



Report to Shareholders

Third Quarter 2022

National Bank reports its results for the Third Quarter of 2022

The financial information reported in this document is based on the unaudited interim condensed consolidated financial statements for the quarter and nine-month period ended July 31, 2022 and is prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB), unless otherwise indicated. IFRS represent Canadian generally accepted accounting principles (GAAP). All amounts are presented in Canadian dollars.

MONTREAL, August 24, 2022 – For the third quarter of 2022, National Bank is reporting net income of \$826 million, down 2% from \$839 million in the third quarter of 2021. Third-quarter diluted earnings per share stood at \$2.35 compared to \$2.36 in the third quarter of 2021. Solid performance in all of the business segments was partly offset by higher provisions for credit losses recorded to reflect a less favourable macroeconomic outlook in the third quarter of 2022, whereas, in the third quarter of 2021, reversals of allowances for credit losses had been recorded to reflect a more favourable macroeconomic outlook. Income before provisions for credit losses and income taxes totalled \$1,107 million in the third quarter of 2022 compared to \$1,038 million in the third quarter of 2021, a 7% increase arising from total revenue growth in all of the business segments.

For the nine-month period ended July 31, 2022, the Bank's net income totalled \$2,651 million, up 10% from \$2,401 million in the same period of 2021, while nine-month diluted earnings per share stood at \$7.55 compared to \$6.77 in the same period last year. Excellent performance in all of the business segments, driven by revenue growth, contributed to these increases in nine-month net income and diluted earnings per share, even though there were higher provisions for credit losses. Also for the nine-month period, income before provisions for credit losses and income taxes totalled \$3,442 million, a 10% year-over-year increase driven by the revenue growth in all of the business segments.

“The Bank's excellent results in the third quarter of fiscal 2022 were driven by strong growth in each of the business segments. Sustained loan and deposit growth contributed to the Bank's performance this quarter,” said Laurent Ferreira, President and Chief Executive Officer of National Bank of Canada. “We continue to operate in an increasingly complex backdrop. Despite these challenges, the Bank is in a solid position with strong capital levels and substantial allowances for credit losses, which, along with our prudent positioning, gives us comfort in the current environment,” added Mr. Ferreira.

Highlights

(millions of Canadian dollars)	Quarter ended July 31			Nine months ended July 31		
	2022	2021	% Change	2022	2021	% Change
Net income	826	839	(2)	2,651	2,401	10
Diluted earnings per share (<i>dollars</i>)	\$ 2.35	\$ 2.36	–	\$ 7.55	\$ 6.77	12
Income before provisions for credit losses and income taxes	1,107	1,038	7	3,442	3,121	10
Return on common shareholders' equity ⁽¹⁾	17.7 %	21.3 %		20.0 %	21.5 %	
Dividend payout ratio ⁽¹⁾	34.2 %	34.6 %		34.2 %	34.6 %	
				As at July 31, 2022	As at October 31, 2021	
CET1 capital ratio under Basel III ⁽²⁾				12.8 %	12.4 %	
Leverage ratio under Basel III ⁽²⁾				4.4 %	4.4 %	

(1) See the Glossary section on pages 45 to 48 for details on the composition of these measures.

(2) See the Financial Reporting Method section on pages 4 to 6 for additional information on capital management measures.

Personal and Commercial

- Net income totalled \$335 million in the third quarter of 2022 versus \$303 million in the third quarter of 2021, an 11% increase that was driven by growth in total revenues, partly offset by higher provisions for credit losses.
- Income before provisions for credit losses and income taxes totalled \$505 million in the third quarter of 2022, up 18% from \$429 million in the third quarter of 2021.
- At \$1,043 million, third-quarter total revenues were up \$121 million or 13% year over year due to an increase in net interest income (driven by growth in loan and deposit volumes), to a higher net interest margin, and to an increase in non-interest income.
- Compared to a year ago, personal lending grew 8% and commercial lending grew 17%.
- The net interest margin⁽¹⁾ stood at 2.17% in the third quarter of 2022, up from 2.09% in the third quarter of 2021.
- Third-quarter non-interest expenses stood at \$538 million, a 9% year-over-year increase.
- Third-quarter provisions for credit losses were \$32 million higher than those of third-quarter 2021, mainly because higher allowances for credit losses on non-impaired loans were recorded to reflect a less favourable macroeconomic outlook, whereas, in the third quarter of 2021, a more favourable macroeconomic outlook had led to reversals of allowances for credit losses on non-impaired loans.
- At 51.6%, the third-quarter efficiency ratio⁽¹⁾ improved from 53.5% in third-quarter 2021.

Wealth Management

- Net income totalled \$181 million in the third quarter of 2022, a 10% increase from \$164 million in the third quarter of 2021.
- Third-quarter total revenues amounted to \$591 million compared to \$546 million in third-quarter 2021, a \$45 million or 8% increase driven mainly by growth in net interest income.
- Third-quarter non-interest expenses stood at \$344 million compared to \$323 million in the third quarter of 2021, a 7% increase associated with revenue growth.
- At 58.2%, the third-quarter efficiency ratio⁽¹⁾ improved from 59.2% in the third quarter of 2021.

