on non-impaired loans (Stages 1 and 2) as at October 31, 2020 based on the probability weightings of three scenarios with allowances for credit losses resulting from simulations of each scenario weighted at 100%.

	Allowances for credit losses on non-impaired loans
Balance as at October 31, 2020	1,029
Simulations	
100% upside scenario	919
100% base scenario	958
100% downside scenario	1,279

Migration

The following table shows a comparison of the Bank's allowances for credit losses on non-impaired loans (Stages 1 and 2) as at October 31, 2020 with the estimated allowances for credit losses that would result if all these non-impaired loans were in Stage 1.

	Allowances for credit losses on non-impaired loans
Balance as at October 31, 2020	1,029
Simulations	
Non-impaired loans if they were all in Stage 1	866

Note 8 – Financial Assets Transferred But Not Derecognized

In the normal course of its business, the Bank enters into transactions in which it transfers financial assets such as securities or loans directly to third parties, in particular structured entities. According to the terms of some of those transactions, the Bank retains substantially all of the risks and rewards related to those financial assets. The risks include credit risk, interest rate risk, foreign exchange risk, prepayment risk and other price risks, whereas the rewards include income streams associated with the financial assets. As such, those financial assets are not derecognized and the transactions are treated as collateralized or secured borrowings. The nature of those transactions is described below.

Securities Sold Under Repurchase Agreements and Securities Loaned

When securities are sold under repurchase agreements and securities loaned under securities lending agreements, the Bank transfers financial assets to third parties in accordance with the standard terms for such transactions. These third parties may have an unlimited right to resell or repledge the financial assets received. If cash collateral is received, the Bank records the cash along with an obligation to return the cash, which is included in *Obligations related to securities sold under repurchase agreements and securities loaned* on the Consolidated Balance Sheet. Where securities are received as collateral, the Bank does not record the collateral on the Consolidated Balance Sheet.

Financial Assets Transferred to Structured Entities

Under the Canada Mortgage Bond (CMB) program, the Bank sells securities backed by insured residential mortgages and other securities to Canada Housing Trust (CHT), which finances the purchase through the issuance of insured mortgage bonds. Third-party CMB investors have legal recourse only to the transferred assets. The cash received for these transferred assets is treated as a secured borrowing, and a corresponding liability is recorded in *Liabilities related to transferred receivables* on the Consolidated Balance Sheet.

The following table provides additional information about the nature of the transferred financial assets that do not qualify for derecognition and the associated liabilities.

As at October 31	2020	2019
Carrying value of financial assets transferred but not derecognized		
Securities ⁽¹⁾	61,599	47,297
Residential mortgages	20,731	20,142
	82,330	67,439
Carrying value of associated liabilities⁽²⁾	45,781	36,625
Fair value of financial assets transferred but not derecognized		
Securities ⁽¹⁾	61,599	47,297
Residential mortgages	21,252	20,308
	82,851	67,605
Fair value of associated liabilities⁽²⁾	46,120	36,714

(1) The amount related to the securities loaned is the maximum amount of Bank securities that can be lent. For the obligations related to securities sold under repurchase agreements, the amount includes the Bank's own financial assets as well as those of third parties and excludes bearer deposit notes issued by the Bank and covered bonds issued by the Bank.

(2) Associated liabilities include liabilities related to transferred receivables and obligations related to securities sold under repurchase agreements before the offsetting impact of \$959 million as at October 31, 2020 (\$3,166 million as at October 31, 2019) excluding repurchased agreements guaranteed by bearer deposit notes issued by the Bank and covered bonds issued by the Bank. Liabilities related to securities loaned are not included, as the Bank can lend its own financial assets and those of third parties. The carrying value and fair value of liabilities related to securities loaned were \$6,327 million as at October 31, 2020 (\$9,753 million as at October 31, 2019).

The following table specifies the nature of the transactions related to financial assets transferred but not derecognized.

As at October 31	2020	2019
Carrying value of financial assets transferred but not derecognized		
Securities backed by insured residential mortgages and other securities sold to CHT	21,211	21,035
Securities sold under repurchase agreements	25,442	16,294
Securities loaned	35,677	30,110
	82,330	67,439

Note 9 – Investments in Associates and Joint Ventures

As at October 31		2020	2019
	Business segment	Carrying value	Carrying value
Listed associate			
TMX Group Limited ⁽¹⁾	Other	278	273
Unlisted associates		131	112
		409	385

(1) The Bank exercises significant influence over TMX Group Limited (TMX) mainly through its equity interest, debt financing, and presence on TMX's board of directors. As at October 31, 2020, the Bank's ownership interest in TMX was 8.2% and the fair value of this investment based on quoted prices in active markets was \$596 million (\$544 million as at October 31, 2019).

As at October 31, 2020 and 2019, there were no significant restrictions limiting the ability of associates to transfer funds to the Bank in the form of dividends or to repay any loans or advances. Furthermore, the Bank has not made any specific commitment or contracted any contingent liability with respect to associates.

TMX Group Limited

TMX is a Canadian corporation that directly or indirectly controls a number of entities that operate stock exchanges and clearing houses and provide clearing and settlement services. During the year ended October 31, 2020, TMX paid \$13 million in dividends to the Bank (\$12 million for the year ended October 31, 2019). The following table provides summarized financial information on TMX.

As at October 31 ⁽¹⁾		2020	2019
Balance sheet			
Current assets		34,496	31,099
Non-current assets		5,248	5,215
Current liabilities		34,415	31,164
Non-current liabilities		1,720	1,711
Income statement			
Total revenues		848	812
Net income		255	270
Other comprehensive income (loss)		48	(38)
Comprehensive income		303	232

(1) The balance sheet amounts are the balances reported in the unaudited financial statements as at September 30, 2020 and 2019, which are the most recent available, and the income statement amounts are based on the cumulative balances for the 12-month periods ended September 30, 2020 and 2019.

Unlisted associates

The table below provides summarized financial information related to the Bank's proportionate share in unlisted associates that are not individually significant.

Year ended October 31 ⁽¹⁾		2020	2019
Net income		7	12
Other comprehensive income		–	1
Comprehensive income		7	13

(1) The amounts are based on the cumulative balances for the 12-month periods ended September 30, 2020 and 2019.

Note 10 – Premises and Equipment

	Owned assets held						Right-of-use assets	Total
	Land	Head office building under construction ⁽¹⁾	Buildings	Computer equipment	Equipment and furniture	Leasehold improvements	Total	Real estate
Cost								
As at October 31, 2018	79	–	256	320	118	340	1,113	1,113
Additions	1	48	4	39	18	34	144	144
Disposals ⁽²⁾	(10)	–	(185)	–	(26)	(52)	(273)	(273)
Impairment losses ⁽³⁾	–	–	–	(36)	–	–	(36)	(36)
As at October 31, 2019	70	48	75	323	110	322	948	948
Impact of adopting IFRS 16 ⁽⁴⁾							648	648
Additions and modifications	1	72	3	55	14	37	182	232
Disposals	–	–	(7)	–	–	(4)	(11)	(11)
Impairment losses ⁽³⁾	–	–	–	(38)	–	–	(38)	(38)
Fully amortized assets	–	–	–	–	(12)	(24)	(36)	(36)
As at October 31, 2020	71	120	71	340	112	331	1,045	1,743
Accumulated amortization								
As at October 31, 2018			155	160	55	142	512	512
Depreciation for the year			6	57	15	27	105	105
Disposals ⁽²⁾			(103)	–	(13)	(20)	(136)	(136)
Impairment losses ⁽³⁾			–	(23)	–	–	(23)	(23)
As at October 31, 2019			58	194	57	149	458	458
Depreciation for the year			3	55	11	28	97	196
Disposals			(7)	–	–	(4)	(11)	(11)
Impairment losses ⁽³⁾			–	(19)	–	–	(19)	(19)
Fully amortized assets			–	–	(12)	(24)	(36)	(36)
As at October 31, 2020			54	230	56	149	489	588
Carrying value as at October 31, 2019	70	48	17	129	53	173	490	490
Carrying value as at October 31, 2020	71	120	17	110	56	182	556	1,155

- As at October 31, 2020, contractual commitments related to the head office building under construction stood at \$312 million, covering a period up to 2023.
- On July 30, 2019, the Bank completed the sale of its head office land and building located at 600 De La Gauchetière Street West, Montreal, Quebec, Canada, for gross proceeds of \$187 million. At the same time, the Bank entered into a four-year operating lease with the purchaser. This sale-leaseback transaction resulted in a gain of \$50 million, which was recognized in the *Non-Interest Income – Other* item of the Consolidated Statement of Income and reported in the *Other* heading of segment results.
- During the year ended October 31, 2020, the Bank decided to stop using certain computer equipment. Consequently, an amount of \$19 million in impairment losses related to this equipment was recognized in the *Non-interest expenses – Technology* item of the Consolidated Statement of Income and reported in the *Other* heading of segment results (2019: \$13 million).
- On November 1, 2019, the Bank adopted IFRS 16. The Bank recognized right-of-use assets totalling \$648 million (\$668 million reduced by provisions for onerous lease contracts of \$20 million). For additional information on the adoption of IFRS 16, refer to Note 1 to these consolidated financial statements.

Assets Leased Under Operating Leases

The Bank is a lessor under operating lease agreements for certain buildings. These leases have terms varying from one year to five years and do not contain any bargain purchase options or contingent rent.

The following table breaks down the future minimum payments receivable under these operating leases. These amounts include sub-lease revenues of \$8 million related to real estate right-of-use assets.

	As at October 31, 2020
1 year or less	2
Over 1 year to 2 years	2
Over 2 years to 3 years	2
Over 3 years to 4 years	1
Over 4 years to 5 years	1
Over 5 years	2
	10

Note 10 – Premises and Equipment (cont.)

Leases Recognized in the Consolidated Statement of Income

	As at October 31, 2020
Interest expense	18
Expense relating to leases of low-value assets ⁽¹⁾	8
Expense relating to variable lease payments	100
Income from leasing and sub-leasing ⁽²⁾	4

(1) The expense relates to payments for leases for which the underlying asset is of low value that are part of the exemptions permitted by the practical expedients of IFRS 16.

(2) These amounts include variable lease payments of \$2 million.

For the year ended October 31, 2020, the cash outflows for leases amount to \$213 million.

Note 11 – Goodwill and Intangible Assets

Goodwill

The following table presents changes in the carrying amounts of goodwill by cash-generating unit (CGU) and by business segment for the years ended October 31, 2020 and 2019.

	Personal and Commercial ⁽¹⁾	Wealth Management			Financial Markets ⁽¹⁾	USFF&I			Total	
		Third-Party Solutions ⁽¹⁾	Securities Brokerage ⁽¹⁾	Managed Solutions ⁽¹⁾		Total	Credigy Ltd. ⁽¹⁾	Advanced Bank of Asia Limited ⁽¹⁾		Total
Balance as at October 31, 2018	54	256	434	269	959	235	33	131	164	1,412
Impact of foreign currency translation	–	–	–	–	–	–	–	–	–	–
Balance as at October 31, 2019	54	256	434	269	959	235	33	131	164	1,412
Impact of foreign currency translation	–	–	–	–	–	–	–	2	2	2
Balance as at October 31, 2020	54	256	434	269	959	235	33	133	166	1,414

(1) Constitutes a CGU.

Goodwill Impairment Testing and Significant Assumptions

For impairment testing purposes, goodwill resulting from a business combination must be allocated, as of the acquisition date, to a CGU or a group of CGUs expected to benefit from the synergies of the business combination. Goodwill is tested for impairment annually or more frequently if events or circumstances indicate that the recoverable value of the CGU or group of CGUs may have fallen below its carrying amount.

Goodwill was tested for impairment during the years ended October 31, 2020 and 2019, and no impairment loss was recognized.

The recoverable value of a CGU or group of CGUs is based on the value in use that is calculated based on discounted pre-tax cash flows. Future pre-tax cash flows are estimated based on a five-year period, which is the reference period used for the most recent financial forecasts approved by management. Cash flows beyond that period are extrapolated using a long-term growth rate.

The discount rate used for each CGU or group of CGUs is calculated using the cost of debt financing and the cost related to the Bank's equity. This rate corresponds to the Bank's weighted average cost of capital and reflects the risk specific to the CGU. The long-term growth rate used in calculating discounted cash flow estimates is based on the forecasted growth rate plus a risk premium. The rate is constant over the entire five-year period for which the cash flows were determined. Growth rates are determined, among other factors, based on past growth rates, economic trends, inflation, competition and the impact of the Bank's strategic initiatives. As at October 31, 2020, for each CGU or CGU group, the discount rate used was 13.2% (12.9% as at October 31, 2019) and the long-term growth rate was between 2% and 5%, depending on the CGU, as at October 31, 2020 and 2019.

Estimating a CGU's value in use requires significant judgment regarding the inputs used in applying the discounted cash flow method. The Bank conducts sensitivity analyses by varying the after-tax discount rate upward by 1% and the terminal growth rates down by 1%. Such sensitivity analyses demonstrate that a reasonable change in assumptions would not result in a CGU's carrying value exceeding its value in use.

Intangible Assets

	Indefinite useful life			Finite useful life			Total
	Management contracts ⁽¹⁾	Trademark	Total	Internally-generated software ⁽²⁾	Other software	Other intangible assets	
Cost							
As at October 31, 2018	161	11	172	1,509	126	103	1,738
Acquisitions	-	-	-	329	30	-	359
Impairment losses ⁽³⁾	-	-	-	(85)	-	-	(85)
Fully amortized intangible assets				(50)	-	-	(50)
As at October 31, 2019	161	11	172	1,703	156	103	1,962
Acquisitions	-	-	-	317	15	-	332
Impairment losses ⁽³⁾	-	-	-	(95)	-	-	(95)
Fully amortized intangible assets				(3)	(2)	(34)	(39)
As at October 31, 2020	161	11	172	1,922	169	69	2,160
Accumulated amortization							
As at October 31, 2018				444	82	70	596
Amortization for the year				194	23	6	223
Impairment losses ⁽³⁾				(41)	-	-	(41)
Fully amortized intangible assets				(50)	-	-	(50)
As at October 31, 2019				547	105	76	728
Amortization for the year				223	22	7	252
Impairment losses ⁽³⁾				(43)	-	-	(43)
Fully amortized intangible assets				(3)	(2)	(34)	(39)
As at October 31, 2020				724	125	49	898
Carrying value as at October 31, 2019	161	11	172	1,156	51	27	1,234
Carrying value as at October 31, 2020	161	11	172	1,198	44	20	1,262

(1) For annual impairment testing purposes, management contracts are allocated to the Managed Solutions CGU.

(2) The remaining amortization period for significant internally-generated software is four years.

(3) The Bank wrote off certain technology developments due to obsolescence and decided to discontinue them. The recoverable amount of those technology developments was estimated to be nil. During the year ended October 31, 2020, an amount of \$52 million (\$44 million for the year ended October 31, 2019) in impairment losses was recognized in the *Non-interest expenses – Technology* item of the Consolidated Statement of Income and reported in the *Other* heading of segment results.

Note 12 – Other Assets

As at October 31	2020	2019
Receivables, prepaid expenses and other items	946	696
Interest and dividends receivable	567	623
Due from clients, dealers and brokers	586	570
Defined benefit asset (Note 23)	126	38
Deferred tax assets (Note 24)	643	562
Current tax assets	360	216
Reinsurance assets	30	33
Insurance assets	8	-
	3,266	2,738

Note 13 – Deposits

As at October 31				2020	2019
	On demand ⁽¹⁾	After notice ⁽²⁾	Fixed term ⁽³⁾	Total	Total
Personal	5,582	33,322	28,595	67,499	60,065
Business and government	55,394	24,058	64,335	143,787	125,266
Deposit-taking institutions	2,119	768	1,705	4,592	4,235
	63,095	58,148	94,635	215,878	189,566

(1) Demand deposits are deposits for which the Bank does not have the right to require notice of withdrawal and consist essentially of deposits in chequing accounts.

(2) Notice deposits are deposits for which the Bank may legally require a notice of withdrawal and consist mainly of deposits in savings accounts.

(3) Fixed-term deposits are deposits that can be withdrawn by the holder on a specified date and include term deposits, guaranteed investment certificates, savings accounts and plans, covered bonds, and similar instruments.

The *Deposits – Business and government* item includes, among other items, covered bonds, as described below, and a \$8.4 billion amount of deposits as at October 31, 2020 (\$3.5 billion as at October 31, 2019) that are subject to the bank bail-in conversion regulations issued by the Government of Canada. These regulations provide certain powers to the Canada Deposit Insurance Corporation (CDIC), notably the power to convert certain eligible Bank shares and liabilities into common shares should the Bank become non-viable.

Covered Bonds

NBC Covered Bond Guarantor (Legislative) Limited Partnership

In December 2013, the Bank established the covered bond legislative program under which covered bonds are issued. It therefore created NBC Covered Bond Guarantor (Legislative) Limited Partnership (the Guarantor) to guarantee payment of the principal and interest owed to the bondholders. The Bank sold uninsured residential mortgages to the Guarantor and granted it loans to facilitate the acquisition of these assets. During the year ended October 31, 2020, the Bank issued covered bonds in amounts of US\$200 million (1.0 billion of euros in covered bonds matured, and the Bank issued covered bonds in an amount of US\$1.3 billion and 750 million euros during the year ended October 31, 2019). The covered bonds totalled \$10.1 billion as at October 31, 2020 (\$9.5 billion as at October 31, 2019). For additional information, see Note 27 to these consolidated financial statements.

The Bank has limited access to the assets owned by this structured entity according to the terms of the agreements that apply to this transaction. The assets owned by this entity totalled \$17.2 billion as at October 31, 2020 (\$16.5 billion as at October 31, 2019), of which \$16.8 billion (\$16.2 billion as at October 31, 2019) is presented in *Residential mortgage* loans on the Bank's Consolidated Balance Sheet.

Note 14 – Other Liabilities

As at October 31	2020	2019
Accounts payable and accrued expenses	1,993	1,883
Subsidiaries' debts to third parties	386	1,225
Interest and dividends payable	621	1,061
Lease liabilities ⁽¹⁾	628	–
Due to clients, dealers and brokers	652	548
Defined benefit liability (Note 23)	201	374
Allowances for credit losses — Off-balance-sheet commitments (Note 7)	176	74
Deferred tax liabilities (Note 24)	–	5
Current tax liabilities	121	144
Insurance liabilities	–	24
Other items ⁽²⁾⁽³⁾⁽⁴⁾	940	839
	5,718	6,177

(1) As at November 1, 2019, upon IFRS 16 adoption, the Bank recognized lease liabilities totalling \$668 million.

(2) As at October 31, 2020, *Other items* included \$1 million in restructuring provisions (\$6 million as at October 31, 2019).

(3) As at October 31, 2020, *Other items* included \$7 million in litigation provisions (\$19 million as at October 31, 2019).

(4) As at November 1, 2019, upon IFRS 16 adoption, provisions for onerous contracts totalling \$20 million were applied against the right-of-use assets reported in the *Premises and equipment* item. During the year ended October 31, 2019, the Bank reviewed all of the leases for its corporate buildings and recorded \$45 million in provisions for onerous contracts in the *Non-interest expenses – Occupancy* item of the Consolidated Statement of Income and reported in the *Other* heading of segment results. As at October 31, 2020, other items included \$33 million in provisions for onerous contracts (\$48 million as at October 31, 2019).

Note 15 – Subordinated Debt

The subordinated debt represents direct unsecured obligations, in the form of notes and debentures, to the Bank's debt holders. The rights of the Bank's note and debenture holders are subordinate to the claims of depositors and certain other creditors. Approval from OSFI is required before the Bank can redeem its subordinated notes and debentures in whole or in part.

As at October 31			2020	2019
Maturity date	Interest rate	Characteristics		
February 2028	3.183% ⁽¹⁾	Redeemable ⁽²⁾	750	750
February 2087	Variable ⁽³⁾	Redeemable at the Bank's option since February 28, 1993	9	9
			759	759
		Fair value hedge adjustment	17	15
		Unamortized issuance costs ⁽⁴⁾	(1)	(1)
		Total	775	773

- (1) Bearing interest at a rate of 3.183%, payable semi-annually until February 1, 2023, and thereafter bearing interest at a floating rate equal to the rate on three-month CDOR plus 0.72%, payable quarterly.
- (2) With the prior approval of OSFI, the Bank may, at its option, redeem these notes as of February 1, 2023, in whole or in part, at their nominal value plus accrued and unpaid interest. These notes contain non-viability contingent capital (NVCC) provisions and qualify for the purposes of calculating regulatory capital under Basel III. In the case of a trigger event as defined by OSFI, each note will be automatically and immediately converted, on a full and permanent basis, without the consent of the holder, into a specified number of common shares of the Bank as determined using an automatic conversion formula with a multiplier of 1.5 and a conversion price based on the greater of: (i) a floor price of \$5.00; (ii) the current market price of common shares, which represents the volume weighted average price of common shares for the ten trading days ending on the trading day preceding the date of the trigger event. If the common shares are not listed on an exchange when this price is being established, the price will be the fair value reasonably determined by the Bank's Board. The number of shares issued is determined by dividing the par value of the note (plus accrued and unpaid interest on such note) by the conversion price and then applying the multiplier.
- (3) Debentures denominated in foreign currency totalling US\$7 million as at October 31, 2020 (2019: US\$7 million) and bearing interest at a rate of 1/8% above six-month LIBOR.
- (4) The unamortized costs related to the issuance of the subordinated debt represent the initial cost, net of accumulated amortization, calculated using the effective interest rate method.