Financial Markets

- Net income totalled \$280 million in the third quarter of 2022 versus \$249 million in the third quarter of 2021, a 12% increase that was driven by higher total revenues.
- Third-quarter total revenues on a taxable equivalent basis amounted to \$611 million, a \$74 million or 14% year-over-year increase attributable to global markets revenues.
- Third-quarter non-interest expenses stood at \$253 million compared to \$224 million in third-quarter 2021, an increase that was partly attributable to compensation and employee benefits as well as to technology investment expenses.
- Recoveries of credit losses of \$23 million were recorded in the third quarter of 2022, essentially recoveries on impaired loans, compared to credit loss recoveries of \$25 million recorded in the third quarter of 2021, as allowances for credit losses on non-impaired loans had been reversed to reflect a more favourable macroeconomic outlook at that time.
- At 41.4%, the third-quarter efficiency ratio⁽¹⁾ on a taxable equivalent basis improved from 41.7% in the third quarter of 2021.

U.S. Specialty Finance and International

- Net income totalled \$125 million in the third quarter of 2022 versus \$161 million in the third quarter of 2021, a 22% decrease attributable mainly to higher provisions for credit losses.
- Third-quarter total revenues amounted to \$273 million, a 10% year-over-year increase driven by revenue growth at the ABA Bank subsidiary.
- Third-quarter non-interest expenses stood at \$86 million, a 9% year-over-year increase attributable to business growth at ABA Bank.
- At 31.5%, the third-quarter efficiency ratio⁽¹⁾ improved from 31.9% in the third quarter of 2021.

Other

- There was a net loss of \$95 million in the third quarter of 2022 compared to a \$38 million net loss in the third quarter of 2021, a change arising mainly from a decrease in total revenues associated with a lower contribution from treasury activities.

Capital Management

- As at July 31, 2022, the Common Equity Tier 1 (CET1) capital ratio under Basel III⁽²⁾ stood at 12.8%, up from 12.4% as at October 31, 2021.
- As at July 31, 2022, the Basel III leverage ratio⁽²⁾ was 4.4%, unchanged from October 31, 2021.

(1) See the Glossary section on pages 45 to 48 for details on the composition of these measures.

(2) See the Financial Reporting Method section on pages 4 to 6 for additional information on capital management measures.

Management's Discussion and Analysis

August 23, 2022

The following Management's Discussion and Analysis (MD&A) presents the financial condition and operating results of National Bank of Canada (the Bank). This analysis was prepared in accordance with the requirements set out in *National Instrument 51-102, Continuous Disclosure Obligations*, released by the Canadian Securities Administrators (CSA). It is based on the unaudited interim condensed consolidated financial statements (the consolidated financial statements) for the quarter and nine-month period ended July 31, 2022 and prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB), unless otherwise indicated. IFRS represent Canadian generally accepted accounting principles (GAAP). This MD&A should be read in conjunction with the consolidated financial statements and accompanying notes for the quarter and nine-month period ended July 31, 2022 and with the *2021 Annual Report*. All amounts are presented in Canadian dollars. Additional information about the Bank, including the *Annual Information Form*, can be obtained from the Bank's website at nbc.ca and SEDAR's website at sedar.com. Information on the Bank's website mentioned herein is not and should not be considered incorporated by reference into the Report to Shareholders, the Management's Discussion and Analysis, or the Consolidated Financial Statements.

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Caution Regarding Forward-Looking Statements

Certain statements in this document are forward-looking statements. All such statements are made in accordance with applicable securities legislation in Canada and the United States. Forward-looking statements in this document may include, but are not limited to, statements with respect to the economy—particularly the Canadian and U.S. economies—market changes, the Bank's objectives, outlook and priorities for fiscal year 2022 and beyond, the strategies or actions that will be taken to achieve them, expectations about the Bank's financial condition, the regulatory environment in which it operates, the impacts of—and the Bank's response to—the COVID-19 pandemic, and certain risks it faces. These forward-looking statements are typically identified by verbs or words such as "outlook", "believe", "foresee", "forecast", "anticipate", "estimate", "project", "expect", "intend" and "plan", in their future or conditional forms, notably verbs such as "will", "may", "should", "could" or "would" as well as similar terms and expressions. Such forward-looking statements are made for the purpose of assisting the holders of the Bank's securities in understanding the Bank's financial position and results of operations as at and for the periods ended on the dates presented, as well as the Bank's vision, strategic objectives, and financial performance targets, and may not be appropriate for other purposes. These forward-looking statements are based on current expectations, estimates, assumptions and intentions and are subject to uncertainty and inherent risks, many of which are beyond the Bank's control.

Assumptions about the performance of the Canadian and U.S. economies in 2022, including in the context of the COVID-19 pandemic, and how that will affect the Bank's business are among the main factors considered in setting the Bank's strategic priorities and objectives, including allowances for credit losses. In determining its expectations for economic conditions, both broadly and in the financial services sector in particular, the Bank primarily considers historical economic data provided by the governments of Canada, the United States, and certain other countries in which the Bank conducts business, as well as their agencies.

Statements about the economy, market changes, and the Bank's objectives, outlook and priorities for fiscal 2022 and thereafter are based on a number of assumptions and are subject to risk factors, many of which are beyond the Bank's control and the impacts of which are difficult to predict. These risk factors include, among others, the general economic environment and financial market conditions in Canada, the United States, and other countries where the Bank operates; exchange rate and interest rate fluctuations; inflation; higher funding costs and greater market volatility; changes made to fiscal, monetary, and other public policies; changes made to regulations that affect the Bank's business; geopolitical and sociopolitical uncertainty; the transition to a low-carbon economy and the Bank's ability to satisfy stakeholder expectations on environmental and social issues; significant changes in consumer behaviour; the housing situation, real estate market, and household indebtedness in Canada; the Bank's ability to achieve its long-term strategies and key short-term priorities; the timely development and launch of new products and services; the Bank's ability to recruit and retain key personnel; technological innovation and heightened competition from established companies and from competitors offering non-traditional services; changes in the performance and creditworthiness of the Bank's clients and counterparties; the Bank's exposure to significant regulatory matters or litigation; changes made to the accounting policies used by the Bank to report financial information, including the uncertainty inherent to assumptions and critical accounting estimates; changes to tax legislation in the countries where the Bank operates, i.e., primarily Canada and the United States; changes made to capital and liquidity guidelines as well as to the presentation and interpretation thereof; changes to the credit ratings assigned to the Bank; potential disruptions to key suppliers of goods and services to the Bank; potential disruptions to the Bank's information technology systems, including evolving cyberattack risk as well as identity theft and theft of personal information; the risk of fraudulent activity; and possible impacts of major events affecting the local and global economies, including international conflicts, natural disasters, and public health crises such as the COVID-19 pandemic.

There is a strong possibility that the Bank's express or implied predictions, forecasts, projections, expectations or conclusions will not prove to be accurate, that its assumptions may not be confirmed, and that its vision, strategic objectives and financial performance targets will not be achieved. The Bank recommends that readers not place undue reliance on forward-looking statements, as a number of factors, including the impacts of the COVID-19 pandemic, could cause actual results to differ significantly from the expectations, estimates or intentions expressed in these forward-looking statements. These risk factors include credit risk, market risk, liquidity and funding risks, operational risk, regulatory compliance risk, reputation risk, strategic risk, environmental and social risks, and certain emerging risks or risks deemed significant, all of which are described in greater detail in the Risk Management section beginning on page 69 of the *2021 Annual Report*.

The foregoing list of risk factors is not exhaustive. Additional information about these risk factors is provided in the Risk Management section and in the COVID-19 Pandemic section of the *2021 Annual Report* and in the Risk Management section of this *Report to Shareholders for the Third Quarter of 2022*. Investors and others who rely on the Bank's forward-looking statements should carefully consider the above factors as well as the uncertainties they represent and the risk they entail. Except as required by law, the Bank does not undertake to update any forward-looking statements, whether written or oral, that may be made from time to time, by it or on its behalf. The Bank cautions investors that these forward-looking statements are not guarantees of future performance and that actual events or results may differ significantly from these statements due to a number of factors.

Financial Reporting Method

The Bank's consolidated financial statements are prepared in accordance with IFRS, as issued by the 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, which represent Canadian GAAP. None of the OSFI accounting requirements are exceptions to IFRS.

The presentation of segment disclosures is consistent with the presentation adopted by the Bank for the fiscal year beginning November 1, 2021. This presentation reflects the fact that the loan portfolio comprising borrowers in the "Oil and gas" and "Pipelines" sectors as well as related activities, which had previously been reported in the Personal and Commercial segment, is now reported in the Financial Markets segment. The Bank made this change to better align the monitoring of its activities with its management structure.

Non-GAAP and Other Financial Measures

The Bank uses a number of financial measures when assessing its results and measuring overall performance. Some of these financial measures are not calculated in accordance with GAAP. *Regulation 52-112 Respecting Non-GAAP and Other Financial Measures Disclosure* (Regulation 52-112) prescribes disclosure requirements that apply to the following measures used by the Bank:

- non-GAAP financial measures;
- non-GAAP ratios;
- supplementary financial measures;
- capital management measures.

Non-GAAP Financial Measures

The Bank uses non-GAAP financial measures that do not have standardized meanings under GAAP and that therefore may not be comparable to similar measures used by other companies. Presenting non-GAAP financial measures helps readers to better understand how management analyzes results, shows the impacts of specified items on the results of the reported periods, and allows readers to assess results without the specified items if they consider such items not to be reflective of the underlying performance of the Bank's operations. In addition, like many other financial institutions, the Bank uses the taxable equivalent basis to calculate net interest income, non-interest income, and income taxes. This calculation method consists of grossing up certain tax-exempt income (particularly dividends) by the income tax that would have been otherwise payable. An equivalent amount is added to income taxes. This adjustment is necessary in order to perform a uniform comparison of the return on different assets regardless of their tax treatment.