Note 16 – Derivative Financial Instruments

Derivative financial instruments are financial contracts whose value is derived from an underlying interest rate, exchange rate, equity price, commodity price, credit spread or index.

The main types of derivative financial instruments used are presented below.

Forwards and Futures

Forwards and futures are contractual obligations to buy or deliver a specified amount of currency, interest rate, commodity, or financial instrument on a specified future date at a specified price. Forwards are tailor-made agreements transacted in the over-the-counter market. Futures are traded on organized exchanges and are subject to cash margining calculated daily by clearing houses.

Swaps

Swaps are over-the-counter contracts in which two parties agree to exchange cash flows. The Bank uses the following types of swap contracts:

- Cross-currency swaps are transactions in which counterparties exchange fixed-rate interest payments and principal payments in different currencies.
- Interest rate swaps are transactions in which counterparties exchange fixed and floating rate interest payments based on the notional principal value in the same currency.
- Commodity swaps are transactions in which counterparties exchange fixed and floating rate payments based on the notional principal value of a commodity.
- Equity swaps are transactions in which counterparties agree to exchange the return on one equity or group of equities for a payment based on a benchmark interest rate.
- Credit default swaps are transactions in which one of the parties agrees to pay returns to the other party so that the latter can make a payment if a credit event occurs.

Options

Options are agreements between two parties in which the writer of the option grants the buyer the right, but not the obligation, to buy or sell, either at a specified date or dates or at any time prior to a predetermined expiry date, a specific amount of currency, commodity, or financial instrument at an agreed-upon price upon the sale of the option. The writer receives a premium for the sale of this instrument.

Note 16 – Derivative Financial Instruments (cont.)

Notional Amounts⁽¹⁾

As at October 31	2020					2019		
	3 months or less	Over 3 months to 12 months	Over 1 year to 5 years	Over 5 years	Total contracts	Contracts held for trading purposes	Contracts designated as hedges	Total contracts
Interest rate contracts								
OTC contracts								
Forward rate agreements								
Not settled by central counterparties	4,500	546	–	–	5,046	5,046	–	5,269
Settled by central counterparties	–	586	–	–	586	586	–	754
Swaps								
Not settled by central counterparties	6,189	14,986	54,873	45,465	121,513	120,467	1,046	127,373
Settled by central counterparties	83,466	104,852	231,766	75,356	495,440	455,739	39,701	589,827
Options purchased	2,504	433	3,328	970	7,235	7,210	25	8,462
Options written	1,672	243	3,064	699	5,678	4,686	992	5,595
	98,331	121,646	293,031	122,490	635,498	593,734	41,764	737,280
Exchange-traded contracts								
Futures								
Long positions	17,110	4,170	590	–	21,870	21,870	–	34,540
Short positions	12,695	15,243	9,545	–	37,483	37,483	–	21,249
Options purchased	14,594	996	–	–	15,590	15,590	–	18,098
Options written	14,578	996	–	–	15,574	15,574	–	1,863
	58,977	21,405	10,135	–	90,517	90,517	–	75,750
Foreign exchange contracts								
OTC contracts								
Forwards	41,129	11,080	4,210	1,172	57,591	57,591	–	28,948
Swaps	187,208	62,707	91,420	22,203	363,538	348,482	15,056	312,884
Options purchased	4,772	6,121	1,835	–	12,728	12,728	–	13,651
Options written	5,343	6,658	1,616	–	13,617	13,617	–	13,566
	238,452	86,566	99,081	23,375	447,474	432,418	15,056	369,049
Exchange-traded contracts								
Futures								
Long positions	68	–	–	–	68	68	–	80
Short positions	67	6	–	–	73	73	–	35
	135	6	–	–	141	141	–	115
Equity, commodity and credit derivative contracts⁽²⁾								
OTC contracts								
Forwards	–	51	2,364	194	2,609	2,609	–	1,833
Swaps								
Not settled by central counterparties	48,992	20,583	3,416	6,353	79,344	79,255	89	74,406
Settled by central counterparties	273	217	8,516	1,132	10,138	10,138	–	6,454
Options purchased	318	110	488	–	916	916	–	1,108
Options written	377	196	794	193	1,560	1,560	–	1,358
	49,960	21,157	15,578	7,872	94,567	94,478	89	85,159
Exchange-traded contracts								
Futures								
Long positions	4,133	234	391	115	4,873	4,873	–	6,015
Short positions	9,788	1,601	561	–	11,950	11,950	–	14,247
Options purchased	14,437	2,495	137	–	17,069	17,069	–	3,427
Options written	10,752	3,099	1,043	–	14,894	14,894	–	3,873
	39,110	7,429	2,132	115	48,786	48,786	–	27,562
	484,965	258,209	419,957	153,852	1,316,983	1,260,074	56,909	1,294,915

(1) Notional amounts are not presented in assets or liabilities on the Consolidated Balance Sheet. They represent the reference amount of the contract to which a rate or price is applied to determine the amount of cash flows to be exchanged.

(2) Includes precious metal contracts.

Credit Risk

Credit risk on derivative financial instruments is the risk of financial loss that the Bank will have to assume if a counterparty fails to honour its contractual obligations. Credit risk related to derivative financial instruments is subject to the same credit approval, credit limit and credit monitoring standards as those applied to the Bank's other credit transactions. Consequently, the Bank evaluates the creditworthiness of counterparties and manages the size of the portfolios as well as the diversification and maturity profiles of these financial instruments.

The Bank limits the credit risk of over-the-counter contracts by dealing with creditworthy counterparties and entering into contracts that provide for the exchange of collateral between parties where the fair value of the outstanding transactions exceeds an agreed threshold. The Bank also negotiates master netting agreements that provide for the simultaneous close-out and settling of all transactions with a given counterparty in the event of default, insolvency, or bankruptcy. However, overall exposure to credit risk, reduced through master netting agreements, may change substantially after the balance sheet date because it is affected by all transactions subject to a contract as well as by changes in the market rates of the underlying instruments.

The Bank also uses financial intermediaries to have access to established clearing houses in order to minimize the settlement risk arising from financial derivative transactions. In some cases, the Bank has direct access to clearing houses for settling derivative financial instruments. In addition, certain derivative financial instruments traded over the counter are settled directly or indirectly by central counterparties.

In the case of exchange-traded contracts, exposure to credit risk is limited because these transactions are standardized contracts executed on established exchanges, each of which is associated with a well-capitalized clearing house that assumes the obligations of both counterparties and guarantees their performance obligations. All exchange-traded contracts are subject to initial margins and daily settlement.

Terms Used

Replacement Cost

Replacement cost is the Bank's maximum credit risk associated with derivative financial instruments as at the Consolidated Balance Sheet date. This amount is the positive fair value of all derivative financial instruments, before all master netting agreements and collateral held.

Credit Risk Equivalent

The credit risk equivalent amount is the total replacement cost plus an amount representing the potential future credit risk exposure, as outlined in OSFI's *Capital Adequacy Requirements Guideline*.

Risk-Weighted Amount

The risk-weighted amount is determined by applying the OSFI guidance to the credit risk equivalent.

Credit Risk Exposure of the Derivative Financial Instrument Portfolio

As at October 31	2020			2019		
	Replacement cost	Credit risk equivalent ⁽¹⁾	Risk-weighted amount ⁽¹⁾	Replacement cost	Credit risk equivalent ⁽¹⁾	Risk-weighted amount ⁽¹⁾
Interest rate contracts	3,534	3,839	1,383	2,603	6,685	968
Foreign exchange contracts	4,391	4,829	1,542	3,103	4,570	1,515
Equity, commodity and credit derivative contracts	5,497	7,874	1,820	2,423	2,917	1,119
	13,422	16,542	4,745	8,129	14,172	3,602
Impact of master netting agreements	(6,204)			(3,415)		
	7,218	16,542	4,745	4,714	14,172	3,602

(1) The amounts are presented net of the Impact of master netting agreements.

Credit Risk Exposure of the Derivative Financial Instrument Portfolio by Counterparty

As at October 31	2020		2019	
	Replacement cost	Credit risk equivalent	Replacement cost	Credit risk equivalent
OECD ⁽¹⁾ governments	1,265	2,280	1,048	2,077
Banks of OECD member countries	837	3,399	670	3,720
Other	5,116	10,863	2,996	8,375
	7,218	16,542	4,714	14,172

(1) Organisation for Economic Co-operation and Development.

Note 16 – Derivative Financial Instruments (cont.)

Fair Value of Derivative Financial Instruments

As at October 31	2020			2019		
	Positive	Negative	Net	Positive	Negative	Net
Contracts held for trading purposes						
Interest rate contracts						
Forwards	41	20	21	36	59	(23)
Swaps	2,622	2,599	23	1,808	1,742	66
Options	131	73	58	97	70	27
	2,794	2,692	102	1,941	1,871	70
Foreign exchange contracts						
Forwards	1,292	1,318	(26)	298	180	118
Swaps	2,816	2,477	339	2,618	2,263	355
Options	221	201	20	127	109	18
	4,329	3,996	333	3,043	2,552	491
Equity, commodity and credit derivative contracts						
Forwards	850	278	572	1,050	72	978
Swaps	2,502	3,430	(928)	1,030	1,439	(409)
Options	2,145	1,334	811	343	405	(62)
	5,497	5,042	455	2,423	1,916	507
Total – Contracts held for trading purposes	12,620	11,730	890	7,407	6,339	1,068
Contracts designated as hedges						
Interest rate contracts						
Forwards	–	–	–	–	–	–
Swaps	740	765	(25)	662	252	410
Options	–	289	(289)	–	206	(206)
	740	1,054	(314)	662	458	204
Foreign exchange contracts						
Forwards	–	–	–	–	–	–
Swaps	62	136	(74)	60	55	5
Options	–	–	–	–	–	–
	62	136	(74)	60	55	5
Equity, commodity and credit derivative contracts						
Forwards	–	–	–	–	–	–
Swaps	–	3	(3)	–	–	–
Options	–	–	–	–	–	–
	–	3	(3)	–	–	–
Total – Contracts designated as hedges	802	1,193	(391)	722	513	209
Designated as fair value hedges	549	578	(29)	461	320	141
Designated as cash flow hedges	253	615	(362)	261	193	68
Designated as a hedge of a net investment in a foreign operation	–	–	–	–	–	–
Total fair value	13,422	12,923	499	8,129	6,852	1,277
Impact of master netting agreements	(6,204)	(6,204)	–	(3,415)	(3,415)	–
	7,218	6,719	499	4,714	3,437	1,277

Note 17 – Hedging Activities

The Bank's market risk exposure, risk management objectives, policies and procedures, and risk measurement methods are presented in the Risk Management section of the MD&A for the year ended October 31, 2020.

The Bank has elected, as permitted under IFRS 9, to continue applying the hedge accounting requirements of IAS 39. Some of the tables present information on currencies, specifically, the Canadian dollar (CAD), the Chinese yuan renminbi (CNH), the Hong Kong dollar (HKD), the U.S. dollar (USD), the euro (EUR), the pound sterling (GBP) and the Brazilian real (BRL).

The table on the following page shows the notional amounts and the weighted average rates by term to maturity of the designated derivative instruments and their fair value by type of hedging relationship.

As at October 31	2020							2019		
	Term to maturity				Total	Fair value		Fair value		
	1 year or less	Over 1 year to 2 years	Over 2 years to 5 years	Over 5 years		Assets	Liabilities	Total	Assets	Liabilities
Fair value hedges										
Interest rate risk										
Interest rate swaps										
Notional amount – LIBOR reform ⁽¹⁾	–	839	580	916	2,335	536	288	2,322	451	114
Notional amount – Other ⁽²⁾	1,836	810	9,152	3,834	15,632	–	–	14,583	–	–
Average fixed interest rate – Pay fixed	0.4 %	1.1 %	1.3 %	1.0 %	1.1 %	–	–	1.9 %	–	–
Average fixed interest rate – Receive fixed	–	1.6 %	1.8 %	2.0 %	1.9 %	–	–	2.1 %	–	–
Cross-currency swaps										
Notional amount – LIBOR reform ⁽¹⁾	–	–	–	–	–	13	–	–	10	–
Notional amount – Other ⁽²⁾	–	–	118	–	118	–	–	228	–	–
Average CAD-CNH exchange rate	–	–	–	–	–	–	–	\$ 0.1864	–	–
Average CAD-HKD exchange rate	–	–	\$ 0.1621	–	\$ 0.1621	–	–	\$ 0.1621	–	–
Options										
Notional amount – LIBOR reform ⁽¹⁾	–	–	40	400	440	–	290	435	–	206
Notional amount – Other ⁽²⁾	36	12	10	519	577	–	–	864	–	–
Average fixed interest rate – Purchased	0.1 %	–	(0.8) %	–	(0.6) %	–	–	0.1 %	–	–
Average fixed interest rate – Written	2.4 %	2.0 %	2.9 %	2.8 %	2.7 %	–	–	2.7 %	–	–
	1,872	1,661	9,900	5,669	19,102	549	578	18,432	461	320
Cash flow hedges										
Interest rate risk										
Interest rate swaps										
Notional amount – LIBOR reform ⁽¹⁾	–	1,199	–	–	1,199	204	477	1,185	211	138
Notional amount – Other ⁽²⁾	717	4,585	15,524	755	21,581	–	–	21,504	–	–
Average fixed interest rate – Pay fixed	2.1 %	1.9 %	1.6 %	1.4 %	1.7 %	–	–	2.0 %	–	–
Average fixed interest rate – Receive fixed	–	0.9 %	0.3 %	1.3 %	0.5 %	–	–	0.8 %	–	–
Cross-currency swaps										
Notional amount – LIBOR reform ⁽¹⁾	–	3,662	9,805	–	13,467	49	135	13,067	50	55
Notional amount – Other ⁽²⁾	1,461	–	–	–	1,461	–	–	4,469	–	–
Average CAD-USD exchange rate	\$ 1.3242	\$ 1.2907	\$ 1.3119	–	\$ 1.3074	–	–	\$ 1.3074	–	–
Average USD-EUR exchange rate	\$ 1.1131	\$ 1.1145	\$ 1.1656	–	\$ 1.1510	–	–	\$ 1.1626	–	–
Average USD-GBP exchange rate	\$ 1.2921	–	–	–	\$ 1.2921	–	–	\$ 1.2921	–	–
Equity price risk										
Equity swaps										
Notional amount	89	–	–	–	89	–	3	–	–	–
Average price	\$ 65.71	–	–	–	\$ 65.71	–	–	–	–	–
	2,267	9,446	25,329	755	37,797	253	615	40,225	261	193
Hedges of net investments in foreign operations⁽³⁾										
Foreign exchange risk										
Cross-currency swaps										
Notional amount	10	–	–	–	10	–	–	10	–	–
Average CAD-USD exchange rate	\$ 1.3177	–	–	–	\$ 1.3177	–	–	\$ 1.3286	–	–
Average USD-HKD exchange rate	\$ 0.1290	–	–	–	\$ 0.1290	–	–	\$ 0.1277	–	–
	10	–	–	–	10	–	–	10	–	–
	4,149	11,107	35,229	6,424	56,909	802	1,193	58,667	722	513

(1) The benchmark interest rate reform is a global initiative led and coordinated by central banks and governments around the world, including those in Canada. In July 2017, the UK Financial Conduct Committee (FCA) stated that, after 2021, it will no longer compel banks to submit rates used for the calculation of the London Interbank Offered Rate (LIBOR). The Bank has established an enterprise-wide program and is conducting an impact analysis for the Bank. The Bank continues to inventory all of the Bank's contractual arrangements linked to interest rates subject to the reform, in order to evaluate the Bank's exposure to these rates, and to identify impacts on the Bank's products, systems and processes with the intention of minimizing the impacts through appropriate mitigating actions. The Bank is also actively involved in industry working groups and continues to monitor industry progress.

(2) Includes contracts which reference the Canadian Dollar Offered Rate (CDOR), a benchmark rate in Canada, a multi-rate jurisdiction.

(3) As at October 31, 2020, the Bank also designated \$1,279 million in foreign currency deposits denominated in U.S. dollars as net investment hedging instruments (\$958 million as at October 31, 2019).

Note 17 – Hedging Activities (cont.)

Fair Value Hedges

Fair value hedge transactions consist of using derivative financial instruments (interest rate swaps and options) to hedge changes in the fair value of a financial asset or financial liability caused by interest rate fluctuations. Changes in the fair values of the derivative financial instruments used as hedging instruments offset changes in the fair value of the hedged items. The Bank applies this strategy mainly to portfolios of securities measured at fair value through other comprehensive income, fixed-rate mortgage loans, fixed-rate deposits, liabilities related to transferred receivables, and subordinated debt.

In addition, when a fixed-rate asset or liability is denominated in a foreign currency, the Bank sometimes uses cross-currency swaps to hedge the associated foreign exchange risk. The Bank may designate a cross-currency swap to exchange the fixed-rate foreign currency for the functional currency at a floating rate in a single hedging relationship addressing both interest rate risk and foreign exchange risk. In certain cases, given that interest rate risk and foreign exchange risk are hedged in a single hedging relationship, the information below does not distinguish between interest rate risk and the combination of interest rate risk and foreign exchange risk as two separate risk categories. The Bank applies this strategy mainly to foreign currency fixed-rate deposits.

Regression analysis is used to test hedge effectiveness and determine the hedge ratio. For fair value hedges, the main source of potential hedge ineffectiveness is a circumstance where the critical terms of the hedging instrument and the hedged item are not closely aligned.

The following tables show amounts related to hedged items as well as the results of the fair value hedges.

	As at October 31, 2020			Year ended October 31, 2020		
	Carrying value of hedged items	Cumulative hedge adjustments from active hedges	Cumulative adjustments from discontinued hedges	Gains (losses) on the hedged items for ineffectiveness measurement ⁽¹⁾	Gains (losses) on the hedging instruments for ineffectiveness measurement ⁽¹⁾	Hedge ineffectiveness ⁽¹⁾
Securities at fair value through other comprehensive income	9,883	141	26	229	(229)	–
Mortgages	5,124	10	2	12	(12)	–
Deposits	3,371	172	83	(83)	84	1
Liabilities related to transferred receivables	1,041	13	162	(71)	72	1
Subordinated debt	17	–	17	(7)	7	–
				80	(78)	2

	As at October 31, 2019			Year ended October 31, 2019		
	Carrying value of hedged items	Cumulative hedge adjustments from active hedges	Cumulative adjustments from discontinued hedges	Gains (losses) on the hedged items for ineffectiveness measurement ⁽¹⁾	Gains (losses) on the hedging instruments for ineffectiveness measurement ⁽¹⁾	Hedge ineffectiveness ⁽¹⁾
Securities at fair value through other comprehensive income	8,344	78	9	210	(208)	2
Deposits	4,667	112	48	(396)	395	(1)
Liabilities related to transferred receivables	3,663	59	79	(198)	197	(1)
Subordinated debt	752	15	–	(25)	26	1
				(409)	410	1

(1) Amounts are presented on a pre-tax basis.

Cash Flow Hedges

Cash flow hedge transactions consist of using interest rate swaps to hedge the risk of changes in future cash flows caused by floating-rate assets or liabilities. In addition, the Bank sometimes uses cross-currency swaps to hedge the foreign exchange risk caused by assets or liabilities denominated in foreign currencies. In certain cases, given that interest rate risk and foreign exchange risk are hedged in a single hedging relationship, the information below does not distinguish between interest rate risk and the combination of interest rate risk and foreign exchange risk as two separate risk categories. The Bank applies this strategy mainly to its loan, personal credit line, acceptance, deposit portfolios, as well as liabilities related to transferred receivables.

The Bank also uses total return swaps to hedge the risk of changes in future cash flows related to the Restricted Stock Unit (RSU) Plan. Some of these swaps are designated as part of a cash flow hedge against a portion of the unrecognized obligation of the RSU Plan. In cash flow hedges, the derivative financial instruments used as hedging instruments reduce the variability of the future cash flows related to the hedged items.

Regression analysis is used to assess hedge effectiveness and to determine the hedge ratio. For cash flow hedges, the main source of potential hedge ineffectiveness is a circumstance where the critical terms of the hedging instrument and the hedged item are not closely aligned.

The following tables show the amounts related to hedged items as well as the results of the cash flow hedges.