The non-GAAP financial measures used by the Bank are as follows: Adjusted net interest income; adjusted net interest income, non-trading; adjusted non-interest income; adjusted total revenues; adjusted non-interest expenses; adjusted income before provisions for credit losses and income taxes; adjusted income before income taxes; adjusted income taxes; adjusted net income; adjusted non-controlling interests; adjusted net income attributable to the Bank's shareholders and holders of other equity instruments; adjusted basic earnings per share; and adjusted diluted earnings per share. Quantitative reconciliations of these measures are presented in the Reconciliation of Non-GAAP Financial Measures tables on page 6 and in the Consolidated Results table on page 9.

Non-GAAP Ratios

The Bank uses non-GAAP ratios that do not have standardized meanings under GAAP and that therefore may not be comparable to similar measures used by other companies. A non-GAAP ratio is a ratio in which at least one component is a non-GAAP financial measure. The Bank uses non-GAAP ratios to present aspects of its financial performance or financial position, including adjusted efficiency ratio; adjusted operating leverage; adjusted return on common shareholders' equity; adjusted dividend payout ratio; and adjusted net interest margin, non-trading. For additional information about the composition of these ratios, see the Glossary section on pages 45 to 48 of this MD&A.

Supplementary Financial Measures

A supplementary financial measure is a financial measure that: (a) is not reported in the Bank's consolidated financial statements, and (b) is, or is intended to be, reported periodically to represent historical or expected financial performance, financial position, or cash flows. The composition of these supplementary financial measures is presented in table footnotes or in the Glossary section on pages 45 to 48 of this MD&A.

Capital Management Measures

The financial reporting framework used to prepare the financial statements requires disclosure that help readers assess the Bank's capital management objectives, policies, and processes, as set out in IFRS in IAS 1 – *Presentation of Financial Statements*. The Bank has its own methods for managing capital and liquidity, and IFRS does not prescribe any particular calculation method. These measures are calculated using various guidelines and advisories issued by OSFI, which are based on the standards, recommendations, and best practices of the Basel Committee on Banking Supervision (BCBS), as presented in the following table.

OSFI guideline or advisory	Measure
Capital Adequacy Requirements	Common Equity Tier 1 (CET1) capital ratio Tier 1 capital ratio Total capital ratio CET1 capital Tier 1 capital Tier 2 capital Total capital Risk-weighted assets Maximum credit risk exposure under the Basel asset classes
Leverage Requirements	Leverage ratio Total exposure
Liquidity Adequacy Requirements	Liquid asset portfolio Encumbered and unencumbered assets Liquidity coverage ratio (LCR) High-quality liquid assets (HQLA) Cash inflows/outflows and net cash outflows Net stable funding ratio (NSFR) Available stable funding items Required stable funding items
Total Loss Absorbing Capacity (TLAC)	Key indicators – TLAC requirements Available TLAC TLAC ratio TLAC leverage ratio
Global Systemically Important Banks (G-SIBs) – Public Disclosure Requirements	G-SIB indicators

Reconciliation of Non-GAAP Financial Measures

Presentation of Results – Adjusted

(millions of Canadian dollars)

						Quarter ended July 31	
						2022	2021
	Personal and Commercial	Wealth Management	Financial Markets	USSF&I	Other	Total	Total
Net interest income	741	161	333	266	(82)	1,419	1,230
Taxable equivalent	–	–	59	–	1	60	46
Net interest income – Adjusted	741	161	392	266	(81)	1,479	1,276
Non-interest income	302	430	208	7	47	994	1,024
Taxable equivalent	–	–	11	–	–	11	1
Non-interest income – Adjusted	302	430	219	7	47	1,005	1,025
Total revenues – Adjusted	1,043	591	611	273	(34)	2,484	2,301
Non-interest expenses	538	344	253	86	85	1,306	1,216
Income before provisions for credit losses and income taxes – Adjusted	505	247	358	187	(119)	1,178	1,085
Provisions for credit losses	49	1	(23)	29	1	57	(43)
Income before income taxes – Adjusted	456	246	381	158	(120)	1,121	1,128
Income taxes	121	65	31	33	(26)	224	242
Taxable equivalent	–	–	70	–	1	71	47
Income taxes – Adjusted	121	65	101	33	(25)	295	289
Net income	335	181	280	125	(95)	826	839
Non-controlling interests	–	–	–	–	–	–	–
Net income attributable to the Bank's shareholders and holders of other equity instruments	335	181	280	125	(95)	826	839

(millions of Canadian dollars)

						Nine months ended July 31	
						2022	2021
	Personal and Commercial	Wealth Management	Financial Markets	USSF&I	Other	Total	Total
Net interest income	2,080	407	980	813	(216)	4,064	3,593
Taxable equivalent	–	–	165	–	4	169	142
Net interest income – Adjusted	2,080	407	1,145	813	(212)	4,233	3,735
Non-interest income	883	1,355	742	30	244	3,254	3,123
Taxable equivalent	–	–	18	–	–	18	6
Non-interest income – Adjusted	883	1,355	760	30	244	3,272	3,129
Total revenues – Adjusted	2,963	1,762	1,905	843	32	7,505	6,864
Non-interest expenses	1,595	1,045	768	254	214	3,876	3,595
Income before provisions for credit losses and income taxes – Adjusted	1,368	717	1,137	589	(182)	3,629	3,269
Provisions for credit losses	55	1	(55)	56	1	58	43
Income before income taxes – Adjusted	1,313	716	1,192	533	(183)	3,571	3,226
Income taxes	348	190	133	108	(46)	733	677
Taxable equivalent	–	–	183	–	4	187	148
Income taxes – Adjusted	348	190	316	108	(42)	920	825
Net income	965	526	876	425	(141)	2,651	2,401
Non-controlling interests	–	–	–	–	(1)	(1)	–
Net income attributable to the Bank's shareholders and holders of other equity instruments	965	526	876	425	(140)	2,652	2,401

Presentation of Adjusted Net Interest Income, Non-Trading

(millions of Canadian dollars)

			Quarter ended July 31			Nine months ended July 31
			2022	2021	2022	2021
Net interest income – Adjusted		1,479		1,276	4,233	3,735
Net interest income related to trading activities ⁽¹⁾		293		262	895	733
Net interest income, non-trading – Adjusted		1,186		1,014	3,338	3,002

(1) See the Glossary section on pages 45 to 48 for details on the composition of these measures.

Highlights

(millions of Canadian dollars, except per share amounts)		Quarter ended July 31			Nine months ended July 31		
		2022	2021	% Change	2022	2021	% Change
Operating results							
Total revenues		2,413	2,254	7	7,318	6,716	9
Income before provisions for credit losses and income taxes		1,107	1,038	7	3,442	3,121	10
Net income		826	839	(2)	2,651	2,401	10
Net income attributable to the Bank's shareholders and holders of other equity instruments		826	839	(2)	2,652	2,401	10
Return on common shareholders' equity ⁽¹⁾		17.7 %	21.3 %	(2)	20.0 %	21.5 %	
Earnings per share							
Basic	\$	2.38	\$	2.39	–	\$	6.84
Diluted		2.35		2.36	–		6.77
							12
Operating results – Adjusted⁽²⁾							
Total revenues – Adjusted ⁽²⁾		2,484	2,301	8	7,505	6,864	9
Income before provisions for credit losses and income taxes – Adjusted ⁽²⁾		1,178	1,085	9	3,629	3,269	11
Net income – Adjusted ⁽²⁾		826	839	(2)	2,651	2,401	10
Return on common shareholders' equity – Adjusted ⁽³⁾		17.7 %	21.3 %	(2)	20.0 %	21.5 %	
Operating leverage – Adjusted ⁽³⁾		0.6 %	0.7 %	(2)	1.5 %	1.9 %	
Efficiency ratio – Adjusted ⁽³⁾		52.6 %	52.8 %	(2)	51.6 %	52.4 %	
Earnings per share – Adjusted⁽²⁾							
Basic	\$	2.38	\$	2.39	–	\$	6.84
Diluted		2.35		2.36	–		6.77
							12
Common share information							
Dividends declared	\$	0.92	\$	0.71	–	\$	2.13
Book value ⁽⁴⁾		54.82		46.00	–		46.00
Share price							
High		97.87		96.97	–	105.44	96.97
Low		83.33		89.47	–	83.33	65.54
Close		89.85		95.49	–	89.85	95.49
Number of common shares (thousands)		336,456		337,587	–	336,456	337,587
Market capitalization		30,231		32,236	–	30,231	32,236
(millions of Canadian dollars)					As at July 31, 2022	As at October 31, 2021	% Change
Balance sheet and off-balance-sheet							
Total assets					387,051	355,795	9
Loans and acceptances, net of allowances					200,924	182,689	10
Deposits					257,190	240,938	7
Equity attributable to common shareholders					18,445	16,203	14
Assets under administration ⁽¹⁾					621,126	651,530	(5)
Assets under management ⁽¹⁾					113,904	117,186	(3)
Regulatory ratios under Basel III⁽⁴⁾							
Capital ratios							
Common Equity Tier 1 (CET1)					12.8 %	12.4 %	
Tier 1					15.2 %	15.0 %	
Total					16.8 %	15.9 %	
Leverage ratio					4.4 %	4.4 %	
TLAC ratio ⁽⁴⁾					28.3 %	26.3 %	
TLAC leverage ratio ⁽⁴⁾					8.2 %	7.8 %	
Liquidity coverage ratio (LCR) ⁽⁴⁾					148 %	154 %	
Net stable funding ratio (NSFR) ⁽⁴⁾					119 %	117 %	
Other information							
Number of employees – Worldwide					28,903	26,920	7
Number of branches in Canada					384	384	–
Number of banking machines in Canada					934	927	1

(1) See the Glossary section on pages 45 to 48 for details on the composition of these measures.