	As at October 31, 2020		Year ended October 31, 2020				
	<i>Accumulated other comprehensive income from active hedges</i>	<i>Accumulated other comprehensive income from discontinued hedges</i>	Gains (losses) on hedged items for ineffectiveness measurement ⁽¹⁾	Gains (losses) on hedging instruments for ineffectiveness measurement ⁽¹⁾	Hedge ineffectiveness ⁽¹⁾	Unrealized gains (losses) included in <i>Other comprehensive income</i> as the effective portion of the hedging instrument ⁽¹⁾	Losses (gains) reclassified to <i>Net interest income</i> ⁽¹⁾
Interest rate risk							
Loans	2	(1)	(31)	31	–	30	(17)
Deposits	(178)	(2)	23	(21)	–	(208)	(11)
Acceptances	(71)	(136)	193	(199)	(7)	(193)	26
Liabilities related to transferred receivables	(6)	–	7	(6)	–	(6)	–
	(253)	(139)	192	(195)	(7)	(377)	(2)
Equity price risk							
Other liabilities	9	4	(13)	13	–	9	(6)
	(244)	(135)	179	(182)	(7)	(368)	(8)

	As at October 31, 2019		Year ended October 31, 2019				
	<i>Accumulated other comprehensive income from active hedges</i>	<i>Accumulated other comprehensive income from discontinued hedges</i>	Gains (losses) on hedged items for ineffectiveness measurement ⁽¹⁾	Gains (losses) on hedging instruments for ineffectiveness measurement ⁽¹⁾	Hedge ineffectiveness ⁽¹⁾	Unrealized gains (losses) included in <i>Other comprehensive income</i> as the effective portion of the hedging instrument ⁽¹⁾	Losses (gains) reclassified to <i>Net interest income</i> ⁽¹⁾
Interest rate risk							
Loans	–	(14)	(45)	45	–	45	(16)
Deposits	30	9	154	(154)	–	(108)	(10)
Acceptances	4	(44)	133	(135)	(2)	(133)	2
	34	(49)	242	(244)	(2)	(196)	(24)
Equity price risk							
Other liabilities	–	10	(6)	6	–	9	(3)
	34	(39)	236	(238)	(2)	(187)	(27)

(1) Amounts are presented on a pre-tax basis.

Note 17 – Hedging Activities (cont.)

Hedges of Net Investments in Foreign Operations

The Bank's structural foreign exchange risk arises from investments in foreign operations denominated in currencies other than the Canadian dollar. The Bank measures this risk by assessing the impact of foreign currency fluctuations and hedges it using derivative and non-derivative financial instruments (cross-currency swaps and deposits). In a hedge of a net investment in a foreign operation (net investment hedge), the financial instruments used offset the foreign exchange gains and losses on the investments. When non-derivative financial instruments are designated as foreign exchange risk hedges, only the changes in fair value that are attributable to foreign exchange risk are taken into account when assessing and calculating the effectiveness of the hedge.

Assessing the effectiveness of net investment hedges consists of comparing changes in the carrying value of the deposits or the fair value of the derivative attributable to exchange rate fluctuations with changes in the net investment in a foreign operation attributable to exchange rate fluctuations. Inasmuch as the notional amount of the hedging instruments and the hedged net investments are aligned, no ineffectiveness is expected.

The following tables present the amounts related to hedged items as well as the results of the net investment hedges.

	As at October 31, 2020		Year ended October 31, 2020				
	<i>Accumulated other comprehensive income from active hedges</i>	<i>Accumulated other comprehensive income from discontinued hedges</i>	Gains (losses) on hedged items for ineffectiveness measurement ⁽¹⁾	Gains (losses) on hedging instruments for ineffectiveness measurement ⁽¹⁾	Hedge ineffectiveness ⁽¹⁾	Unrealized gains (losses) included in <i>Other comprehensive income</i> as the effective portion of the hedging instrument ⁽¹⁾	Losses (gains) reclassified to the <i>Non-interest income</i> item ⁽¹⁾
Net investments in foreign operations denominated in:							
USD	(1)	(202)	18	(18)	–	(18)	–
EUR	–	–	–	–	–	–	–
BRL	–	–	–	–	–	–	(38)
Other currencies	–	–	–	–	–	–	–
	(1)	(202)	18	(18)	–	(18)	(38)

	As at October 31, 2019		Year ended October 31, 2019				
	<i>Accumulated other comprehensive income from active hedges</i>	<i>Accumulated other comprehensive income from discontinued hedges</i>	Gains (losses) on hedged items for ineffectiveness measurement ⁽¹⁾	Gains (losses) on hedging instruments for ineffectiveness measurement ⁽¹⁾	Hedge ineffectiveness ⁽¹⁾	Unrealized gains (losses) included in <i>Other comprehensive income</i> as the effective portion of the hedging instrument ⁽¹⁾	Losses (gains) reclassified to the <i>Non-interest income</i> item ⁽¹⁾
Net investments in foreign operations denominated in:							
USD	7	(191)	(5)	5	–	5	–
EUR	–	–	–	–	–	–	3
BRL	–	36	–	–	–	–	–
Other currencies	–	–	(1)	1	–	1	(1)
	7	(155)	(6)	6	–	6	2

(1) Amounts are presented on a pre-tax basis.

Reconciliation of Equity Components

The following table presents a reconciliation by risk category of *Accumulated other comprehensive income* attributable to hedge accounting.

As at October 31	2020		2019	
	Net gains (losses) on cash flow hedges	Net foreign currency translation adjustments	Net gains (losses) on cash flow hedges	Net foreign currency translation adjustments
Balance at beginning	(6)	8	151	14
Hedges of net investments in foreign operations⁽¹⁾				
Gains (losses) included as the effective portion		(18)		6
Losses (gains) reclassified to <i>Non-interest income</i>		(38)		2
Foreign currency translation gains (losses) on investments in foreign operations		92		(9)
Cash flow hedges⁽¹⁾				
Gains (losses) included as the effective portion				
Interest rate risk	(377)		(196)	
Equity price risk	9		9	
Losses (gains) reclassified to <i>Net interest income</i>				
Interest rate risk	(2)		(24)	
Equity price risk	(6)		(3)	
Other comprehensive income attributable to non-controlling interests	–	(12)	–	1
Income taxes	99	29	57	(6)
Balance at end	(283)	61	(6)	8

(1) Amounts are presented on a pre-tax basis.

Note 18 – Share Capital and Other Equity Instruments

Authorized

Common Shares

An unlimited number of shares without par value.

First Preferred Shares

An unlimited number of shares, without par value, issuable for a maximum aggregate consideration of \$5 billion.

First Preferred Shares and Other Equity Instruments

As at October 31, 2020

	Redemption and conversion date ⁽¹⁾⁽²⁾	Redemption price per share or LRCN (\$) ⁽¹⁾	Convertible into preferred shares ⁽²⁾	Dividend per share (\$) or interest rate per LRCN ⁽³⁾	Reset premium of the dividend rate or interest rate
First preferred shares issued and outstanding					
Series 30 ⁽⁴⁾	May 15, 2024 ⁽⁵⁾⁽⁶⁾	25.00	Series 31	0.25156 ⁽⁷⁾	2.40 %
Series 32 ⁽⁴⁾	February 15, 2025 ⁽⁵⁾⁽⁶⁾	25.00	Series 33	0.23994 ⁽⁷⁾	2.25 %
Series 34 ⁽⁴⁾	May 15, 2021 ⁽⁵⁾⁽⁶⁾	25.00	Series 35	0.35000 ⁽⁸⁾	4.90 %
Series 36 ⁽⁴⁾	August 15, 2021 ⁽⁵⁾⁽⁶⁾	25.00	Series 37	0.33750 ⁽⁸⁾	4.66 %
Series 38 ⁽⁴⁾	November 15, 2022 ⁽⁵⁾⁽⁶⁾	25.00	Series 39	0.27813 ⁽⁸⁾	3.43 %
Series 40 ⁽⁴⁾	May 15, 2023 ⁽⁵⁾⁽⁶⁾	25.00	Series 41	0.28750 ⁽⁸⁾	2.58 %
Series 42 ⁽⁴⁾	November 15, 2023 ⁽⁵⁾⁽⁶⁾	25.00	Series 43	0.30938 ⁽⁸⁾	2.77 %
Series 44 ⁽⁹⁾	October 15, 2025 ⁽⁵⁾	1000.00	n.a.	Floating rate ⁽⁹⁾	3.943 %
Other equity instruments issued					
Limited Recourse Capital Notes – Series 1 (LRCN – Series 1) ⁽⁴⁾⁽¹⁰⁾	October 15, 2025 ⁽⁵⁾	1,000.00	Series 44 ⁽¹⁰⁾	4.3 % ⁽¹¹⁾	3.943 %
First preferred shares authorized but not issued					
Series 31 ⁽⁴⁾	May 15, 2024 ⁽⁵⁾	25.00 ⁽¹²⁾	n.a.	Floating rate ⁽¹³⁾	2.40 %
Series 33 ⁽⁴⁾	February 15, 2025 ⁽⁵⁾	25.00 ⁽¹²⁾	n.a.	Floating rate ⁽¹³⁾	2.25 %
Series 35 ⁽⁴⁾	May 15, 2021 ⁽⁵⁾	25.50 ⁽¹⁴⁾	n.a.	Floating rate ⁽¹³⁾	4.90 %
Series 37 ⁽⁴⁾	August 15, 2021 ⁽⁵⁾	25.50 ⁽¹⁴⁾	n.a.	Floating rate ⁽¹³⁾	4.66 %
Series 39 ⁽⁴⁾	November 15, 2022 ⁽⁵⁾	25.50 ⁽¹⁴⁾	n.a.	Floating rate ⁽¹³⁾	3.43 %
Series 41 ⁽⁴⁾	May 15, 2023 ⁽⁵⁾	25.50 ⁽¹⁴⁾	n.a.	Floating rate ⁽¹³⁾	2.58 %
Series 43 ⁽⁴⁾	November 15, 2023 ⁽⁵⁾	25.50 ⁽¹⁴⁾	n.a.	Floating rate ⁽¹³⁾	2.77 %

n.a. Not applicable

- Redeemable in cash at the Bank's option, in whole or in part, subject to the provisions of the *Bank Act* (Canada) and to OSFI approval. For the preferred shares, the redemption prices are increased by all the declared and unpaid dividends on the preferred shares to the date fixed for redemption. In the case of LRCN – Series 1, the redemption price is increased by interest accrued and unpaid up to the redemption date.
- Convertible at the option of the holders of first preferred shares, subject to certain conditions.
- The dividends are non-cumulative and payable quarterly, except for Series 44, for which the dividends are paid semi-annually. Interest on the LRCN – Series 1 is payable semi-annually.
- Upon the occurrence of a trigger event, as defined by OSFI, each outstanding preferred share will be automatically and immediately converted, on a full and permanent basis, without the consent of the holder, into a number of Bank common shares determined pursuant to an automatic conversion formula. This conversion will be calculated by dividing the value of the preferred shares, i.e., \$25.00 per share, plus all declared and unpaid dividends as at the date of the trigger event, by the value of the common shares. The value of the common shares will be the greater of a \$5.00 floor price or the current market price of the common shares. Current market price means the volume weighted average trading price of common shares for the ten consecutive trading days ending on the trading day preceding the date of the trigger event. If the common shares are not listed on an exchange when this price is being established, the price will be the fair value reasonably determined by the Bank's Board.
- For the preferred shares, redeemable at the date fixed for redemption and on the same date every five years thereafter. In the case of LRCN – Series 1, the redemption occurs automatically upon the redemption of the Series 44 preferred shares held in the limited recourse trust. The Series 44 preferred shares are redeemable at the date fixed for redemption and on the same date every five years thereafter.
- Convertible on the date fixed for conversion and on the same date every five years thereafter, subject to certain conditions.
- The dividend amount is set for the five-year period commencing on May 16, 2019 for Series 30 as well as February 16, 2020 for Series 32 and ending on the redemption date. Thereafter, these shares carry a non-cumulative quarterly fixed dividend in an amount per share determined by multiplying the rate of interest equal to the sum of the five-year Government of Canada bond yield on the applicable fixed-rate calculation date by \$25.00, plus the reset premium.
- The dividend amount is set for the initial period ending on the date fixed for redemption. Thereafter, these shares carry a non-cumulative quarterly fixed dividend in an amount per share determined by multiplying the rate of interest equal to the sum of the five-year Government of Canada bond yield on the applicable fixed-rate calculation date by \$25.00, plus the reset premium.

- (9) Series 44 Preferred Shares are held by a consolidated limited recourse trust on the Bank's balance sheet and are therefore eliminated for financial reporting purposes. Dividends are payable semi-annually and the dividend rate is the Government of Canada bond yield on the calculation date plus the reset premium; however, no dividend will be payable before the date on which all Series 44 First Preferred Shares are issued to the holders of LRCN – Series 1. Upon the occurrence of a trigger event, as defined by OSFI, 1) each LRCN – Series 1 will be automatically redeemed and the redemption price will be covered by delivery of the trust's assets that consist of Series 44 preferred shares; 2) each Series 44 outstanding preferred share will be automatically and immediately converted on a full and permanent basis, without the consent of the holder, into a number of Bank common shares determined pursuant to an automatic conversion formula. This conversion will be calculated by dividing the value of the preferred shares, i.e., \$1,000 per share, plus all accrued and unpaid interest as at the date of the trigger event, by the value of the common shares. The value of the common shares will be the greater of a \$5.00 floor price or the current market price of the common shares. Current market price means the volume weighted average trading price of common shares for the ten consecutive trading days ending on the trading day preceding the date of the trigger event. If the common shares are not listed on an exchange when this price is being established, the price will be the fair value reasonably determined by the Bank's Board.
- (10) The LRCN – Series 1 for which recourse is limited to the assets held by an independent trustee in a consolidated limited recourse trust. The trust assets consist of Series 44 Preferred Shares issued in conjunction with the LRCN – Series 1. In the event of (i) non-payment of interest on any of the interest payment dates, (ii) non-payment of the redemption amount upon redemption of the LRCN – Series 1, (iii) non-payment of the principal amount upon maturity of the LRCN – Series 1, or (iv) an event of default in respect of the LRCN – Series 1, the noteholders will have recourse only to the assets of the trust, and each noteholder will be entitled to its pro rata share of the assets of the trust. In such circumstances, delivery of the assets of the trust will eliminate all of the Bank's obligations with respect to the LRCN – Series 1. The LRCN – Series 1 are redeemable at maturity or earlier to the extent that the Bank redeems the Series 44 preferred shares on certain redemption dates specified in the terms and conditions of the Series 44 preferred shares, and subject to OSFI's consent and approval.
- (11) The interest rate is set for the initial period ending on the date fixed for redemption. Every five years thereafter until November 15, 2075, the interest rate on the notes will be adjusted and will be an annual interest rate equal to the five-year Government of Canada bond yield on the applicable interest rate calculation date, plus the interest rate reset premium.
- (12) As of the date fixed for redemption, and every five years thereafter, the redemption price will be \$25.00 per share.
- (13) The dividend period begins as of the date fixed for redemption. The amount of the floating quarterly non-cumulative dividend is determined by multiplying by \$25.00 the rate of interest equal to the sum of the 90-day Government of Canada treasury bill yield on the floating rate calculation date, plus the reset premium.
- (14) As of the date fixed for redemption, the redemption price will be \$25.50 per share. Thereafter, on the same date every five years, the redemption price will be \$25.00 per share.

Second Preferred Shares

15 million shares without par value, issuable for a total maximum consideration of \$300 million. As at October 31, 2020, no shares had been issued or traded.

Shares and Other Equity Instruments Outstanding

As at October 31	2020		2019	
	Number of shares or LRCN	Shares or LRCN \$	Number of shares	Shares \$
First Preferred Shares				
Series 30	14,000,000	350	14,000,000	350
Series 32	12,000,000	300	12,000,000	300
Series 34	16,000,000	400	16,000,000	400
Series 36	16,000,000	400	16,000,000	400
Series 38	16,000,000	400	16,000,000	400
Series 40	12,000,000	300	12,000,000	300
Series 42	12,000,000	300	12,000,000	300
	98,000,000	2,450	98,000,000	2,450
Other equity instruments				
LRCN – Series 1	500,000	500	–	–
Preferred shares and other equity instruments	98,500,000	2,950	98,000,000	2,450
Common shares at beginning of year	334,172,411	2,949	335,070,642	2,822
Issued pursuant to the Stock Option Plan	2,318,926	111	2,950,922	122
Repurchase of common shares for cancellation	(525,000)	(5)	(4,547,200)	(40)
Impact of shares purchased or sold for trading ⁽¹⁾	31,323	2	699,564	45
Other	–	–	(1,517)	–
Common shares at end of year	335,997,660	3,057	334,172,411	2,949

- (1) As at October 31, 2020, a total of 27,477 shares were sold short for trading, representing \$2 million (3,846 shares held for trading representing a negligible amount as at October 31, 2019).

Note 18 – Share Capital and Other Equity Instruments (cont.)

Dividends Declared and Distributions on Other Equity Instruments Capital Note

Year ended October 31	2020		2019	
	Dividends or interest \$	Dividends per share	Dividends \$	Dividends per share
First Preferred Shares				
Series 30	14	1.0063	14	1.0156
Series 32	12	0.9636	12	0.9750
Series 34	22	1.4000	22	1.4000
Series 36	22	1.3500	22	1.3500
Series 38	18	1.1125	18	1.1125
Series 40	14	1.1500	14	1.1500
Series 42	14	1.2375	14	1.2375
	116		116	
Other equity instruments				
LRCN – Series 1	3		–	
	119		116	
Common shares	953	2.8400	892	2.6600
	1,072		1,008	

Issuance of Equity Instruments

On September 9, 2020, the Bank issued \$500 million of Series 1 Limited Recourse Capital Notes (LRCN – Series 1) for which recourse of the noteholders is limited to the assets held by an independent trustee in a limited recourse consolidated trust. The trust's assets consist of \$500 million of Series 44 First Preferred Shares issued by the Bank in conjunction with the LRCN – Series 1. The LRCN – Series 1 are sold for \$1,000 each and bear interest at a fixed rate of 4.3% per annum until November 15, 2025 exclusively and, thereafter, at an annual rate equal to the five-year Government of Canada bond yield plus 3.943% until November 15, 2075.

In the event of (i) non-payment of interest on any of the interest payment dates, (ii) non-payment of the redemption amount upon redemption of the LRCN - Series 1, (iii) non-payment of the principal amount upon maturity of the LRCN – Series 1, or (iv) an event of default in respect of the notes, the noteholders will have recourse only to the assets of the trust, and each noteholder will be entitled to its pro rata share of the assets of the trust. In such circumstances, delivery of the assets of the trust will eliminate all of the Bank's obligations with respect to the LRCN – Series 1. The LRCN – Series 1 are redeemable at maturity or earlier to the extent that the Bank redeems the Series 44 preferred shares on certain redemption dates specified in the terms and conditions of the Series 44 preferred shares, and subject to OSFI's consent and approval.

Given that the LRCN – Series 1 satisfy the non-viability contingent capital requirements, they qualify for the purposes of calculating regulatory capital under Basel III.

Repurchases of Common Shares

On June 10, 2019, the Bank had begun a normal course issuer bid to repurchase for cancellation up to 6,000,000 common shares (representing approximately 1.80% of its outstanding common shares) over the 12-month period ended June 9, 2020. Any repurchase through the Toronto Stock Exchange will be done at market prices. The common shares may also be repurchased through other means authorized by the Toronto Stock Exchange and applicable regulations, including private agreements or share repurchase programs under issuer bid exemption orders issued by the securities regulators. A private purchase made under an exemption order issued by a securities regulator will be done at a discount to the prevailing market price. The amounts that are paid above the average book value of the common shares are charged to *Retained earnings*. During the year ended October 31, 2020, the Bank repurchased 525,000 common shares for \$30 million, which reduced *Common share* capital by \$5 million and *Retained earnings* by \$25 million. During the year ended October 31, 2019, the Bank had repurchased 4,547,200 common shares for \$281 million, which had reduced *Common share* capital by \$40 million and *Retained earnings* by \$241 million. These repurchases were carried out before March 13, 2020, which was the date on which OSFI lowered the domestic stability buffer and indicated that it was expecting all banks to cease any dividend increases or share buybacks.

Reserved Common Shares

As at October 31, 2020 and 2019, there were 15,507,568 common shares reserved under the Dividend Reinvestment and Share Purchase Plan. As at October 31, 2020, there were 18,058,352 common shares (20,377,278 as at October 31, 2019) reserved under the Stock Option Plan.

Common Shares Held in Escrow

As part of the acquisition of Wellington West Holdings Inc. in 2011, the Bank had issued common shares held in escrow. As at October 31, 2020, the number of common shares held in escrow was 21,510 (21,510 as at October 31, 2019). The Bank expects that the remaining shares in escrow will be settled by the end of calendar year 2021.