(2) See the Financial Reporting Method section on pages 4 to 6 for additional information on non-GAAP financial measures.

(3) See the Financial Reporting Method section on pages 4 to 6 and see the Glossary section on pages 45 to 48 for additional information on non-GAAP ratios.

(4) See the Financial Reporting Method section on pages 4 to 6 for additional information on capital management measures.

Economic Review and Outlook

Global Economy

The global economic environment has deteriorated over the past few months. The optimism that accompanied the reopening of the Chinese economy after strict lockdowns has given way to concerns of an imminent recession triggered by high inflation and ongoing uncertainty in the geopolitical landscape. Despite difficult times expected in several European economies in the months ahead, we still believe the global economy can sidestep a worst-case scenario, so long as inflation can slow relatively quickly given the recent declines in the cost of several raw materials. This should help tame activity by central banks, for whom inflation has become enemy number one. Our growth forecast for global GDP is close to 2.5%⁽¹⁾ for 2022 and 2.7%⁽¹⁾ for 2023.

In the United States, the economic outlook has not escaped the prevailing pessimism, judging by the sudden inversion of the yield curve and deteriorating consumer expectations. The latest economic data has, for the most part, fallen short of expectations. GDP even contracted for a second straight quarter in the second quarter of 2022, which has prompted discussion as to whether the U.S. economy is already in a recession. However, these decreases were largely caused by major inventory adjustments carried out by companies that are still dealing with supply chain uncertainty rather than by a slowdown in domestic demand or a sharp decline in the labour market. Unlike previous GDP contraction cycles, employment continues to grow at a steady pace, with over 500,000 jobs added in July 2022. While the U.S. economy should return to growth in the second half, our real GDP growth forecasts are 1.6%⁽¹⁾ for 2022 and 1.7%⁽¹⁾ for 2023.

Canadian Economy

The latest economic data has convinced the Bank of Canada to accelerate interest rate normalization. Inflationary pressures have worsened, and the central bank's business and consumer surveys have revealed that inflation expectations are trending upward, an undesirable trend that it fears will not diminish. After the 100 basis-point interest rate hike announced last July, the Bank of Canada believes it still has work to do, and that is making observers nervous about the upcoming economic cycle. We do not believe the Canadian economy is about to get weak in the knees. As we were expecting, it has demonstrated greater resilience than other economies since Russia's invasion of Ukraine. Consumers still have excess savings, helping them to absorb the higher cost of living, and the labour market sits comfortably at full employment, translating into solid wage growth. Despite a recent decline in the price of certain raw materials, the natural resources sector remains a strong pillar of the Canadian economy, helping it to partially offset the sharp drop in real estate activity. As for governments, which are seeing spectacular upturns in public finances, budgetary support will prove greater than anticipated in 2022. As monetary policy becomes restrictive, we are still expecting a significant slowdown in the economy that should translate into below-potential growth over the next 12 months. Our real GDP growth forecasts are 3.5%⁽¹⁾ for 2022 and 1.5%⁽¹⁾ for 2023.

Quebec Economy

Quebec's GDP stands at 3.3%, which is above its pre-pandemic level, for a recovery that is stronger than for Canada as a whole (+2.2%). The Quebec labour market remains tight, posting an unemployment rate around 4%, which is close to its historical low. We remain optimistic about growth in 2022 given the diversified economy, the fiscal leeway available to the Quebec government, and lower household debt than elsewhere in the country. After growth of 5.6% in 2021, the Quebec economy should slow to 3.6%⁽¹⁾ in 2022, with growth of 1.3%⁽¹⁾ expected for 2023.