Restriction on the Payment of Dividends

The Bank is prohibited from declaring dividends on its common or preferred shares if there are reasonable grounds for believing that the Bank would, by so doing, be in contravention of the regulations of the *Bank Act* (Canada) or OSFI's capital adequacy and liquidity guidelines. In addition, the ability to pay common share dividends is restricted by the terms of the outstanding preferred shares pursuant to which the Bank may not pay dividends on its common shares without the approval of the holders of the outstanding preferred shares, unless all preferred share dividends have been declared and paid or set aside for payment.

Dividend Reinvestment and Share Purchase Plan

National Bank has a Dividend Reinvestment and Share Purchase Plan for holders of its common and preferred shares under which they can acquire common shares of the Bank without paying commissions or administration fees. Participants acquire common shares through the reinvestment of cash dividends paid on the shares they hold or through optional cash payments of at least \$1 per payment, up to a maximum of \$5,000 per quarter. Common shares subscribed by participants are purchased on their behalf in the secondary market through the Bank's transfer agent, Computershare Trust Company of Canada, at a price equal to the average purchase price of the common shares during the three business days immediately following the dividend payment date.

Note 19 – Non-Controlling Interests

As at October 31	2020	2019
Trust units issued by NBC Asset Trust (NBC CapS II) – Series 2 ⁽¹⁾	–	359
Other ⁽²⁾	3	(1)
	3	358

(1) As at October 31, 2019, includes \$9 million in accrued interest.

(2) During the year ended October 31, 2019, the Bank acquired the entire remaining non-controlling interest in the Cambodian subsidiary Advanced Bank of Asia Limited.

Trust Units Issued by NBC Asset Trust

Through structured entity NBC Asset Trust (the Trust), a closed-end trust established under the laws of the Province of Ontario, the Bank issued transferable non-voting trust units called "Trust Capital Securities" or "NBC CapS II." These securities are not redeemable or exchangeable for Bank preferred shares at the option of the holder. The gross proceeds from the issuance were used by the Trust to finance the acquisition of mortgage loans from the Bank. For additional information, see Note 27 to these consolidated financial statements.

On June 30, 2020, the Trust redeemed all of the outstanding 350,000 Trust units – Series 2 (NBC CapS II – Series 2) at a per-unit price of \$1,000 for gross proceeds of \$350 million. The redemption was approved by OSFI. On July 17, 2020, the Trust was dissolved.

Note 20 – Capital Disclosure

Capital Management Objectives, Policies and Procedures

Capital management has a dual role of ensuring a competitive return to the Bank's shareholders while maintaining a solid capital foundation that covers the risks inherent to the Bank's business, supports its business segments and protects its clients.

The Bank's capital management policy defines the guiding principles as well as the roles and responsibilities regarding its internal capital adequacy assessment process. This process is a key tool in establishing the Bank's capital strategy and is subject to quarterly reviews and periodic amendments.

Capital Management

Capital ratios are obtained by dividing regulatory capital by risk-weighted assets and are expressed as a percentage. Risk-weighted assets are calculated in accordance with the rules established by OSFI for on- and off-balance-sheet risks. Credit, market and operational risks are factored into the risk-weighted assets calculation for regulatory purposes. The definition adopted by the Basel Committee on Banking Supervision (BCBS) distinguishes between three types of capital. Common Equity Tier 1 (CET1) capital consists of common shareholders' equity less goodwill, intangible assets and other capital deductions. Additional Tier 1 instruments comprise eligible non-cumulative preferred shares, limited recourse capital notes, and the eligible amount of innovative instruments. During the year ended October 31, 2020, the Bank redeemed all of its outstanding innovative instruments. The sum of CET1 and Additional Tier 1 capital forms what is known as Tier 1 capital. Tier 2 capital consists of the eligible portion of subordinated debt and certain allowances for credit losses. Total regulatory capital is the sum of Tier 1 and Tier 2 capital.

During the second quarter of 2020, OSFI adjusted regulatory ratio requirements in response to the impact of the COVID-19 pandemic. For additional information, see the section entitled COVID-19 Pandemic – Key Measures Introduced by the Regulatory Authorities on pages 20 and 21 of this MD&A. The Bank and all other major Canadian banks have to maintain minimum capital ratios established by OSFI: a CET1 capital ratio of at least 9.0%, a Tier 1 capital ratio of at least 10.5%, and a Total capital ratio of at least 12.5%. All of these ratios are to include a capital conservation buffer of 2.5% established by the BCBS and OSFI as well as a 1.0% surcharge applicable solely to D-SIBs and a 1.0% domestic stability buffer established by OSFI. The domestic stability buffer, which can vary from 0% to 2.5% of risk-weighted assets, consists exclusively of CET1 capital. A D-SIB that fails to meet this buffer requirement will not be subject to automatic constraints to reduce capital distributions but will have to provide a remediation plan to OSFI. The banks also have to meet the capital floor that sets the regulatory capital level according to the Basel II standardized approach. If the capital requirement under Basel III is less than 70% of the capital requirement as calculated under Basel II, the difference is added to risk-weighted assets. OSFI requires Canadian banks to meet a Basel III leverage ratio of at least 3.0%. The leverage ratio is a measure independent of risk that is calculated by dividing the amount of Tier 1 capital by 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. The assets deducted from Tier 1 capital are also deducted from total exposure.

During the years ended October 31, 2020 and 2019, the Bank was in compliance with all of OSFI's regulatory capital requirements.

Regulatory Capital and Ratios Under Basel III

As at October 31		2020	2019
	Adjusted⁽¹⁾		
Capital			
CET1	10,924	11,167	9,692
Tier 1	13,869	14,112	12,492
Total	15,167	15,167	13,366
Risk-weighted assets	94,808	94,808	83,039
Total exposure	321,038	321,038	308,902
Capital ratios			
CET1	11.5 %	11.8 %	11.7 %
Tier 1	14.6 %	14.9 %	15.0 %
Total	16.0 %	16.0 %	16.1 %
Leverage ratio	4.3 %	4.4 %	4.0 %

(1) The Basel III regulatory capital and ratios adjusted as at October 31, 2020 do not include the transitional measure applicable to expected credit loss provisioning. For additional information, see the section entitled COVID-19 Pandemic – Key Measures Introduced by the Regulatory Authorities on pages 20 and 21 of the MD&A.

Note 21 – Trading Activity Revenues

Trading activity revenues consist of the net interest income from trading activities and of trading revenues recognized in *Non-interest income* in the Consolidated Statement of Income.

Net interest income comprises dividends related to financial assets and liabilities associated with trading activities, net of interest expenses and interest income related to the financing of these financial assets and liabilities.

Non-interest income consists of realized and unrealized gains and losses as well as interest income on securities measured at fair value through profit or loss, income from held-for-trading derivative financial instruments, changes in the fair value of loans at fair value through profit or loss, changes in the fair value of financial instruments designated at fair value through profit or loss, and transaction costs if applicable.

Year ended October 31	2020	2019
Net interest income	603	40
Non-interest income	604	829
	1,207	869

Note 22 – Share-Based Payments

The compensation expense information provided below excludes the impact of hedging.

Stock Option Plan

The Bank's Stock Option Plan is for officers and other designated persons of the Bank and its subsidiaries. Under this plan, options are awarded annually and provide participants with the right to purchase common shares at an exercise price equal to the closing price of the Bank's common share on the Toronto Stock Exchange on the day preceding the award. The options vest evenly over a four-year period and expire ten years from the award date or, in certain circumstances set out in the plan, within specified time limits. The Stock Option Plan contains provisions for retiring employees that allow the participant's rights to continue vesting in accordance with the stated terms of the grant agreement. The maximum number of common shares that may be issued under the Stock Option Plan was 18,058,352 as at October 31, 2020 (20,377,278 as at October 31, 2019). The number of common shares reserved for a participant may not exceed 5% of the total number of Bank shares issued and outstanding.

As at October 31	2020		2019	
	Number of options	Weighted average exercise price	Number of options	Weighted average exercise price
Stock Option Plan				
Outstanding at beginning	12,103,626	\$ 49.15	13,064,746	\$ 44.78
Awarded	1,789,280	\$ 71.86	2,116,892	\$ 58.79
Exercised	(2,318,926)	\$ 42.18	(2,950,922)	\$ 36.40
Cancelled ⁽¹⁾	(148,577)	\$ 60.99	(127,090)	\$ 56.86
Outstanding at end	11,425,403	\$ 53.96	12,103,626	\$ 49.15
Exercisable at end	6,908,779	\$ 47.05	7,421,662	\$ 43.59

(1) Includes 1,800 expired options during the year ended October 31, 2020 (13,662 expired options during the year ended October 31, 2019).

Exercise price	Options outstanding	Options exercisable	Expiry date
\$34.34	399,530	399,530	December 2020
\$34.09	625,356	625,356	December 2021
\$38.36	696,308	696,308	December 2022
\$44.96	941,939	941,939	December 2023
\$47.93	1,213,908	1,213,908	December 2024
\$42.17	953,611	953,611	December 2025
\$54.69	1,275,263	878,169	December 2026
\$64.14	1,595,263	753,795	December 2027
\$58.79	1,960,809	446,163	December 2028
\$71.86	1,763,416	–	December 2029
	11,425,403	6,908,779	

During the year ended October 31, 2020, the Bank awarded 1,789,280 stock options (2,116,892 stock options during the year ended October 31, 2019) with an average fair value of \$5.11 per option (\$6.14 for the year ended October 31, 2019).

The average fair value of options awarded was estimated on the award date using the Black-Scholes model as well as the following assumptions.

Year ended October 31	2020	2019
Risk-free interest rate	1.94%	2.50%
Expected life of options	7 years	7 years
Expected volatility	14.97%	18.40%
Expected dividend yield	4.29%	4.37%

The expected life of the options is based on historical data and is not necessarily representative of how options will be exercised in the future. Expected volatility is extrapolated from the implied volatility of the Bank's share price and observable market inputs, which are not necessarily representative of actual results. The expected dividend yield represents the annualized dividend divided by the Bank's share price at the award date. The risk-free interest rate is based on the Canadian dollar swap curve at the award date. The exercise price is equal to the Bank's share price at the award date. No other market parameter has been included in the fair value measurement of the options.

A \$9 million compensation expense was recorded for the year ended October 31, 2020 with respect to this plan (\$11 million for the year ended October 31, 2019).

Stock Appreciation Rights (SAR) Plan

The SAR Plan is for officers and other designated persons of the Bank and its subsidiaries. Under this plan, participants receive, upon exercising the right, a cash amount equal to the difference between the closing price of the Bank's common share on the Toronto Stock Exchange on the day preceding the exercise date and the closing price on the day preceding the award date. SARs vest evenly over a four-year period and expire 10 years after the award date or, in certain circumstances set out in the plan, within specified time limits. The SAR Plan contains provisions for retiring employees that allow the participant's rights to continue vesting in accordance with the stated terms of the grant agreement. A compensation expense in a negligible amount was recognized for the year ended October 31, 2020 with respect to this plan (\$2 million for the year ended October 31, 2019).

As at October 31	2020		2019	
	Number of SARs	Weighted average exercise price	Number of SARs	Weighted average exercise price
SAR Plan⁽¹⁾				
Outstanding at beginning	334,997	\$ 49.61	332,211	\$ 46.86
Awarded	42,876	\$ 71.86	46,968	\$ 58.79
Exercised	(84,977)	\$ 46.88	(44,182)	\$ 38.69
Outstanding at end	292,896	\$ 53.66	334,997	\$ 49.61
Exercisable at end	167,545	\$ 45.87	190,691	\$ 43.65

(1) No SARs cancelled or expired during the years ended October 31, 2020 and 2019.

Exercise price	SARs outstanding	SARs exercisable	Expiry date
\$34.34	1,620	1,620	December 2020
\$34.09	24,608	24,608	December 2021
\$38.36	24,216	24,216	December 2022
\$44.96	29,480	29,480	December 2023
\$47.93	31,572	31,572	December 2024
\$42.17	19,748	19,748	December 2025
\$54.69	28,079	12,240	December 2026
\$64.14	51,320	19,910	December 2027
\$58.79	39,377	4,151	December 2028
\$71.86	42,876	–	December 2029
	292,896	167,545	

Deferred Stock Unit (DSU) Plans

The DSU Plans are for officers and other designated persons of the Bank and its subsidiaries as well as directors. These plans allow the Bank to tie a portion of the value of the compensation of participants to the future value of the Bank's common shares. A DSU is a right that has a value equal to the closing price of a common share of the Bank on the Toronto Stock Exchange on the day preceding the award. DSUs generally vest evenly over four years. Additional DSUs are credited to the accounts of participants in an amount equal to the dividends declared on Bank common shares and vest evenly over the same period as the reference DSUs. DSUs may only be cashed when participants retire or leave the Bank or, for directors, when their term ends. The DSU Plans contain provisions for retiring employees whereby participants may continue vesting units in accordance with the stated terms of the grant agreement.

During the year ended October 31, 2020, the Bank awarded 44,292 DSUs at a weighted average price of \$67.35 (51,839 DSUs at a weighted average price of \$60.33 for the year ended October 31, 2019). A total of 483,009 DSUs were outstanding as at October 31, 2020 (569,402 DSUs as at October 31, 2019). A compensation expense of \$3 million was recognized for the year ended October 31, 2020 with respect to these plans (\$9 million for the year ended October 31, 2019).

Note 22 – Share-Based Payments (cont.)

Restricted Stock Unit (RSU) Plan

The RSU Plan is for certain officers and other designated persons of the Bank and its subsidiaries. The objective of this plan is to ensure that the compensation of certain officers and other designated persons is competitive and to foster retention. An RSU represents a right that has a value equal to the average closing price of the Bank's common share, as published by the Toronto Stock Exchange, over the ten trading days preceding the sixth business day in December. RSUs generally vest evenly over three years, although some RSUs vest on the sixth business day of December of the third year following the date of the award, the date on which all RSUs expire. Additional RSUs are credited to the accounts of participants in an amount equal to the dividends declared on the Bank common shares and vest evenly over the same period as the reference RSUs. The RSU Plan contains provisions for retiring employees whereby participants may continue vesting units in accordance with the stated terms of the award agreement.

During the year ended October 31, 2020, the Bank awarded 1,868,580 RSUs at a weighted average price of \$71.36 (2,396,501 RSUs at a weighted average price of \$60.07 for the year ended October 31, 2019). As at October 31, 2020, a total of 4,606,456 RSUs were outstanding (4,977,984 RSUs as at October 31, 2019). A compensation expense of \$135 million was recognized for the year ended October 31, 2020 with respect to this plan (\$175 million for the year ended October 31, 2019).

Performance Stock Unit (PSU) Plan

The PSU Plan is for officers and other designated persons of the Bank. The objective of this plan is to tie a portion of the value of the compensation of these officers and other designated persons to the future value of the Bank's common shares. A PSU represents a right that has a value equal to the average closing price of the Bank's common share, as published by the Toronto Stock Exchange, over the ten trading days preceding the sixth business day in December, adjusted upward or downward according to performance criteria, which is based on the Bank's total shareholder return (TSR) growth index over three years compared to the average TSR growth index of the comparator group composed of Canadian banks over three years. PSUs vest on the sixth business day of December of the third year following the date of the award, the date on which all PSUs expire. Additional PSUs are credited to the accounts of participants in an amount equal to the dividends declared on the Bank's common shares and vest evenly over the same period as the reference PSUs. The PSU Plan contains provisions for retiring employees whereby participants may continue vesting units in accordance with the stated terms of the award agreement.

During the year ended October 31, 2020, the Bank awarded 235,987 PSUs at a weighted average price of \$71.36 (351,956 PSUs at a weighted average price of \$60.07 for the year ended October 31, 2019). As at October 31, 2020, a total of 796,340 PSUs were outstanding (843,250 PSUs as at October 31, 2019). A compensation expense of \$25 million was recognized for the year ended October 31, 2020 with respect to this plan (\$29 million for the year ended October 31, 2019).

Deferred Compensation Plan of National Bank Financial (NBF)

This plan is exclusively for key employees of NBF Wealth Management. The purpose of this plan is to foster the retention of key employees and promote the growth in income and the continuous improvement in profitability at Wealth Management. Under this plan, participants can defer a portion of their annual compensation, and NBF may pay a contribution to key employees when certain financial objectives are met. Amounts awarded by NBF and the compensation deferred by participants are invested in, among others, Bank common share units. These share units represent a right, the value of which corresponds to the closing price of the Bank's common share on the Toronto Stock Exchange on the award date. Additional units are paid to the accounts of participants in an amount equal to the dividends declared on Bank common shares. Share units representing the amounts awarded by NBF vest evenly over four years. When a participant retires, or in certain cases when the participant's employment is terminated, the participant receives a cash amount representing the value of the vested share units.

During the year ended October 31, 2020, NBF awarded 137,465 share units at a weighted average price of \$69.80 (147,927 share units at a weighted average price of \$59.94 for the year ended October 31, 2019). As at October 31, 2020, a total of 1,904,866 share units were outstanding (1,764,789 share units as at October 31, 2019). During the year ended October 31, 2020, a \$2 million compensation expense was recognized for this plan (\$22 million for the year ended October 31, 2019).

Employee Share Ownership Plan

Under the Bank's Employee Share Ownership Plan, employees who meet the eligibility criteria can contribute up to 8% of their annual gross salary by way of payroll deductions. The Bank matches 25% of the employee contribution up to a maximum of \$1,500 per annum. Bank contributions vest to the employee after one year of uninterrupted participation in the plan. Subsequent contributions vest immediately. The Bank's contributions, amounting to \$13 million for the year ended October 31, 2020 (\$12 million for the year ended October 31, 2019), were charged to *Compensation and employee benefits* when paid. As at October 31, 2020, a total of 6,167,265 common shares were held for this plan (5,813,172 common shares as at October 31, 2019).

Plan shares are purchased on the open market and are considered to be outstanding for earnings per share calculations. Dividends paid on the Bank's common shares held for the Employee Share Ownership Plan are used to purchase other common shares on the open market.

Plan Liabilities and Intrinsic Value

Total liabilities arising from the Bank's share-based compensation plans amounted to \$507 million as at October 31, 2020 (\$549 million as at October 31, 2019). The intrinsic value of these liabilities that had vested as at October 31, 2020 was \$213 million (\$217 million as at October 31, 2019).

Note 23 – Employee Benefits – Pension Plans and Other Post-Employment Benefits

The Bank offers defined benefit pension plans and other post-employment benefit plans to eligible employees. The pension plans provide benefits based on years of plan participation and average earnings at retirement. Other post-employment benefit plans include post-employment medical, dental, and life insurance coverage. While pension plans are funded, the other plans are not. The fair value of plan assets and the present value of the defined benefit obligation are measured as at October 31.

The Bank's most significant pension plan is the *Employee Pension Plan of the National Bank of Canada*; it is registered with OSFI and the Canada Revenue Agency and subject to the *Pension Benefits Standards Act, 1985* and the *Income Tax Act*.

The defined benefit plans expose the Bank to specific risks such as investment performance, changes to the discount rate used to calculate the obligation, the longevity of plan members and future inflation. While management believes that the assumptions used in the actuarial valuation process are reasonable, there remains a degree of risk and uncertainty that may cause future results to differ significantly from these assumptions, which could give rise to gains or losses.

According to the Bank's governance rules, the policies and risk management related to the defined benefit plans are overseen at different levels by the pension committees, the Bank's management and the Board's Human Resources Committee. The defined benefit plans are examined on an ongoing basis in order to monitor the funding and investment policies, the plans' financial status and the Bank's funding requirements.

The Bank's funding policy for the defined benefit pension plans is to make at least the minimum annual contributions required by pension regulators.

For funded plans, the Bank determines whether an economic benefit exists in the form of potential reductions in future contributions and in the form of refunds from the plan surplus, where permitted by applicable regulations and plan provisions.

Defined Benefit Obligation, Plan Assets and Funded Status

As at October 31

	Pension plans		Other post-employment benefit plans	
	2020	2019	2020	2019
Defined benefit obligation				
Balance at beginning	4,703	3,864	202	176
Current service cost	126	93	2	3
Interest cost	148	158	5	6
Remeasurements				
Actuarial (gains) losses arising from changes in demographic assumptions	5	(121)	1	8
Actuarial (gains) losses arising from changes in financial assumptions	195	712	1	18
Actuarial (gains) losses arising from experience adjustments	–	141	(1)	–
Employee contributions	54	53		
Benefits paid	(204)	(197)	(9)	(9)
Balance at end	5,027	4,703	201	202
Plan assets				
Fair value at beginning	4,569	3,918		
Interest income	140	157		
Administration cost	(3)	(4)		
Remeasurements				
Return on plan assets (excluding interest income)	525	575		
Bank contributions ⁽¹⁾	72	67		
Employee contributions	54	53		
Benefits paid	(204)	(197)		
Fair value at end	5,153	4,569		
Defined benefit asset (liability) at end	126	(134)	(201)	(202)

(1) For fiscal 2021, the Bank expects to pay an employer contribution of \$72 million to the defined benefit pension plans.

Note 23 – Employee Benefits – Pension Plans and Other Post-Employment Benefits (cont.)