(1) GDP growth forecasts, National Bank Financial's Economics and Strategy group

Financial Analysis

Consolidated Results

(millions of Canadian dollars)	Quarter ended July 31			Nine months ended July 31		
	2022	2021	% Change	2022	2021	% Change
Operating results						
Net interest income	1,419	1,230	15	4,064	3,593	13
Non-interest income	994	1,024	(3)	3,254	3,123	4
Total revenues	2,413	2,254	7	7,318	6,716	9
Non-interest expenses	1,306	1,216	7	3,876	3,595	8
Income before provisions for credit losses and income taxes	1,107	1,038	7	3,442	3,121	10
Provisions for credit losses	57	(43)	233	58	43	35
Income before income taxes	1,050	1,081	(3)	3,384	3,078	10
Income taxes	224	242	(7)	733	677	8
Net income	826	839	(2)	2,651	2,401	10
Diluted earnings per share (<i>dollars</i>)	2.35	2.36	–	7.55	6.77	12
Taxable equivalent basis⁽¹⁾						
Net interest income	60	46		169	142	
Non-interest income	11	1		18	6	
Income taxes	71	47		187	148	
Impact of taxable equivalent basis on net income	–	–		–	–	
Operating results – Adjusted⁽¹⁾						
Net interest income – Adjusted	1,479	1,276	16	4,233	3,735	13
Non-interest income – Adjusted	1,005	1,025	(2)	3,272	3,129	5
Total revenues – Adjusted	2,484	2,301	8	7,505	6,864	9
Non-interest expenses – Adjusted	1,306	1,216	7	3,876	3,595	8
Income before provisions for credit losses and income taxes – Adjusted	1,178	1,085	9	3,629	3,269	11
Provisions for credit losses	57	(43)	233	58	43	35
Income before income taxes – Adjusted	1,121	1,128	(1)	3,571	3,226	11
Income taxes – Adjusted	295	289	2	920	825	12
Net income – Adjusted	826	839	(2)	2,651	2,401	10
Diluted earnings per share – Adjusted (<i>dollars</i>)	2.35	2.36	–	7.55	6.77	12
Average assets ⁽²⁾	392,183	363,746	8	388,668	360,935	8
Average loans and acceptances ⁽²⁾	197,650	174,252	13	191,092	169,522	13
Average deposits ⁽²⁾	260,355	237,162	10	255,525	232,867	10
Operating leverage – Adjusted ⁽³⁾	0.6 %	0.7 %		1.5 %	1.9 %	
Efficiency ratio – Adjusted ⁽³⁾	52.6 %	52.8 %		51.6 %	52.4 %	

(1) See the Financial Reporting Method section on pages 4 to 6 for additional information on non-GAAP financial measures.

(2) Represents an average of the daily balances for the period.

(3) See the Financial Reporting Method section on pages 4 to 6 and see the Glossary section on pages 45 to 48 for additional information on non-GAAP ratios.

Financial Results

For the third quarter of 2022, the Bank reported net income of \$826 million, down 2% from \$839 million in the third quarter of 2021. Third-quarter diluted earnings per share stood at \$2.35 compared to \$2.36 in the third quarter of 2021. Solid performance in all of the business segments was partly offset by higher provisions for credit losses recorded to reflect a less favourable macroeconomic outlook in the third quarter of 2022, whereas, in the third quarter of 2021, reversals of allowances for credit losses had been recorded to reflect a more favourable macroeconomic outlook. Income before provisions for credit losses and income taxes totalled \$1,107 million in the third quarter of 2022 compared to \$1,038 million in the third quarter of 2021, a 7% increase arising from total revenue growth in all of the business segments.

For the nine-month period ended July 31, 2022, the Bank's net income totalled \$2,651 million, up 10% from \$2,401 million in the same period of 2021, while nine-month diluted earnings per share stood at \$7.55 compared to \$6.77 in the first nine months of 2021. Excellent performance in all of the business segments, driven by revenue growth, contributed to these increases in nine-month net income and diluted earnings per share, even though there were higher provisions for credit losses. Also for the nine-month period, income before provisions for credit losses and income taxes totalled \$3,442 million, a 10% year-over-year increase driven by the revenue growth in all of the business segments.

Return on common shareholders' equity was 20.0% for the nine-month period ended July 31, 2022 compared to 21.5% in the same period of 2021.

Total Revenues

For the third quarter of 2022, the Bank's total revenues amounted to \$2,413 million, rising \$159 million or 7% year over year. In the Personal and Commercial segment, third-quarter total revenues rose 13% year over year owing to loan and deposit growth, to a higher net interest margin resulting from recent interest rate hikes, and to increases in credit card revenues, insurance revenues, revenues from bankers' acceptances, and revenues from foreign exchange activities. In the Wealth Management segment, third-quarter total revenues grew 8% year over year, mainly due to higher net interest income resulting from higher interest rates as well as to an increase in fee-based revenues, notably revenues from investment management and trust service fees. However, securities brokerage commissions decreased year over year given fewer commission-generating transactions. In the Financial Markets segment, third-quarter total revenues on a taxable equivalent basis increased by 14% year over year due to an increase in global markets revenues, partly offset by lower corporate and investment banking revenues. In the USSF&I segment, third-quarter total revenues were up 10% year over year owing to a sustained increase in ABA Bank's revenues as a result of business growth, partly offset by a decrease in Credigy's revenues, notably due to stronger performance by certain loan portfolios during the third quarter of 2021. For the *Other* heading of segment results, third-quarter total revenues reflect a lower contribution from treasury activities compared to the third quarter of 2021.