Defined Benefit Asset (Liability)

As at October 31

	Pension plans		Other post-employment benefit plans	
	2020	2019	2020	2019
Defined benefit asset included in <i>Other assets</i>	126	38		
Defined benefit liability included in <i>Other liabilities</i>	–	(172)	(201)	(202)
	126	(134)	(201)	(202)

Cost for Pension Plans and Other Post-Employment Benefits

Year ended October 31

	Pension plans		Other post-employment benefit plans	
	2020	2019	2020	2019
Current service cost	126	93	2	3
Interest expense (income), net	8	1	5	6
Administration costs	3	4		
Expense recognized in <i>Net income</i>	137	98	7	9
Remeasurements⁽¹⁾				
Actuarial (gains) losses on defined benefit obligation	200	732	1	26
Return on plan assets ⁽²⁾	(525)	(575)		
Remeasurements recognized in <i>Other comprehensive income</i>	(325)	157	1	26
	(188)	255	8	35

(1) Changes related to the discount rate and to the return on plan assets are reviewed and updated on a quarterly basis. All other assumptions are updated annually.

(2) Excluding interest income.

Allocation of the Fair Value of Pension Plan Assets

As at October 31

	2020			2019		
	Quoted in an active market ⁽¹⁾	Not quoted in an active market	Total	Quoted in an active market ⁽¹⁾	Not quoted in an active market	Total
Asset classes						
Cash and cash equivalents	–	135	135	–	63	63
Equity securities	1,432	613	2,045	1,458	478	1,936
Debt securities						
Canadian government	48	–	48	306	–	306
Canadian provincial and municipal governments	–	1,656	1,656	–	1,491	1,491
Other issuers	–	1,125	1,125	–	571	571
Other	–	144	144	–	202	202
	1,480	3,673	5,153	1,764	2,805	4,569

(1) Unadjusted quoted prices in active markets for identical assets that the Bank can access at the measurement date.

The Bank's investment strategy for plan assets considers several factors, including the time horizon of pension plan obligations and investment risk. For each plan, an allocation range per asset class is defined using a mix of equity and debt securities to optimize the risk-return profile of plan assets and minimize asset/liability mismatching.

The pension plan assets may include investment securities issued by the Bank. As at October 31, 2020 and 2019, the pension plan assets do not include any securities issued by the Bank.

For fiscal 2020, the Bank and its related entities received \$11 million (\$3 million in fiscal 2019) in fees from the pension plans for related management, administration and custodial services.

Allocation of the Defined Benefit Obligation by the Status of Defined Benefit Plan Participants

As at October 31

	Pension plans		Other post-employment benefit plans	
	2020	2019	2020	2019
Active employees	42 %	42 %	14 %	22 %
Retirees	51 %	52 %	86 %	78 %
Participants with deferred vested benefits	7 %	6 %		
	100 %	100 %	100 %	100 %
Weighted average duration of the defined benefit obligation (in years)	17	17	13	13

Significant Actuarial Assumptions (Weighted Average)

Discount Rate

The discount rate assumption is based on an interest rate curve that represents the yields on corporate AA bonds. Short-term maturities are obtained using a curve based on observed data from corporate AA bonds. Long-term maturities are obtained using a curve based on observed data and extrapolated data.

To measure the pension plan and other post-employment plan obligation, the vested benefits that the Bank expects to pay in each future period are discounted to the measurement date using the spot rate associated with each of the respective periods based on the yield curve derived using the above methodology. The sum of discounted benefit amounts represents the defined benefit obligation. An average discount rate that replicates this obligation is then computed.

To better reflect current service cost, a separate discount rate was determined to account for the timing of future benefit payments associated with the additional year of service to be earned by the plan's active participants. Since these benefits are, on average, being paid at a later date than the benefits already earned by participants as a whole (i.e., longer duration), this method results in the use of a generally higher discount rate for calculating current service cost than that used to measure obligations where the yield curve is positively sloped. The methodology used to determine this discount rate is the same as the one used to establish the discount rate for measuring the obligation.

Other Assumptions

For measurement purposes, the estimated annual growth rate for health care costs was 4.64% as at October 31, 2020 (5.17% as at October 31, 2019). Based on the assumption retained, this rate is expected to decrease gradually to 3.34% in 2041 and remain steady thereafter.

Mortality assumptions are a determining factor when measuring the defined benefit obligation. Determining the expected benefit payout period is based on best estimate assumptions regarding mortality. Mortality tables are reviewed at least once a year, and the assumptions made are in accordance with accepted actuarial practice. New results regarding the plans are reviewed and used in calculating best estimates of future mortality.

As at October 31

	Pension plans		Other post-employment benefit plans	
	2020	2019	2020	2019
Defined benefit obligation				
Discount rate	2.90 %	3.10 %	2.90 %	3.10 %
Rate of compensation increase	3.00 %	3.00 %	3.00 %	3.00 %
Health care cost trend rate			4.64 %	5.17 %
Life expectancy (in years) at 65 for a participant currently at Age 65				
Men	21.3	21.3	21.3	21.3
Women	23.7	23.6	23.7	23.6
Age 45				
Men	22.4	22.3	22.4	22.3
Women	24.6	24.6	24.6	24.6

Note 23 – Employee Benefits – Pension Plans and Other Post-Employment Benefits (cont.)

Year ended October 31

	Pension plans		Other post-employment benefit plans	
	2020	2019	2020	2019
Pension plan expense				
Discount rate – Current service	3.20 %	4.15 %	3.20 %	4.15 %
Discount rate – Interest expense (income), net	3.10 %	4.05 %	3.10 %	4.05 %
Rate of compensation increase	3.00 %	3.00 %	3.00 %	3.00 %
Health care cost trend rate			5.17 %	5.23 %
Life expectancy (<i>in years</i>) at 65 for a participant currently at				
Age 65				
Men	21.2	21.2	21.2	21.2
Women	23.6	23.6	23.6	23.6
Age 45				
Men	22.3	22.3	22.3	22.3
Women	24.5	24.5	24.5	24.5

Sensitivity of Significant Assumptions for 2020

The following table shows the potential impacts of changes to key assumptions on the defined benefit obligation of the pension plans and other post-employment benefit plans as at October 31, 2020. These impacts are hypothetical and should be interpreted with caution as changes in each significant assumption may not be linear.

As at October 31, 2020

	Pension plans	Other post-employment benefit plans
	Change in the obligation	Change in the obligation
Impact of a 0.25% increase in the discount rate	(209)	(5)
Impact of a 0.25% decrease in the discount rate	223	5
Impact of a 0.25% increase in the rate of compensation increase	42	
Impact of a 0.25% decrease in the rate of compensation increase	(41)	
Impact of a 1.00% increase in the health care cost trend rate		7
Impact of a 1.00% decrease in the health care cost trend rate		(6)
Impact of an increase in the age of participants by one year	(138)	(3)
Impact of a decrease in the age of participants by one year	136	2

Projected Benefit Payments

Year ended October 31

	Pension plans	Other post-employment benefit plans
2021	210	10
2022	217	9
2023	223	9
2024	230	9
2025	237	8
2026 to 2030	1,294	37

Note 24 – Income Taxes

The Bank's income tax expense reported in the consolidated financial statements is as follows.

Year ended October 31	2020	2019
Consolidated Statement of Income		
Current taxes		
Current year	638	647
Prior period adjustments	(27)	22
	611	669
Deferred taxes		
Origination and reversal of temporary differences	(193)	(188)
Prior period adjustments	35	(19)
	(158)	(207)
	453	462
Consolidated Statement of Changes in Equity		
Share issuance expense and other	(2)	-
Consolidated Statement of Comprehensive Income		
Remeasurements of pension plans and other post-employment benefit plans	86	(48)
Net change in cash flow hedges	(99)	(57)
Other	(13)	2
	(26)	(103)
Income taxes	425	359

The breakdown of the income tax expense is as follows.

Year ended October 31	2020	2019
Current taxes	511	617
Deferred taxes	(86)	(258)
	425	359

The temporary differences and tax loss carryforwards resulting in deferred tax assets and liabilities are as follows.

	As at October 31		Year ended October 31		Year ended October 31	
	Consolidated Balance Sheet		Consolidated Statement of Income		Consolidated Statement of Comprehensive Income	
	2020	2019 ⁽¹⁾	2020	2019 ⁽¹⁾	2020	2019
Deferred tax assets						
Allowances for credit losses	326	150	176	7	-	-
Deferred charges	265	264	1	31	-	-
Defined benefit liability – Pension plans	-	78	-	-	(78)	42
Defined benefit liability – Other post-employment benefit plans	52	50	1	(10)	1	6
Investments in associates	98	82	15	21	1	-
Leases liabilities	145	-	145	-	-	-
Deferred revenue	47	41	6	3	-	-
Tax loss carryforwards	40	95	(55)	69	-	-
Other items ⁽²⁾	59	71	(13)	17	-	-
	1,032	831	276	138	(76)	48
Deferred tax liabilities						
Premises and equipment and intangible assets	(326)	(188)	(138)	67	-	-
Defined benefit asset – Pension plans	(26)	(33)	16	8	(9)	-
Investments in associates	(4)	(16)	12	15	-	-
Other items	(33)	(37)	(8)	(21)	12	2
	(389)	(274)	(118)	69	3	2
Net deferred tax assets (liabilities)	643	557	158	207	(73)	50

(1) For the year ended October 31, 2019, certain amounts have been reclassified.

(2) As at October 31, 2020, the Consolidated Balance Sheet includes \$1 million in deferred tax assets related to share issuance costs (negligible amount as at October 31, 2019) reported in *Retained earnings* on the Consolidated Statement of Changes in Equity.

Note 24 – Income Taxes (cont.)

Net deferred tax assets are included in *Other assets* and net deferred tax liabilities are included in *Other liabilities*.

As at October 31	2020	2019
Deferred tax assets	643	562
Deferred tax liabilities	–	(5)
	643	557

According to forecasts, which are based on information available on October 31, 2020, the Bank believes that it is probable that the results of future operations will generate sufficient taxable income to utilize all the deferred tax assets before they expire.

As at October 31, 2020, the total amount of temporary differences, unused tax loss carryforwards and unused tax credits for which no deferred tax asset has been recognized was \$498 million (\$508 million as at October 31, 2019).

As at October 31, 2020, the total amount of temporary differences related to investments in subsidiaries, associates, and joint ventures for which no deferred tax liability has been recognized was \$4,139 million (\$3,184 million as at October 31, 2019).

The following table provides a reconciliation of the Bank's income tax rate.

Year ended October 31	2020		2019	
	\$	%	\$	%
Income before income taxes	2,536	100.0	2,784	100.0
Income taxes at Canadian statutory income tax rate	672	26.5	741	26.6
Reduction in income tax rate due to				
Tax-exempt income from securities	(190)	(7.5)	(208)	(7.5)
Non-taxable portion of capital gains	–	–	(17)	(0.6)
Tax rates of subsidiaries, foreign entities and associates	(58)	(2.3)	(67)	(2.4)
Other items	29	1.2	13	0.5
	(219)	(8.6)	(279)	(10.0)
Income taxes reported in the Consolidated Statement of Income and effective income tax rate	453	17.9	462	16.6

Notice of Assessment

In April 2020, the Bank was reassessed by the Canada Revenue Agency (CRA) for additional income tax and interest of approximately \$240 million (including estimated provincial tax and interest) in respect of certain Canadian dividends received by the Bank during 2015.

In prior fiscal years, the Bank was reassessed for additional income tax and interest of approximately \$370 million (including provincial tax and interest) in respect of certain Canadian dividends received by the Bank during the 2014, 2013 and 2012 taxation years.

The transactions to which the above-mentioned reassessments relate are similar to those prospectively addressed by income tax legislation enacted as a result of the 2015 and 2018 Canadian federal budgets.

The CRA may issue reassessments to the Bank for taxation years subsequent to 2015 in regard to activities similar to those that were the subject of the above-mentioned reassessments. The Bank remains confident that its tax position was appropriate and intends to vigorously defend its position. As a result, no amount has been recognized in the consolidated financial statements as at October 31, 2020.

Note 25 – Earnings Per Share

Diluted earnings per share is calculated by dividing net income attributable to common shareholders by the weighted average number of common shares outstanding after taking into account the dilution effect of stock options using the treasury stock method and any gain (loss) on the redemption of preferred shares.

Year ended October 31	2020	2019
Basic earnings per share		
Net income attributable to the Bank's shareholders and holders of other equity instruments	2,041	2,256
Dividends on preferred shares and distributions on LRCNs	118	116
Net income attributable to common shareholders	1,923	2,140
Weighted average basic number of common shares outstanding (<i>thousands</i>)	335,508	335,104
Basic earnings per share (<i>dollars</i>)	5.73	6.39
Diluted earnings per share		
Net income attributable to common shareholders	1,923	2,140
Weighted average basic number of common shares outstanding (<i>thousands</i>)	335,508	335,104
Adjustment to average number of common shares (<i>thousands</i>)		
Stock options ⁽¹⁾	2,072	2,526
Weighted average diluted number of common shares outstanding (<i>thousands</i>)	337,580	337,630
Diluted earnings per share (<i>dollars</i>)	5.70	6.34

(1) For the year ended October 31, 2020, the calculation of the diluted earnings per share excluded an average number of 1,585,629 options outstanding with a weighted average exercise price of \$71.86 (1,775,598 options outstanding with a weighted average exercise price of \$64.14 for the year ended October 31, 2019), as the exercise price of these options was greater than the average price of the Bank's common shares.

Note 26 – Guarantees, Commitments and Contingent Liabilities

Guarantees

The maximum potential amount of future payments represents the maximum risk of loss if there were a total default by the guaranteed parties, without consideration of recoveries under recourse provisions, insurance policies or from collateral held or pledged. The maximum potential amount of future payments for significant guarantees issued by the Bank is presented in the following table.

As at October 31	2020	2019
Letters of guarantee ⁽¹⁾	5,802	5,231
Backstop liquidity, credit enhancement facilities and other ⁽¹⁾	7,658	5,655
Securities lending	92	280

(1) For additional information on allowances for credit losses related to off-balance-sheet commitments, refer to Note 7 to these consolidated financial statements.

Letters of Guarantee

In the normal course of business, the Bank issues letters of guarantee. These letters of guarantee represent irrevocable commitments that the Bank will make payments in the event that a client cannot meet its obligations to third parties. The Bank's policy for requiring collateral security with respect to letters of guarantee is similar to that for loans. Generally, the term of these letters of guarantee is less than two years.

Backstop Liquidity and Credit Enhancement Facilities

Facilities to Multi-Seller Conduits

The Bank administers multi-seller conduits that purchase financial assets from clients and finance those purchases by issuing asset-backed commercial paper. The Bank provides backstop liquidity facilities to these multi-seller conduits. As at October 31, 2020, the notional amount of the global-style backstop liquidity facilities totalled \$3.2 billion (\$2.6 billion as at October 31, 2019), representing the total amount of the commercial paper outstanding.

These backstop liquidity facilities can be drawn if the conduits are unable to access the commercial paper market, even if there is no general market disruption. These facilities have terms of less than one year and can be periodically renewed. The terms and conditions of these backstop liquidity facilities do not require the Bank to advance money to the conduits if the conduits are insolvent or involved in bankruptcy proceedings or to fund non-performing assets beyond the amount of the available credit enhancements. The backstop liquidity facilities provided by the Bank have not been drawn to date.

Note 26 – Guarantees, Commitments and Contingent Liabilities (cont.)

The Bank also provides credit enhancement facilities to these multi-seller conduits. These facilities have terms of less than one year and are automatically renewable unless the Bank sends a non-renewal notice. As at October 31, 2020 and 2019, the committed notional value for these facilities was \$30 million. To date, the credit enhancement facilities provided by the Bank have not been drawn.

The maximum risk of loss for the Bank cannot exceed the total amount of commercial paper outstanding, i.e., \$3.2 billion as at October 31, 2020 (\$2.6 billion as at October 31, 2019). As at October 31, 2020, the Bank held \$123 million (\$13 million as at October 31, 2019) of this commercial paper and, consequently, the maximum potential amount of future payments was \$3.1 billion (\$2.6 billion as at October 31, 2019).

CDCC Overnight Liquidity Facility

Canadian Derivatives Clearing Corporation (CDCC) acts as a central clearing counterparty for multiple financial instrument transactions in Canada. Certain fixed-income clearing members of CDCC have provided an equally shared committed and uncommitted global overnight liquidity facility for the purpose of supporting CDCC in its clearing activities of securities purchased under reverse repurchase agreements or sold under repurchase agreements. The objective of this facility is to maintain sufficient liquidity in the event of a clearing member's default. As a fixed-income clearing member providing support to CDCC, the Bank provides a liquidity facility. As at October 31, 2020, the notional amount of the overnight uncommitted liquidity facility amounted to \$4.5 billion (\$3.0 billion as at October 31, 2019). As at October 31, 2020 and 2019, no amount had been drawn.

Securities Lending

Under securities lending agreements the Bank has entered into with certain clients who have entrusted it with the safekeeping of their securities, the Bank lends the securities to third parties and indemnifies its clients in the event of loss. In order to protect itself against any contingent loss, the Bank obtains, as security from the borrower, a cash amount or extremely liquid marketable securities with a fair value greater than that of the securities loaned. No amount has been recognized on the Consolidated Balance Sheet with respect to potential indemnities resulting from securities lending agreements.

Other Indemnification Agreements

In the normal course of business, including securitization transactions and discontinuances of businesses and operations, the Bank enters into numerous contractual agreements under which it undertakes to compensate the counterparty for costs incurred as a result of litigation, changes in laws and regulations (including tax legislation), claims with respect to past performance, incorrect representations or the non-performance of certain restrictive covenants. The Bank also undertakes to indemnify any person acting as a director or officer or performing a similar function within the Bank or one of its subsidiaries or another entity, at the request of the Bank, for all expenses incurred by that person in proceedings or investigations to which he or she is party in that capacity. Moreover, as a member of a securities transfer network and pursuant to the membership agreement and the regulations governing the operation of the network, the Bank granted collateral in favour of the Bank of Canada to guarantee any obligation of the Bank towards the Bank of Canada that could result from the Bank's participation in the securities transfer network. The durations of the indemnification agreements vary according to circumstance; as at October 31, 2020 and 2019, given the nature of the agreements, the Bank is unable to make a reasonable estimate of the maximum potential liability it could be required to pay to counterparties. No amount has been recorded on the Consolidated Balance Sheet with respect to these agreements.

Commitments

Credit Instruments

In the normal course of business, the Bank enters into various off-balance-sheet commitments. The credit instruments used to meet the financing needs of its clients represent the maximum amount of additional credit the Bank could be obligated to extend if the commitments were fully drawn.

As at October 31	2020	2019
Letters of guarantee ⁽¹⁾	5,802	5,231
Documentary letters of credit ⁽²⁾	171	163
Credit card receivables ⁽³⁾	7,999	7,630
Commitments to extend credit ⁽³⁾	70,329	62,124

(1) See the Letters of Guarantee heading on page 209.

(2) Documentary letters of credit are documents issued by the Bank and used in international trade to enable a third party to draw drafts on the Bank up to an amount established under specific terms and conditions; these instruments are collateralized by the delivery of the goods to which they are related.

(3) Credit card receivables and commitments to extend credit represent the undrawn portions of credit authorizations granted in the form of loans, acceptances, letters of guarantee and documentary letters of credit. The Bank is required at all times to make the undrawn portion of the credit authorization available, subject to certain conditions.

Financial Assets Received as Collateral

As at October 31, 2020, the fair value of financial assets received as collateral that the Bank was authorized to sell or repledge was \$60.6 billion (\$55.3 billion as at October 31, 2019). These financial assets received as collateral consist of securities related to securities financing and derivative transactions as well as securities purchased under reverse repurchase agreements and securities borrowed.

Other Commitments

The Bank acts as an investor in investment banking activities where it enters into agreements to finance external private equity funds and investments in equity and debt securities at market value at the time the agreements are signed. In connection with these activities, the Bank has commitments to invest up to \$78 million as at October 31, 2020 (\$92 million as at October 31, 2019). In addition, through one of its subsidiaries, the Bank purchases retail loans originated by other financial institutions at market value at the time of purchase. As at October 31, 2020, the Bank had no commitment to purchase loans (\$1.6 billion as at October 31, 2019). As at October 31, 2020, the Bank also has a commitment to finance \$200 million related to securitization transactions.

Pledged Assets

In the normal course of business, the Bank pledges securities and other assets as collateral. A breakdown of encumbered assets pledged as collateral is provided in the following table. These transactions are concluded in accordance with standard terms and conditions for such transactions.

As at October 31	2020	2019
Assets pledged to		
Bank of Canada	502	502
Direct clearing organizations ⁽¹⁾	4,039	1,052
Assets pledged in relation to		
Derivative financial instrument transactions	4,380	2,822
Borrowing, securities lending and securities sold under reverse repurchase agreements	57,257	41,946
Securitization transactions	22,859	23,299
Covered bonds ⁽²⁾	14,337	10,300
Other	4	4
Total	103,378	79,925

(1) Includes assets pledged as collateral for Large Value Transfer System (LVTS) activities.

(2) The Bank has a covered bond program. For additional information, see Notes 13 and 27 to these consolidated financial statements.

Contingent Liabilities

Maple Financial Group Inc.

The Bank has a 24.9% equity interest in Maple Financial Group Inc. (Maple), a privately owned Canadian company that operated through direct and indirect wholly owned subsidiaries in Canada, Germany, the United Kingdom and the United States.

Maple Bank GmbH (Maple GmbH), an indirect wholly owned subsidiary of Maple, has been the subject of an investigation into alleged tax irregularities by German prosecutors since September 2015, and the investigation was focusing on selected trading activities by Maple GmbH and some of its former employees, primarily during taxation years 2006 to 2010. The German authorities have alleged that these trading activities, often referred to as “cum/ex trading,” violated German tax laws. Neither the Bank nor its employees were involved in these trading activities and, to the Bank’s knowledge, are not the subject of this investigation. At that time, the Bank announced that if it were determined that portions of the dividends it received from Maple could be reasonably attributed to tax fraud by Maple GmbH, arrangements would be made to repay those amounts to the relevant authority.

On February 6, 2016, the German Federal Financial Supervisory Authority, BaFin, placed a moratorium on the business activities of Maple GmbH preventing it from carrying out its normal business activities. In August 2016, Maple filed for bankruptcy protection under applicable Canadian laws, and a trustee was appointed to administer the company. Similar proceedings were initiated for each of Maple’s other material subsidiaries in their home jurisdictions. In light of the situation, the Bank wrote off the carrying value of its equity interest in Maple in an amount of \$164 million (\$145 million net of income taxes) during the first quarter of 2016. The \$164 million write-off of the equity interest in this associate was recognized in the *Non-interest income – Other* item of the Consolidated Statement of Income for the year ended October 31, 2016 and was reported in the Financial Markets segment.

While there has not yet been a determination of tax fraud on the part of Maple GmbH or its employees, in the insolvency proceedings of Maple GmbH the German finance office issued a declaration about the result of the tax audit at Maple GmbH and about the relevant tax consequences of the cum/ex trading and concluded a final tax claim of the tax authorities against the insolvency administrator. This claim was approved by the Maple GmbH creditor assembly.

The Bank has been in contact with the German prosecutors, who have confirmed that, in their view based upon the evidence they have considered since the occurrence of the insolvency, the Bank was not involved in any respect with the alleged tax fraud undertaken by Maple GmbH nor was it negligent in failing to identify that alleged fraud. Further to discussions between the Bank and the German prosecutors concerning the amounts deemed attributable to the alleged tax fraud, the Bank paid 7.7 million euros to the German tax authorities on November 19, 2019. As at October 31, 2019, an \$11 million provision was recorded to reflect this adjusting event after the Consolidated Balance Sheet date.

In December 2019, the Bank, together with the other principal Maple shareholders, reached an agreement with the bankruptcy and insolvency administrator of Maple GmbH to settle any potential claims that might be asserted against them by or on behalf of Maple GmbH. In connection with the settlement, the Bank agreed to pay 8.7 million euros for the benefit of Maple GmbH’s creditors and, during the first quarter of 2020, recorded a \$13 million charge in the *Non-interest expenses – Other* item presented in the *Other* heading of segment results. During the third quarter of 2020, by virtue of the finalization of this agreement, all material liabilities associated with the Bank’s ownership of Maple have been resolved.

Note 26 – Guarantees, Commitments and Contingent Liabilities (cont.)

Litigation

In the normal course of business, the Bank and its subsidiaries are involved in various claims relating, among other matters, to loan portfolios, investment portfolios and supplier agreements, including court proceedings, investigations or claims of a regulatory nature, class actions or other legal remedies of varied natures.

More specifically, the Bank is involved as a defendant in class actions instituted by consumers contesting, *inter alia*, certain transaction fees or who wish to avail themselves of certain legislative provisions relating to consumer protection. The recent developments in the main legal proceedings involving the Bank are as follows:

Watson

In 2011, a class action was filed in the Supreme Court of British Columbia against Visa Corporation Canada (Visa) and MasterCard International Incorporated (MasterCard) (the Networks) as well as National Bank and a number of other Canadian financial institutions. A similar action was also initiated in Quebec, Ontario, Alberta and Saskatchewan. In each of the actions, the Networks and financial institutions are alleged to have been involved in a price-fixing system to maintain and increase the fees paid by merchants on transactions executed using the credit cards of the Networks. In so doing, they would notably be in breach of the *Competition Act*. An unspecified amount of compensatory and punitive damages is being claimed. In 2017, a settlement was reached with the plaintiffs; in 2018 it was approved by the trial courts in each of the five jurisdictions where the action was initiated. The rulings approving the settlement are now the subject of appeal proceedings in multiple jurisdictions.

Defrance

On January 21, 2019, the Quebec Superior Court authorized a class action against the Bank and several other Canadian financial institutions. The originating application was served to the Bank on April 23, 2019. The class action was initiated on behalf of consumers residing in Quebec. The plaintiffs allege that non-sufficient funds charges, billed by all of the defendants when a payment order is refused due to non-sufficient funds, are illegal and prohibited by the *Consumer Protection Act*. The plaintiffs are claiming, in the form of damages, the repayment of these charges as well as punitive damages.

It is impossible to determine the outcome of the claims instituted or which may be instituted against the Bank and its subsidiaries. The Bank estimates, based on the information at its disposal, that while the amount of contingent liabilities pertaining to these claims, taken individually or in the aggregate, could have a material impact on the Bank's consolidated results of operation for a particular period, it would not have a material adverse impact on the Bank's consolidated financial position.

Note 27 – Structured Entities

A structured entity is an entity created to accomplish a narrow and well-defined objective and is designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, such as when any voting rights relate solely to administrative tasks and the relevant activities are directed by means of contractual arrangements. Structured entities are assessed for consolidation in accordance with the accounting treatment described in Note 1 to these consolidated financial statements. The Bank's maximum exposure to loss resulting from its interests in these structured entities consists primarily of the investments in these entities, the fair value of derivative financial instrument contracts entered into with them, and the backstop liquidity and credit enhancement facilities granted to certain structured entities.

In the normal course of business, the Bank may enter into financing transactions with third-party structured entities, including commercial loans, reverse repurchase agreements, prime brokerage margin lending, and similar collateralized lending transactions. While such transactions expose the Bank to the counterparty credit risk of the structured entities, this exposure is mitigated by the collateral related to these transactions. The Bank typically has neither power nor significant variable returns resulting from financing transactions with structured entities and does not consolidate such entities. Financing transactions with third-party-sponsored structured entities are included in the Bank's consolidated financial statements and are not included in the table accompanying this note on page 214.

Non-Consolidated Structured Entities

Multi-Seller Conduits

The Bank administers multi-seller conduits that purchase financial assets from clients and finance those purchases by issuing commercial paper backed by the assets acquired. Clients use these multi-seller conduits to diversify their funding sources and reduce borrowing costs, while continuing to manage the financial assets and providing some amount of first-loss protection. Notes issued by the conduits and held by third parties provide additional credit loss protection. The Bank acts as a financial agent and provides these conduits with administrative and transaction structuring services as well as backstop liquidity and credit enhancement facilities under the commercial paper program. These facilities are presented and described in Note 26. The Bank has concluded derivative financial instrument contracts with these conduits, the fair value of which is presented on the Bank's Consolidated Balance Sheet. Although the Bank has the ability to direct the relevant activities of these conduits, it cannot use its power to affect the amount of the returns it obtains, as it acts as an agent. Consequently, the Bank does not control these conduits and does not consolidate them.

Investment Funds

The Bank enters into derivative or other financial instrument contracts with third parties to provide them with the desired exposure to certain investment funds. The Bank economically hedges the risks related to these derivatives by investing in those investment funds. The Bank can also hold economic interests in certain investment funds as part of its investing activities. In addition, the Bank is sponsor and investment manager of mutual funds in which it has insignificant or no interest. The Bank does not control the funds where its holdings are not significant as in these circumstances, the Bank either acts only as an agent or does not have any power over the relevant activities. In both cases, it does not have significant exposure to the variable returns of the funds. Therefore, the Bank does not consolidate these funds.

Private Investments

As part of its investment banking operations, the Bank invests in several limited liability partnerships and other incorporated entities. These investment companies in turn invest in operating companies with a view to reselling these investments at a profit over the medium or long term. The Bank does not intervene in the operations of these entities; its only role is that of an investor. Consequently, it does not control these companies and does not consolidate them.

Asset-Backed Structured Entities

The Bank invested in certain asset-backed structured entities. The underlying assets consist of residential mortgages, consumer loans, equipment loans and leases. The Bank does not have the ability to direct the relevant activities of these structured entities and has no exposure to their variable returns, other than the right to receive interest income and dividend income from its investments. Consequently, the Bank does not control these structured entities and does not consolidate them.

Note 27 – Structured Entities (cont.)

The following table presents the carrying amounts of the assets and liabilities relating to the Bank's interests in non-consolidated structured entities, the Bank's maximum exposure to loss from these interests, as well as the total assets of these structured entities. The structured entity Canada Housing Trust is not presented. For additional information, see Note 8 to these consolidated financial statements.

	As at October 31, 2020			
	Multi-seller conduits ⁽¹⁾	Investment funds ⁽²⁾	Private investments ⁽³⁾	Asset-backed structured entities ⁽⁴⁾
Assets on the Consolidated Balance Sheet				
Securities at fair value through profit or loss	23	255	68	–
Securities at fair value through other comprehensive income	100	–	–	–
Securities at amortized cost	–	–	–	2,268
Derivative financial instruments	17	–	–	19
	140	255	68	2,287
As at October 31, 2019	15	540	81	2,465
Maximum exposure to loss				
Securities	140	255	68	2,287
Liquidity, credit enhancement facilities and commitments	3,226	–	–	425
	3,366	255	68	2,712
As at October 31, 2019	2,623	540	81	2,707
Total assets of the structured entities				
	3,304	1,900	431	8,139
As at October 31, 2019	2,647	1,970	482	6,506

(1) The main underlying assets, located in Canada, are residential mortgages, automobile loans, automobile inventory financings, and other receivables. As at October 31, 2020, the notional committed amount of the global-style liquidity facilities totalled \$3.2 billion (\$2.6 billion as at October 31, 2019), representing the total amount of commercial paper outstanding. The Bank also provides series-wide credit enhancement facilities for a notional committed amount of \$30 million (\$30 million as at October 31, 2019). The maximum exposure to loss cannot exceed the amount of commercial paper outstanding. As at October 31, 2020, the Bank held \$123 million in commercial paper (\$13 million as at October 31, 2019) and, consequently, the maximum potential amount of future payments as at October 31, 2020 is limited to \$3.1 billion (\$2.6 billion as at October 31, 2019), which represents the undrawn liquidity and credit enhancement facilities.

(2) The underlying assets are various financial instruments and are presented on a net asset basis. Certain investment funds are in a trading portfolio.

(3) The underlying assets are private investments. The amount of total assets of the structured entities corresponds to the amount for the most recent available period.

(4) The underlying assets are residential mortgages, consumer loans, equipment loans and leases.

Consolidated Structured Entities

Securitization Entity for the Bank's Credit Card Receivables

In April 2015, the Bank set up Canadian Credit Card Trust II (CCCT II) to continue its credit card securitization program on a revolving basis and to use the entity for capital management and funding purposes.

The Bank provides first-loss protection against the losses since it retains the excess spread from the portfolio of sold receivables. The excess spread represents the residual net interest income after all the expenses related to this structure have been paid. The Bank also provides second-loss protection as it holds subordinated notes issued by CCCT II. In addition, the Bank acts as an administrative agent and servicer and as such is responsible for the daily administration and management of CCCT II's credit card receivables. The Bank therefore has the ability to direct the relevant activities of CCCT II and can exercise its power to affect the amount of returns it obtains. Consequently, the Bank controls CCCT II and consolidates it.

Multi-Seller Conduit

The Bank administers a multi-seller conduit that purchases financial assets from clients and finances those purchases by issuing debt securities (including commercial paper) backed by the assets acquired. The clients use this multi-seller conduit to diversify their funding sources and reduce borrowing costs, while continuing to manage the financial assets and providing some amount of first-loss protection. The Bank holds the sole note issued by the conduit and has concluded a derivative financial instrument contract with the conduit. The Bank controls the relevant activities of this conduit through its involvement as a financial agent, agent for administrative and transaction structuring services as well as investor in the conduit's sole note. The Bank's functions and investment in the conduit confer to it decision-making power over the composition of assets acquired by the conduit and the selection of the seller as well as some exposure to the conduit's variable returns. Therefore, the Bank consolidates these funds.

Investment Funds

The Bank enters into derivative or other financial instrument contracts with third parties to provide them with the desired exposure to certain investment funds. The Bank economically hedges the risks related to these derivatives by investing in those investment funds. The Bank can also hold economic interests in certain investment funds as part of its investing activities. The Bank controls the relevant activities of these funds through its involvement as an investor and its significant exposure to their variable returns. Therefore, the Bank consolidates these funds.

Covered Bonds

NBC Covered Bond Guarantor (Legislative) Limited Partnership

In December 2013, the Bank established the covered bond legislative program under which covered bonds are issued. It therefore created NBC Covered Bond Guarantor (Legislative) Limited Partnership (the Guarantor) to guarantee payment of the principal and interest owed to the bondholders. The Bank sold uninsured residential mortgages to the Guarantor and granted it loans to facilitate the acquisition of these assets. The Bank acts as manager of the partnership and has decision-making authority over its relevant activities in accordance with the contractual terms governing the covered bond legislative program. In addition, the Bank is able, in accordance with the contractual terms governing the covered bond legislative program, to affect the variable returns of the partnership, which are directly related to the return on the mortgage loan portfolio and the interest on the loans from the Bank. Consequently, the Bank controls the partnership and consolidates it.

NBC Asset Trust

The Bank had created NBC Asset Trust (the Trust) for its funding and capital management needs. The securities issued by this trust constituted innovative capital instruments and were eligible as additional Tier 1 capital. The issuance proceeds were used to acquire, from the Bank, residential mortgage loans. The Bank continued to administer these loans and was committed to repurchase from the Trust the capital balance and unpaid accrued interest on any loan that was more than 90 days past due. The Bank also managed day-to-day operations and held the special voting securities of the Trust. After the distribution had been paid to the holders of the trust capital securities, the Bank, as the sole holder of the special trust securities, was entitled to receive the balance of net residual funds. Therefore, the Bank had the ability to direct the relevant activities of the Trust and could use its power to affect the amount of returns it obtained. Therefore, the Bank controlled this trust and consolidated it until June 2020.

On June 30, 2020, the Trust redeemed all of the outstanding Trust units (NBC Caps II) – Series 2 and on July 17, 2020, the Trust was dissolved. For additional information, see Note 19 to these consolidated financial statements.

Third-Party Structured Entities

In 2018, the Bank, through one of its subsidiaries, provided financing to a third-party structured entity in exchange for a 100% interest in a loan portfolio, the sole asset held by that entity. The Bank controls and therefore consolidates the structured entity, as it has the ability to direct the entity's relevant activities through its involvement in the decision-making process. The Bank is also exposed to the entity's variable returns.

The following table presents the Bank's investments and other assets in the consolidated structured entities as well as the total assets of these entities.

As at October 31	2020		2019	
	Investments and other assets	Total assets ⁽¹⁾	Investments and other assets	Total assets ⁽¹⁾
Consolidated structured entities				
Securitization entity for the Bank's credit card receivables ⁽²⁾⁽³⁾	1,417	1,478	849	1,765
Multiseller conduit ⁽⁴⁾	172	172	–	–
Investment funds ⁽⁵⁾	174	174	286	311
Covered bonds ⁽⁶⁾	16,771	17,197	16,167	16,515
NBC Asset Trust ⁽⁷⁾	–	–	700	1,063
Third-party structured entities ⁽⁸⁾	191	191	232	232
	18,725	19,212	18,234	19,886

(1) There are restrictions that stem mainly from regulatory requirements, corporate or securities laws and contractual arrangements that limit the ability of certain consolidated structured entities to transfer funds to the Bank.

(2) The underlying assets are credit card receivables.

(3) The Bank's investment is presented net of third-party holdings.

(4) The underlying assets, located in Canada, are residential mortgages.

(5) The underlying assets are various financial instruments and are presented on a net asset basis. Certain investment funds are in a trading portfolio.

(6) The underlying assets are uninsured residential mortgage loans of the Bank. The average maturity of these underlying assets is two years. As at October 31, 2020, the total amount of transferred mortgage loans was \$16.8 billion (\$16.2 billion as at October 31, 2019), and the total amount of covered bonds of \$10.1 billion was recognized in *Deposits* on the Consolidated Balance Sheet (\$9.5 billion as at October 31, 2019). For additional information, see Note 13 to these consolidated financial statements.

(7) The underlying assets were insured and uninsured residential mortgage loans of the Bank. As at October 31, 2019, insured loans had amounted to \$12 million.

(8) The underlying assets consist of a loan portfolio.

Note 28 – Related Party Disclosures

In the normal course of business, the Bank provides various banking services to related parties and enters into contractual agreements and other operations with related parties. The Bank considers the following to be related parties:

- its key officers and directors and members of their immediate family, i.e., spouses and children under 18 living in the same household;
- entities over which its key officers and directors and their immediate family have control or significant influence through their significant voting power;
- the Bank's associates and joint ventures;
- the Bank's pension plans (for additional information, see Note 23 to these consolidated financial statements).

According to the established definition, the Bank's key officers are those persons having authority and responsibility for planning, directing and controlling the Bank's activities, directly or indirectly.

Related Party Transactions

As at October 31

	Key officers and directors ⁽¹⁾		Related entities	
	2020	2019	2020	2019
Assets				
Mortgage loans and other loans	33	42	347 ⁽²⁾	339 ⁽²⁾
Liabilities				
Deposits	59	39	517 ⁽³⁾	632 ⁽³⁾
Other	–	–	1	3

(1) As at October 31, 2020, key officers, directors and their immediate family members were holding \$66 million of the Bank's common and preferred shares (\$69 million as at October 31, 2019).

(2) As at October 31, 2020, mortgage loans and other loans consisted of: (i) \$1 million in loans to the Bank's associates (no loans as at October 31, 2019) and (ii) \$346 million in loans to entities over which the Bank's key officers, directors or their immediate family members exercise control or significant influence through significant voting power (\$339 million as at October 31, 2019).

(3) As at October 31, 2020, deposits consisted of: (i) \$210 million in deposits from the Bank's associates (\$395 million as at October 31, 2019) and (ii) \$307 million in deposits from entities over which the Bank's key officers, directors or their immediate family members exercise control or significant influence through significant voting power (\$237 million as at October 31, 2019).

The contractual agreements and other transactions with related entities as well as with directors and key officers are entered into under conditions similar to those offered to non-related third parties. These agreements did not have a significant impact on the Bank's results. The Bank also offers a deferred stock unit plan to directors who are not Bank employees. For additional information, see Notes 9, 22 and 27 to these consolidated financial statements.

Compensation of Key Officers and Directors

Year ended October 31	2020	2019
Compensation and other short-term and long-term benefits	21	23
Share-based payments	21	25

Principal Subsidiaries of the Bank⁽¹⁾

As at October 31, 2020				
Name	Business activity	Principal office address	Voting shares ⁽²⁾	Investment at cost
Canada and United States				
National Bank Acquisition Holding Inc.	Holding company	Montreal, Canada	100%	1,785
National Bank Financial Inc.	Investment dealer	Montreal, Canada	100%	
NBF International Holdings Inc.	Holding company	Montreal, Canada	100%	
National Bank of Canada Financial Group Inc.	Holding company	New York, NY, United States	100%	
Credigy Ltd.	Holding company	Atlanta, GA, United States	80%	
National Bank of Canada Financial Inc.	Investment dealer	New York, NY, United States	100%	
National Bank Investments Inc.	Mutual funds dealer	Montreal, Canada	100%	441
National Bank Life Insurance Company	Insurance	Montreal, Canada	100%	
Natcan Trust Company	Trustee	Montreal, Canada	100%	238
National Bank Trust Inc.	Trustee	Montreal, Canada	100%	195
National Bank Realty Inc.	Real estate	Montreal, Canada	100%	80
NatBC Holding Corporation	Holding company	Hollywood, FL, United States	100%	31
Natbank, National Association	Commercial bank	Hollywood, FL, United States	100%	
Other countries				
Natcan Global Holdings Ltd.	Holding company	Sliema, Malta	100%	22
NBC Global Finance Limited	Investment services	Dublin, Ireland	100%	
NBC Financial Markets Asia Limited	Investment dealer	Hong Kong, China	100%	5
Advanced Bank of Asia Limited	Commercial bank	Phnom Penh, Cambodia	100%	532
ATA IT Ltd.	Information technology	Bangkok, Thailand	100%	3

(1) Excluding consolidated structured entities. For additional information, see Note 27 to these consolidated financial statements.

(2) The Bank's percentage of voting rights in these subsidiaries.

Note 29 – Management of the Risks Associated With Financial Instruments

The Bank is exposed to credit risk, market risk, liquidity risk and financing risk. The Bank's objectives, policies and procedures for managing risk and the risk measurement methods are presented in the Risk Management section of the MD&A for the year ended October 31, 2020. Text in grey shading and tables identified with an asterisk (*) in the Risk Management section of the MD&A for the year ended October 31, 2020 are an integral part of these consolidated financial statements.

Residual Contractual Maturities of Balance Sheet Items and Off-Balance-Sheet Commitments

The following tables present balance sheet items and off-balance-sheet commitments by residual contractual maturity as at October 31, 2020 and 2019. The information gathered from this maturity analysis is a component of liquidity and funding management. However, this maturity profile does not represent how the Bank manages its interest rate risk nor its liquidity risk and funding needs. The Bank considers factors other than contractual maturity in the assessment of liquid assets or in determining expected future cash flows.

In the normal course of business, the Bank enters into various off-balance-sheet commitments. The credit instruments used to meet the funding needs of its clients represent the maximum amount of additional credit the Bank could be obligated to extend if the commitments were fully drawn.

The Bank also has future minimum commitments under leases for premises as well for other contracts, mainly commitments to purchase loans and contracts for outsourced information technology services. Most of the lease commitments are related to operating leases.

Note 29 – Management of the Risks Associated With Financial Instruments (cont.)

	As at October 31, 2020									
	1 month or less	Over 1 month to 3 months	Over 3 months to 6 months	Over 6 months to 9 months	Over 9 months to 12 months	Over 1 year to 2 years	Over 2 years to 5 years	Over 5 years	No specified maturity	Total
Assets										
Cash and deposits with financial institutions	6,126	345	372	264	488	–	–	–	21,547	29,142
Securities										
At fair value through profit or loss	4,084	2,352	2,778	603	1,832	2,383	6,080	9,413	48,801	78,326
At fair value through other comprehensive income	1	–	858	1,060	400	984	5,322	3,482	619	12,726
At amortized cost	20	256	306	367	1,678	2,218	5,450	784	–	11,079
	4,105	2,608	3,942	2,030	3,910	5,585	16,852	13,679	49,420	102,131
Securities purchased under reverse repurchase agreements and securities borrowed	7,984	1,658	133	–	–	666	–	–	4,071	14,512
Loans⁽¹⁾										
Residential mortgage	1,352	1,230	2,043	3,170	3,152	9,320	38,719	4,690	1,283	64,959
Personal	278	447	660	796	890	3,221	13,435	3,475	14,411	37,613
Credit card									2,038	2,038
Business and government	8,815	2,548	3,608	3,971	4,208	5,679	13,563	3,622	8,408	54,422
Customers' liability under acceptances	6,049	765	52	–	–	–	–	–	–	6,866
Allowances for credit losses									(1,158)	(1,158)
	16,494	4,990	6,363	7,937	8,250	18,220	65,717	11,787	24,982	164,740
Other										
Derivative financial instruments	1,816	2,586	1,139	706	318	968	2,298	3,591	–	13,422
Investments in associates and joint ventures									409	409
Premises and equipment									1,155	1,155
Goodwill									1,414	1,414
Intangible assets									1,434	1,434
Other assets ⁽¹⁾	1,193	351	147	149	134	344	64	12	872	3,266
	3,009	2,937	1,286	855	452	1,312	2,362	3,603	5,284	21,100
	37,718	12,538	12,096	11,086	13,100	25,783	84,931	29,069	105,304	331,625

(1) Amounts collectible on demand are considered to have no specified maturity.

	As at October 31, 2020									
	1 month or less	Over 1 month to 3 months	Over 3 months to 6 months	Over 6 months to 9 months	Over 9 months to 12 months	Over 1 year to 2 years	Over 2 years to 5 years	Over 5 years	No specified maturity	Total
Liabilities and equity										
Deposits⁽¹⁾⁽²⁾										
Personal	1,845	2,728	3,462	1,647	2,084	6,909	6,958	2,962	38,904	67,499
Business and government	21,801	7,168	9,916	2,185	2,462	6,860	10,341	3,602	79,452	143,787
Deposit-taking institutions	1,435	111	14	80	17	5	1	42	2,887	4,592
	25,081	10,007	13,392	3,912	4,563	13,774	17,300	6,606	121,243	215,878
Other										
Acceptances	6,049	765	52	–	–	–	–	–	–	6,866
Obligations related to securities sold short ⁽³⁾	618	620	952	69	92	1,516	2,361	4,321	5,819	16,368
Obligations related to securities sold under repurchase agreements and securities loaned	14,084	3,335	8,803	136	–	1,487	–	–	6,014	33,859
Derivative financial instruments	1,738	2,070	877	603	266	875	3,116	3,378	–	12,923
Liabilities related to transferred receivables ⁽⁴⁾	–	2,138	311	1,850	397	3,430	11,059	3,670	–	22,855
Securitization – Credit card ⁽⁵⁾	–	–	–	–	–	36	28	–	–	64
Lease liabilities ⁽⁵⁾	8	14	21	22	21	85	224	233	–	628
Other liabilities – Other items ⁽¹⁾⁽⁵⁾	1,087	192	200	87	76	85	37	281	2,981	5,026
	23,584	9,134	11,216	2,767	852	7,514	16,825	11,883	14,814	98,589
Subordinated debt	–	–	–	–	–	–	–	775	–	775
Equity									16,383	16,383
	48,665	19,141	24,608	6,679	5,415	21,288	34,125	19,264	152,440	331,625
Off-balance-sheet commitments										
Letters of guarantee and documentary letters of credit	200	1,579	603	948	1,187	1,322	134	–	–	5,973
Credit card receivables ⁽⁶⁾	–	–	–	–	–	–	–	–	7,999	7,999
Backstop liquidity and credit enhancement facilities ⁽⁷⁾	–	15	4,502	15	–	–	–	–	3,126	7,658
Commitments to extend credit ⁽⁸⁾	2,846	4,143	4,504	6,429	5,688	5,651	10,690	1,165	29,213	70,329
Obligations related to:										
Lease commitments ⁽⁹⁾	1	1	2	2	1	4	2	1	–	14
Other contracts ⁽¹⁰⁾	15	28	41	41	39	145	114	–	278	701

- (1) Amounts payable upon demand or notice are considered to have no specified maturity.
- (2) The *Deposits* item is presented in greater detail than it is on the Consolidated Balance Sheet.
- (3) Amounts are disclosed according to the remaining contractual maturity of the underlying security.
- (4) These amounts mainly include liabilities related to the securitization of mortgage loans.
- (5) The *Other liabilities* item is presented in greater detail than it is on the Consolidated Balance Sheet.
- (6) These amounts are unconditionally revocable at the Bank's discretion at any time.
- (7) In the event of payment on one of the backstop liquidity facilities, the Bank will receive as collateral government bonds in an amount up to \$4.5 billion.
- (8) These amounts include \$39.4 billion that is unconditionally revocable at the Bank's discretion at any time.
- (9) These amounts include leases for which the underlying asset is of low value and leases other than for real estate of less than one year.
- (10) These amounts include \$0.3 billion in contractual commitments related to the head office building under construction.

Note 29 – Management of the Risks Associated With Financial Instruments (cont.)

As at October 31, 2019										
	1 month or less	Over 1 month to 3 months	Over 3 months to 6 months	Over 6 months to 9 months	Over 9 months to 12 months	Over 1 year to 2 years	Over 2 years to 5 years	Over 5 years	No specified maturity	Total
Assets										
Cash and deposits with financial institutions	7,301	1,638	121	111	33	–	–	–	4,494	13,698
Securities										
At fair value through profit or loss	1,228	647	658	256	411	4,215	7,451	6,872	40,085	61,823
At fair value through other comprehensive income	36	14	26	5	1	3,213	4,749	1,982	622	10,648
At amortized cost	33	84	262	331	105	1,704	5,853	1,383	–	9,755
	1,297	745	946	592	517	9,132	18,053	10,237	40,707	82,226
Securities purchased under reverse repurchase agreements and securities borrowed	7,247	1,365	922	495	–	1,317	–	–	6,377	17,723
Loans⁽¹⁾										
Residential mortgage	734	1,161	1,959	3,093	2,893	10,674	32,601	3,375	681	57,171
Personal	253	430	803	972	843	3,367	11,576	3,407	15,293	36,944
Credit card									2,322	2,322
Business and government Customers' liability under acceptances	8,469	2,771	2,995	3,203	2,222	6,016	13,445	2,771	8,707	50,599
Allowances for credit losses	6,138	710	45	–	–	–	–	–	–	6,893
									(678)	(678)
	15,594	5,072	5,802	7,268	5,958	20,057	57,622	9,553	26,325	153,251
Other										
Derivative financial instruments	564	614	483	262	194	847	2,039	3,126	–	8,129
Investments in associates and joint ventures									385	385
Premises and equipment									490	490
Goodwill									1,412	1,412
Intangible assets									1,406	1,406
Other assets ⁽¹⁾	1,425	142	87	88	88	266	107	38	497	2,738
	1,989	756	570	350	282	1,113	2,146	3,164	4,190	14,560
	33,428	9,576	8,361	8,816	6,790	31,619	77,821	22,954	82,093	281,458

(1) Amounts collectible on demand are considered to have no specified maturity.

As at October 31, 2019

	1 month or less	Over 1 month to 3 months	Over 3 months to 6 months	Over 6 months to 9 months	Over 9 months to 12 months	Over 1 year to 2 years	Over 2 years to 5 years	Over 5 years	No specified maturity	Total
Liabilities and equity										
Deposits⁽¹⁾⁽²⁾										
Personal	1,716	1,983	3,045	2,696	3,042	6,105	7,276	2,606	31,596	60,065
Business and government	20,252	6,050	6,630	4,778	2,723	6,411	11,706	6,213	60,503	125,266
Deposit-taking institutions	711	69	79	29	275	–	5	46	3,021	4,235
	22,679	8,102	9,754	7,503	6,040	12,516	18,987	8,865	95,120	189,566
Other										
Acceptances	6,138	710	45	–	–	–	–	–	–	6,893
Obligations related to securities sold short ⁽³⁾	504	176	195	34	495	315	2,738	5,147	3,245	12,849
Obligations related to securities sold under repurchase agreements and securities loaned	7,493	1,281	2,881	2,743	–	–	–	–	7,502	21,900
Derivative financial instruments	793	763	556	292	214	712	1,959	1,563	–	6,852
Liabilities related to transferred receivables ⁽⁴⁾	–	1,491	995	881	375	3,640	10,623	3,307	–	21,312
Securitization – Credit card ⁽⁵⁾	–	–	874	–	–	–	37	–	–	911
Other liabilities – Other items ⁽⁴⁾⁽⁵⁾	1,298	330	141	63	36	58	84	292	2,964	5,266
	16,226	4,751	5,687	4,013	1,120	4,725	15,441	10,309	13,711	75,983
Subordinated debt	–	–	–	–	–	–	–	773	–	773
Equity	38,905	12,853	15,441	11,516	7,160	17,241	34,428	19,947	15,136	15,136
									123,967	281,458
Off-balance-sheet commitments										
Letters of guarantee and documentary letters of credit	335	1,430	411	1,019	888	1,258	53	–	–	5,394
Credit card receivables ⁽⁶⁾	–	–	–	–	–	–	–	–	7,630	7,630
Backstop liquidity and credit enhancement facilities ⁽⁷⁾	–	15	3,017	15	–	–	–	–	2,608	5,655
Commitments to extend credit ⁽⁸⁾	1,916	4,552	4,103	5,064	4,019	4,258	10,326	784	27,102	62,124
Obligations related to:										
Lease commitments	8	17	26	27	26	99	249	239	–	691
Other contracts ⁽⁹⁾	158	289	523	423	380	198	257	–	–	2,228

(1) Amounts payable upon demand or notice are considered to have no specified maturity.

(2) The *Deposits* item is presented in greater detail than it is on the Consolidated Balance Sheet.

(3) Amounts have been disclosed according to the remaining contractual maturity of the underlying security.

(4) These amounts mainly include liabilities related to the securitization of mortgage loans.

(5) The *Other liabilities* item is presented in greater detail than it is on the Consolidated Balance Sheet.

(6) These amounts are unconditionally revocable at the Bank's discretion at any time.

(7) In the event of payment on one of the backstop liquidity facilities, the Bank will receive as collateral government bonds in an amount up to \$3.0 billion.

(8) These amounts include \$35.7 billion that is unconditionally revocable at the Bank's discretion at any time.

(9) These amounts include \$0.3 billion in contractual commitments related to the head office building under construction.

Note 30 – Segment Disclosures

The Bank carries out its activities in four business segments, which are defined below. For presentation purposes, other activities are grouped in the *Other* heading. Each reportable segment is distinguished by services offered, type of clientele and marketing strategy.

Personal and Commercial

The Personal and Commercial segment encompasses the banking, financing, and investing services offered to individuals, advisors and businesses as well as insurance operations.

Wealth Management

The Wealth Management segment comprises investment solutions, trust services, banking services, lending services and other wealth management solutions offered through internal and third-party distribution networks.

Financial Markets

The Financial Markets segment encompasses corporate banking and investment banking and financial solutions for large and mid-size corporations, public sector organizations, and institutional investors.

U.S. Specialty Finance and International (USSF&I)

The USSF&I segment encompasses the specialty finance expertise provided by subsidiary Credigy; the activities of subsidiary ABA Bank, which offers financial products and services to individuals and businesses in Cambodia; and the activities of targeted investments in certain emerging markets.

Other

This heading encompasses treasury activities, liquidity management, Bank funding, asset/liability management activities, certain specified items and the unallocated portion of corporate units.

The segment disclosures have been prepared in accordance with the accounting policies described in Note 1 to these consolidated financial statements, except for the net interest income, non-interest income and income taxes (recovery) of the operating segments, which are presented on a taxable equivalent basis. Taxable equivalent basis is a calculation method that consists in grossing up certain tax-exempt income by the amount of income tax that would have otherwise been payable. The effect of these adjustments is reversed under the *Other* heading. Operations support charges are allocated to each operating segment presented in the business segment results. The Bank assesses performance based on the net income attributable to the Bank's shareholders and holders of other equity instruments. Intersegment revenues are recognized at the exchange amount. Segment assets correspond to average assets used in segment operations.

Results by Business Segment

Year ended October 31⁽¹⁾

	Personal and Commercial		Wealth Management		Financial Markets		USSF&I		Other		Total	
	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019
Net interest income ⁽²⁾	2,445	2,384	442	455	946	474	807	656	(385)	(373)	4,255	3,596
Non-interest income ⁽²⁾⁽³⁾	1,018	1,067	1,413	1,288	1,108	1,277	13	59	120	145	3,672	3,836
Total revenues	3,463	3,451	1,855	1,743	2,054	1,751	820	715	(265)	(228)	7,927	7,432
Non-interest expenses ⁽⁴⁾	1,849	1,837	1,115	1,073	809	756	319	285	453	350	4,545	4,301
Income before provisions for credit losses and income taxes	1,614	1,614	740	670	1,245	995	501	430	(718)	(578)	3,382	3,131
Provisions for credit losses	517	237	7	–	239	30	80	80	3	–	846	347
Income before income taxes (recovery)	1,097	1,377	733	670	1,006	965	421	350	(721)	(578)	2,536	2,784
Income taxes (recovery) ⁽²⁾	290	366	194	176	266	257	69	71	(366)	(408)	453	462
Net income	807	1,011	539	494	740	708	352	279	(355)	(170)	2,083	2,322
Non-controlling interests	–	–	–	–	–	–	34	40	8	26	42	66
Net income attributable to the Bank's shareholders and holders of other equity instruments	807	1,011	539	494	740	708	318	239	(363)	(196)	2,041	2,256
Average assets	117,338	112,798	5,917	6,219	123,943	112,493	14,336	10,985	56,665	43,667	318,199	286,162

(1) For the year ended October 31, 2019, certain amounts have been reclassified.

(2) For the year ended October 31, 2020, *Net interest income* was grossed up by \$208 million (\$195 million in 2019), *Non-interest income* was grossed up by \$57 million (\$135 million in 2019), and an equivalent amount was recognized in *Income taxes (recovery)*. The effect of these adjustments is reversed under the *Other* heading.

(3) For the *Other* heading of segment results, for the year ended October 31, 2020, the *Non-interest income* item includes a foreign currency translation loss of \$24 million following the sale, through its subsidiary Credigy Ltd., of two subsidiaries in Brazil. For the *Other* heading of segment results, for the year ended October 31, 2019, the *Non-interest income* item had included a \$79 million gain on disposal of Fiera Capital Corporation shares, a \$50 million gain on disposal of premises and equipment, and a \$33 million loss resulting from the fair value measurement of an investment.

(4) For the year ended October 31, 2020, for the *Other* heading of segment results, the *Non-interest expenses* item includes \$71 million in impairment losses on premises and equipment and on intangible assets related to computer equipment and technology developments, a \$13 million charge related to Maple, and \$48 million in severance pay. For the *Other* heading of segment results, for the year ended October 31, 2019, the *Non-interest expenses* item had included \$57 million in impairment losses on premises and equipment and on intangible assets, \$45 million in provisions for onerous contracts, an \$11 million charge related to Maple, and \$10 million in severance pay.

Results by Geographic Segment

Year ended October 31⁽¹⁾

	Canada		United States		Other		Total	
	2020	2019	2020	2019	2020	2019	2020	2019
Net interest income	3,239	2,930	642	550	374	116	4,255	3,596
Non-interest income ⁽²⁾	3,574	3,645	5	85	93	106	3,672	3,836
Total revenues	6,813	6,575	647	635	467	222	7,927	7,432
Non-interest expenses ⁽³⁾	4,124	3,931	209	210	212	160	4,545	4,301
Income before provisions for credit losses and income taxes	2,689	2,644	438	425	255	62	3,382	3,131
Provisions for credit losses	766	267	59	68	21	12	846	347
Income before income taxes	1,923	2,377	379	357	234	50	2,536	2,784
Income taxes	343	394	68	59	42	9	453	462
Net income	1,580	1,983	311	298	192	41	2,083	2,322
Non-controlling interests	18	36	24	30	–	–	42	66
Net income attributable to the Bank's shareholders and holders of other equity instruments	1,562	1,947	287	268	192	41	2,041	2,256
Average assets	258,594	231,667	22,654	20,411	36,951	34,084	318,199	286,162

(1) For the year ended October 31, 2019, certain amounts have been reclassified.

(2) For the United States results, for the year ended October 31, 2020, the *Non-interest income* item includes a foreign currency translation loss of \$24 million following the sale, through its subsidiary Credigy Ltd., of two subsidiaries in Brazil. For Canada results, for the year ended October 31, 2019, the *Non-interest income* item had included a \$79 million gain on disposal of Fiera Capital Corporation shares, a \$50 million gain on disposal of premises and equipment, and a \$33 million loss resulting from the fair value measurement of an investment.

(3) For the year ended October 31, 2020, for Canada results, the *Non-interest expenses* item includes \$71 million in impairment losses on premises and equipment and on intangible assets related to computer equipment and technology developments, a \$13 million charge related to Maple, and \$48 million in severance pay. For the *Other* heading of segment results, for the year ended October 31, 2019, the *Non-interest expenses* item had included \$57 million in impairment losses on premises and equipment and on intangible assets, \$45 million in provisions for onerous contracts, an \$11 million charge related to Maple, and \$10 million in severance pay.

Note 31 – Event After the Consolidated Balance Sheet Date

Acquisition

In the first quarter of fiscal 2021, the Bank will acquire the remaining non-controlling interest in the Credigy Ltd. subsidiary following the decision of the non-controlling shareholders to exercise their put options for an amount of approximately US\$235 million according to an agreement reached in 2013. Subsequent to this transaction, Credigy Ltd. will become a wholly-owned subsidiary of the Bank.

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Statistical Review

As at October 31⁽¹⁾

(millions of Canadian dollars)	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Consolidated Balance Sheet data										
Cash and deposits with financial institutions	29,142	13,698	12,756	8,802	8,183	7,567	8,086	3,596	3,249	2,851
Securities	102,131	82,226	69,783	65,343	64,541	56,040	52,953	53,744	54,898	56,592
Securities purchased under reverse repurchase agreements and securities borrowed	14,512	17,723	18,159	20,789	13,948	17,702	24,525	21,449	15,529	12,507
Loans	164,740	153,251	146,082	136,457	128,036	116,676	106,959	97,338	90,922	80,758
Other assets	21,100	14,560	15,691	14,436	17,498	18,105	12,906	12,092	13,305	14,146
Total assets	331,625	281,458	262,471	245,827	232,206	216,090	205,429	188,219	177,903	166,854
Deposits	215,878	189,566	170,830	156,671	142,066	130,458	119,883	102,111	93,474	85,787
Other liabilities	98,589	75,983	76,539	75,589	77,026	72,755	73,163	74,729	73,948	71,791
Subordinated debt	775	773	747	9	1,012	1,522	1,881	2,426	2,470	2,000
Share capital and other equity instruments										
Preferred and other equity instruments	2,950	2,450	2,450	2,050	1,650	1,023	1,223	677	762	762
Common	3,057	2,949	2,822	2,768	2,645	2,614	2,293	2,160	2,054	1,970
Contributed surplus	47	51	57	58	73	67	52	58	58	46
Retained earnings	10,444	9,312	8,472	7,706	6,706	6,705	5,850	5,055	4,091	3,366
Accumulated other comprehensive income	(118)	16	175	168	218	145	289	214	255	337
Non-controlling interests	3	358	379	808	810	801	795	789	791	795
Total liabilities and equity	331,625	281,458	262,471	245,827	232,206	216,090	205,429	188,219	177,903	166,854
Average assets	318,199	286,162	265,940	248,351	235,913	222,929	206,680	193,509	181,344	165,942
Net impaired loans ⁽²⁾⁽³⁾ under IFRS 9	465	450	404							
Net impaired loans ⁽³⁾ under IAS 39				206	281	254	248	183	179	175
Consolidated Statement of Income data										
Net interest income	4,255	3,596	3,382	3,436	3,205	2,929	2,761	2,478	2,365	2,318
Non-interest income	3,672	3,836	3,784	3,173	2,635	2,817	2,703	2,673	2,936	2,336
Total revenues	7,927	7,432	7,166	6,609	5,840	5,746	5,464	5,151	5,301	4,654
Non-interest expenses	4,545	4,301	4,063	3,857	3,875	3,665	3,423	3,206	3,207	2,952
Income before provisions for credit losses and income taxes	3,382	3,131	3,103	2,752	1,965	2,081	2,041	1,945	2,094	1,702
Provisions for credit losses	846	347	327	244	484	228	208	181	180	184
Income taxes	453	462	544	484	225	234	295	252	317	264
Net income	2,083	2,322	2,232	2,024	1,256	1,619	1,538	1,512	1,597	1,254
Non-controlling interests	42	66	87	84	75	70	69	63	61	60
Net income attributable to the Bank's shareholders and holders of other equity instruments	2,041	2,256	2,145	1,940	1,181	1,549	1,469	1,449	1,536	1,194

(1) Certain amounts from fiscal years 2013, 2012 and 2011 have been adjusted to reflect changes to the accounting standards in 2014.

(2) Given the adoption of IFRS 9, all loans classified in Stage 3 of the expected credit loss model are impaired loans. Under IAS 39, loans were considered impaired according to different criteria. Net impaired loans are presented net of allowances for credit losses on Stage 3 loan amounts drawn and, in this table, the net impaired loans presented exclude POCI loans.

(3) Includes customers' liability under acceptances.

As at October 31 ⁽¹⁾	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Number of common shares ⁽²⁾ (thousands)	335,998	334,172	335,071	339,592	338,053	337,236	329,297	325,983	322,617	320,948
Number of common shareholders on record	20,674	20,894	21,325	21,542	21,966	22,152	22,394	22,737	23,180	23,588
Basic earnings per share ⁽²⁾	\$ 5.73	\$ 6.39	\$ 6.01	\$ 5.44	\$ 3.31	\$ 4.56	\$ 4.36	\$ 4.34	\$ 4.63	\$ 3.41
Diluted earnings per share ⁽²⁾	\$ 5.70	\$ 6.34	\$ 5.94	\$ 5.38	\$ 3.29	\$ 4.51	\$ 4.32	\$ 4.31	\$ 4.58	\$ 3.37
Dividend per share ⁽²⁾	\$ 2.84	\$ 2.66	\$ 2.44	\$ 2.28	\$ 2.18	\$ 2.04	\$ 1.88	\$ 1.70	\$ 1.54	\$ 1.37
Share price ⁽²⁾										
High	\$ 74.79	\$ 68.02	\$ 65.63	\$ 62.74	\$ 47.88	\$ 55.06	\$ 53.88	\$ 45.24	\$ 40.64	\$ 40.72
Low	\$ 38.73	\$ 54.97	\$ 58.69	\$ 46.83	\$ 35.83	\$ 40.75	\$ 41.60	\$ 36.18	\$ 31.64	\$ 32.43
Close	\$ 63.94	\$ 68.02	\$ 59.76	\$ 62.61	\$ 47.88	\$ 43.31	\$ 52.68	\$ 45.24	\$ 38.59	\$ 35.57
Book value ⁽²⁾	\$ 39.97	\$ 36.89	\$ 34.40	\$ 31.51	\$ 28.52	\$ 28.26	\$ 25.76	\$ 22.97	\$ 20.02	\$ 17.82
Dividends on preferred shares										
Series 15	–	–	–	–	–	–	–	\$ 0.2444	\$ 1.4625	\$ 1.4625
Series 16	–	–	–	–	–	–	\$ 1.2125	\$ 1.2125	\$ 1.2125	\$ 1.2125
Series 20	–	–	–	–	–	\$ 1.5000	\$ 1.5000	\$ 1.5000	\$ 1.5000	\$ 1.5000
Series 21	–	–	–	–	–	–	–	\$ 1.0078	\$ 1.3438	\$ 1.3438
Series 24	–	–	–	–	–	–	\$ 0.4125	\$ 1.6500	\$ 1.6500	\$ 1.6500
Series 26	–	–	–	–	–	–	\$ 0.4125	\$ 1.6500	\$ 1.6500	\$ 1.6500
Series 28	–	–	–	\$ 0.9500	\$ 0.9500	\$ 0.9500	\$ 0.9500	\$ 0.9728	–	–
Series 30	\$ 1.0063	\$ 1.0156	\$ 1.0250	\$ 1.0250	\$ 1.0250	\$ 1.0250	\$ 0.7849	–	–	–
Series 32	\$ 0.9636	\$ 0.9750	\$ 0.9750	\$ 0.9750	\$ 0.9750	\$ 1.0760	–	–	–	–
Series 34	\$ 1.4000	\$ 1.4000	\$ 1.4000	\$ 1.4000	\$ 1.1373	–	–	–	–	–
Series 36	\$ 1.3500	\$ 1.3500	\$ 1.3500	\$ 1.3500	\$ 0.5733	–	–	–	–	–
Series 38	\$ 1.1125	\$ 1.1125	\$ 1.1125	\$ 0.4724	–	–	–	–	–	–
Series 40	\$ 1.1500	\$ 1.1500	\$ 0.9310	–	–	–	–	–	–	–
Series 42	\$ 1.2375	\$ 1.2375	\$ 0.5323	–	–	–	–	–	–	–
Financial ratios										
Return on common shareholders' equity	14.9 %	18.0 %	18.4 %	18.1 %	11.7 %	16.9 %	17.9 %	20.1 %	24.1 %	19.8 %
Return on average assets	0.65 %	0.81 %	0.84 %	0.81 %	0.53 %	0.73 %	0.74 %	0.78 %	0.88 %	0.76 %
Regulatory ratios under Basel III⁽³⁾										
Capital ratios⁽⁴⁾										
CET1 ⁽⁵⁾	11.8 %	11.7 %	11.7 %	11.2 %	10.1 %	9.9 %	9.2 %	8.7 %	7.3 %	7.6 %
Tier 1 ⁽⁵⁾	14.9 %	15.0 %	15.5 %	14.9 % ⁽⁶⁾	13.5 %	12.5 % ⁽⁷⁾	12.3 % ⁽⁸⁾	11.4 %	10.1 %	10.8 %
Total ⁽⁵⁾	16.0 %	16.1 %	16.8 %	15.1 % ⁽⁶⁾	15.3 %	14.0 % ⁽⁹⁾	15.1 % ⁽⁸⁾	15.0 %	14.1 %	14.3 %
Leverage ratio ⁽⁵⁾	4.4 %	4.0 %	4.0 %	4.0 %	3.7 %	4.0 %				
Other information										
Number of employees ⁽¹⁰⁾⁽¹¹⁾	25,604	24,557	22,426	20,584	20,600	19,026	18,725	16,675	16,636	16,217
Branches in Canada	403	422	428	429	450	452	452	453	451	448
Banking machines in Canada	940	939	937	931	938	930	935	937	923	893

(1) Certain amounts from fiscal years 2013, 2012 and 2011 have been adjusted to reflect changes to the accounting standards in 2014.

(2) The figures for 2014 and prior years have been adjusted to reflect the stock dividend paid in 2014.

(3) The ratios as at October 31, 2020 include the transitional measures granted by OSFI. For additional information, see the COVID-19 Pandemic – Key Measures introduced by the Regulatory Authorities on pages 20 and 21 of this MD&A.

(4) The October 31, 2013, 2012 and 2011 ratios have not been adjusted to reflect changes in accounting standards.

(5) Since October 31, 2013, the capital ratios were calculated using the “all-in” methodology and the October 31, 2012 and 2011 ratios are presented on a pro forma basis.

(6) Taking into account the redemption of the Series 28 preferred shares on November 15, 2017.

(7) Taking into account the redemption of the Series 20 preferred shares on November 15, 2015.

(8) Taking into account the redemption of the Series 16 preferred shares on November 15, 2014.

(9) Taking into account the redemption of the Series 20 preferred shares on November 15, 2015 and the \$500 million redemption of notes on November 2, 2015.

(10) Full-time equivalent.

(11) Includes employees from Credigy Ltd. and Advanced Bank of Asia Limited for fiscal years 2014 to 2020.

Glossary of Financial Terms

Acceptances

Acceptances constitute a guarantee of payment by a bank and can be traded in the money market. The Bank earns a “stamping fee” for providing this guarantee.

Allowances for credit losses

Allowances for credit losses represent management’s unbiased estimate of expected credit losses as at the balance sheet date. These allowances are primarily related to loans and off-balance-sheet items such as loan commitments and financial guarantees.

Assets under administration

Assets in respect of which a financial institution provides administrative services such as custodial services, collection of investment income, settlement of purchase and sale transactions and record-keeping. Assets under administration, which are beneficially owned by clients, are not reported on the balance sheet of the institution offering such services.

Assets under management

Assets managed by a financial institution that are beneficially owned by clients. Management services are more comprehensive than administrative services, and include selecting investments or offering investment advice. Assets under management, which may also be administered by the financial institution, are not reported on the financial institution’s balance sheet.

Average interest-bearing assets

Average interest-bearing assets include deposits with financial institutions, certain interest-bearing cash items, securities, securities purchased under reverse repurchase agreements and securities borrowed, and loans but excludes other assets. The average is calculated based on the daily averages for the year.

Basis point

Unit of measure equal to one one-hundredth of a percentage point (0.01%).

Common Equity Tier 1 (CET1) capital ratio

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 the corresponding risk-weighted assets.

Derivative financial instruments

Derivative financial instruments are financial contracts whose value is derived from an underlying interest rate, exchange rate or equity, commodity or credit instrument or index. Examples of derivatives include swaps, options, forward rate agreements and futures. The notional amount of the derivative is the contract amount used as a reference point to calculate the payments to be exchanged between the two parties, and the notional amount itself is generally not exchanged by the parties.

Dividend payout ratio

Common dividends as a percentage of net income after preferred share dividends.

Economic capital

Economic capital is the internal measure used by the Bank to determine the capital required for its solvency and to pursue its business operations. Economic capital takes into consideration the credit, market, operational, business and other risks to which the Bank is exposed, as well as the risk diversification effect among them and among the business segments. Economic capital thus helps the Bank to determine the capital required to protect itself against such risks and ensure its long-term viability.

Efficiency ratio

Non-interest expenses as a percentage of total revenue, the efficiency ratio measures the efficiency of the Bank’s operations.

Fair value

The fair value of a financial instrument is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction in the principal market at the measurement date under current market conditions (i.e., an exit price).

Hedging

The purpose of a hedging transaction is to modify the Bank’s exposure to one or more risks by creating an offset between changes in the fair value of, or the cash flows attributable to, the hedged item and the hedging instrument.

Impaired loans

The Bank considers a financial asset, other than a credit card receivable, to be credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred or when contractual payments are 90 days past due. Credit card receivables are considered credit-impaired and are fully written off at the earlier of the following: when a notice of bankruptcy is received, a settlement proposal is made, or contractual payments are 180 days past due.

Leverage ratio

The leverage ratio is calculated by dividing Tier 1 capital by 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.

Liquidity coverage ratio

The liquidity coverage ratio is a measure designed to ensure that the Bank has sufficient high-quality liquid assets to cover net cash outflows given a severe, 30-day liquidity crisis.

Master netting agreement

Legal agreement between two parties that have multiple derivative contracts with each other that provides for the net settlement of all contracts through a single payment, in the event of default, insolvency or bankruptcy.

Net interest margin

Net interest income as a percentage of average interest-bearing assets.

Office of the Superintendent of Financial Institutions (Canada) (OSFI)

The mandate of the Office of the Superintendent of Financial Institutions (OSFI) is to regulate and supervise financial institutions and private pension plans subject to federal oversight, to help minimize undue losses to depositors and policyholders and, thereby, to contribute to public confidence in the Canadian financial system.

Operating leverage

Operating leverage is the difference between the growth rate for total revenues and the growth rate for non-interest expenses.

Provisions for credit losses

The amount charged to income necessary to bring the allowances for credit losses to a level determined appropriate by management.

Return on common shareholders' equity (ROE)

Net income, less dividends on preferred shares, expressed as a percentage of the average value of common shareholders' equity.

Risk-weighted assets

Assets are risk weighted according to the guidelines established by OSFI. 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 Internal Rating-Based (AIRB) approach, risk-weighted assets are derived from the Bank's internal models, which represent 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.

Securities purchased under reverse repurchase agreements

Securities purchased by the Bank from a client pursuant to an agreement under which the securities will be resold to the same client on a specified date and at a specified price. Such an agreement is a form of short-term collateralized lending.

Securities sold under repurchase agreements

Financial obligations related to securities sold pursuant to an agreement under which the securities will be repurchased on a specified date and at a specified price. Such an agreement is a form of short-term funding.

Structured entity

A structured entity is an entity created to accomplish a narrow and well-defined objective and is designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, such as when voting rights relate solely to administrative tasks and the relevant activities are directed by means of contractual arrangements.

Taxable equivalent basis

Taxable equivalent basis is a calculation method that consists in grossing up certain tax-exempt income by the amount of income tax that would have otherwise been payable.

Tier 1 capital ratio

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, less regulatory adjustments, by the corresponding risk-weighted assets.

Total capital ratio

Total capital is the sum of Tier 1 and Tier 2 capital. Tier 2 capital consists of the eligible portion of subordinated debt and certain credit loss allowances. Total capital ratio is calculated by dividing total capital, less regulatory adjustments, by the corresponding risk-weighted assets.

Total shareholder return

The total shareholder return (TSR) represents the average total return on an investment in the Bank's common shares. The return includes changes in share price and assumes that the dividends received were reinvested in additional common shares of the Bank.

Value-at-Risk (VaR)

VaR is a statistical measure of risk that is used to quantify market risks across products, per types of risks and aggregate risk on a portfolio basis. VaR is defined as the maximum loss at a specific confidence level over a certain horizon under normal market conditions. The VaR method has the advantage of providing a uniform measurement of financial instrument-related market risks based on a single statistical confidence level and time horizon.

Information for Shareholders

Description of Share Capital

The authorized share capital of the Bank consists of an unlimited number of common shares, without par value, an unlimited number of first preferred shares, without par value, issuable for a maximum aggregate consideration of \$5 billion, and 15 million second preferred shares, without par value, issuable for a maximum aggregate consideration of \$300 million. As at October 31, 2020, the Bank had a total of 335,997,660 common shares and 98,000,000 first preferred shares issued and outstanding.

Stock Exchange Listings

The Bank's common shares and Series 30, 32, 34, 36, 38, 40 and 42 First Preferred Shares are listed on the Toronto Stock Exchange in Canada.

Issue or class	Ticker symbol
Common shares	NA
First Preferred Shares	
Series 30	NA.PR.S
Series 32	NA.PR.W
Series 34	NA.PR.X
Series 36	NA.PR.A
Series 38	NA.PR.C
Series 40	NA.PR.E
Series 42	NA.PR.G

Number of Registered Shareholders

As at October 31, 2020, there were 20,674 common shareholders recorded in the Bank's common share register.

Dividends

Dividend Dates in Fiscal 2021

(subject to approval by the Board of Directors of the Bank)

Record date	Payment date
Common shares	
December 28, 2020	February 1, 2021
March 29, 2021	May 1, 2021
June 28, 2021	August 1, 2021
September 27, 2021	November 1, 2021
Preferred shares,	
Series 30, 32, 34, 36, 38, 40 and 42	
January 6, 2021	February 15, 2021
April 5, 2021	May 15, 2021
July 6, 2021	August 15, 2021
October 6, 2021	November 15, 2021

Dividends Declared on Common Shares During Fiscal 2020

Record date	Payment date	Dividend per share (\$)
December 30, 2019	February 1, 2020	0.71
March 30, 2020	May 1, 2020	0.71
June 29, 2020	August 1, 2020	0.71
September 28, 2020	November 1, 2020	0.71

Dividends Declared on Preferred Shares During Fiscal 2020

Record date	Payment date	Dividend per share (\$)						
		Series 30	Series 32	Series 34	Series 36	Series 38	Series 40	Series 42
Jan. 6, 2020	Feb. 15, 2020	0.2516	0.2438	0.3500	0.3375	0.2781	0.2875	0.3094
Apr. 6, 2020	May 15, 2020	0.2515	0.2399	0.3500	0.3375	0.2782	0.2875	0.3094
Jul. 6, 2020	Aug. 15, 2020	0.2516	0.2399	0.3500	0.3375	0.2781	0.2875	0.3093
Oct. 6, 2020	Nov. 15, 2020	0.2516	0.2400	0.3500	0.3375	0.2781	0.2875	0.3094

Dividends paid are "eligible dividends" in accordance with the *Income Tax Act* (Canada).

Dividend Reinvestment and Share Purchase Plan

National Bank has a Dividend Reinvestment and Share Purchase Plan for holders of its common and preferred shares under which they can acquire common shares of the Bank without paying commissions or administration fees. Participants acquire common shares through the reinvestment of cash dividends paid on the shares they hold or through optional cash payments of at least \$1 per payment, up to a maximum of \$5,000 per quarter.

For additional information, shareholders may contact National Bank's registrar and transfer agent, Computershare Trust Company of Canada, at 1-888-838-1407. To participate in the plan, National Bank's beneficial or non-registered common shareholders must contact their financial institution or broker.

Direct Deposit

Shareholders may elect to have their dividend payments deposited directly via electronic funds transfer to their bank account at any financial institution that is a member of the Canadian Payments Association. To do so, they must send a written request to the Transfer Agent, Computershare Trust Company of Canada.

Head Office

National Bank of Canada
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Website: nbc.ca

Annual Meeting

The Annual Meeting of Holders of Common Shares of the Bank will be held on April 23, 2021.

Corporate Social Responsibility Statement

The information will be available in March 2021 on the Bank's website at nbc.ca.

Communication with Shareholders

For information about stock transfers, address changes, dividends, lost certificates, tax forms and estate transfers, shareholders of record may contact the Transfer Agent at the following address:

Computershare Trust Company of Canada

Share Ownership Management
100 University Avenue, 8th Floor
Toronto, Ontario M5J 2Y1 Canada

Telephone: 1-888-838-1407
Fax: 1-888-453-0330
E-mail: service@computershare.com
Website: computershare.com

Shareholders whose shares are held by a market intermediary are asked to contact the market intermediary concerned.

Other shareholder inquiries can be addressed to:

Investor Relations
National Bank of Canada
National Bank Tower
600 De La Gauchetière Street West, 7th Floor
Montreal, Quebec H3B 4L2 Canada

Telephone: 1-866-517-5455
E-mail: investorrelations@nbc.ca
Website: nbc.ca/investorrelations

Caution Regarding Forward-Looking Statements

From time to time, National Bank of Canada makes written and oral forward-looking statements, including in this Annual Report, in other filings with Canadian regulators, in reports to shareholders, in press releases and in other communications. All such statements are made pursuant to the Canadian and American securities legislation and the provisions of the United States *Private Securities Litigation Reform Act of 1995*.

Additional information about these statements can be found on page 15 of this Annual Report.

Trademarks

The trademarks belonging to National Bank of Canada and used in this report include National Bank of Canada, National Bank, NBC, National Bank All-In-One, National Bank Financial, National Bank Financial Wealth Management, Private Banking 1859, National Bank Direct Brokerage, National Bank Investments, National Bank Independent Network, National Bank Trust, NBC CapS II, NBC Asset Trust, NBC Capital Trust, National Bank Life Insurance, Natcan Trust Company, National Bank Realty, Natbank and their respective logos. Certain trademarks owned by third parties are also mentioned in this report.

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