For the first nine months of fiscal 2022, the Bank's total revenues amounted to \$7,318 million, up \$602 million or 9% from \$6,716 million in the same period of 2021. In the Personal and Commercial segment, nine-month total revenues rose \$278 million or 10% year over year owing to an increase in net interest income, as both loans and deposits grew (partly offset by a lower net interest margin), as well as to increases in credit card revenues, insurance revenues, internal commission revenues related to the distribution of Wealth Management products, revenues from bankers' acceptances, revenues from derivative financial instruments, and revenues from foreign exchange activities. In the Wealth Management segment, nine-month total revenues grew 10% year over year, mainly due to higher net interest income as well as to an increase in fee-based revenues given growth in average assets under administration and assets under management and given greater market performance compared to the same nine-month period last year. In the Financial Markets segment, nine-month total revenues on a taxable equivalent basis were up \$183 million or 11% year over year given growth in global markets revenues, partly offset by a decrease in corporate and investment banking revenues. In the USSF&I segment, nine-month total revenues rose 11% year over year owing to revenue growth at ABA Bank, which was driven by higher loans and deposits, partly offset by a decrease in Credigy's revenues, notably due to a gain that had been realized in the first nine months of fiscal 2021 upon a disposal of loan portfolios and to a more favourable impact of remeasuring certain loan portfolios during the first nine months of 2021. For the *Other* heading of segment results, nine-month total revenues were down year over year due to a lower contribution from treasury activities, partly offset by higher gains on investments.

Non-Interest Expenses

For the third quarter of 2022, non-interest expenses stood at \$1,306 million, a 7% year-over-year increase that was essentially attributable to higher compensation, notably from wage growth and a greater number of employees as well as from the variable compensation associated with revenue growth. In addition, technology expenses, including amortization, increased as a result of significant investments made to support the Bank's technological evolution. Third-quarter other expenses were up as travel and business development costs increased, notably due to a resumption of activities with clients and to higher advertising expenses.

For the nine-month period ended July 31, 2022, the Bank's non-interest expenses stood at \$3,876 million, an 8% year-over-year increase that was attributable to higher compensation and employee benefits, notably from wage growth and a greater number of employees as well as from the variable compensation associated with revenue growth. Nine-month technology expenses and professional fees were also up year over year, as significant investments were made to support the Bank's technological evolution and business development plan. In addition, travel and business development costs grew as activities with clients gradually resumed. These increases were tempered by decreases in certain expenses, notably a \$20 million reversal of the provision for the compensatory tax on salaries paid in Quebec during the first quarter of 2022 as well as a decrease in COVID-19 response expenses, which were higher during the same period of 2021.

Provisions for Credit Losses

For the third quarter of 2022, the Bank recorded \$57 million in provisions for credit losses compared to \$43 million in recoveries of credit losses in the third quarter of 2021. This increase stems mainly from higher provisions for credit losses on non-impaired loans attributable to less favourable macroeconomic conditions in the third quarter of 2022, notably including greater inflationary pressures, as well as from newly granted loans. In the third quarter of 2021, the Bank had recorded reversals of provisions for credit losses on non-impaired loans given an improved macroeconomic outlook at that time. Third-quarter provisions for credit losses on impaired purchased or originated credit-impaired (POCI) loans of the Credigy subsidiary were also up given a favourable remeasurement of certain portfolios in the third quarter of 2021. Provisions for credit losses on impaired loans were down \$17 million compared to the third quarter of 2021, as a recovery on impaired loans from a borrower in the "Oil and gas" sector recorded in the Financial Markets segment in the third quarter of 2022 more than offset higher year-over-year provisions for credit losses on impaired loans recorded in Personal Banking (including credit card receivables), in Commercial Banking, and at ABA Bank.

For the nine-month period ended July 31, 2022, the Bank recorded \$58 million in provisions for credit losses compared to \$43 million in the same nine-month period last year. The increase stems mainly from lower year-over-year reversals of allowances for credit losses on non-impaired loans. Over the first nine months of 2022, the macroeconomic outlook has weakened, notably due to high inflationary pressure, geopolitical instability, and global supply chain disruptions compared to the more favourable macroeconomic outlook that was prevailing during the same nine-month period in 2021. Nine-month provisions for credit losses on Credigy's POCI loans were also up given a favourable remeasurement of certain portfolios in the third quarter of 2021. Furthermore, the nine-month provisions for credit losses on impaired loans posted a year-over-year decrease that stems from Commercial Banking and the Financial Markets segment, partly offset by higher provisions for credit losses on impaired ABA Bank loans resulting from the end of relief measures granted to the subsidiary's clients.

Income Taxes

For the third quarter of 2022, income taxes stood at \$224 million compared to \$242 million in the same quarter of 2021. The 2022 third-quarter effective tax rate was 21% compared to 22% in the same quarter of 2021. The change in effective income tax rate stems mainly from a higher level of tax-exempt dividend income compared to the same quarter of 2021.

For the nine-month period ended July 31, 2022, the effective tax rate was 22%, unchanged from the first nine months of 2021.

Results by Segment

The Bank carries out its activities in four business segments: Personal and Commercial, Wealth Management, Financial Markets, and U.S. Specialty Finance and International. Other operating activities, certain specified items, Treasury activities, and the activities of the Flinks Technology Inc. (Flinks) subsidiary are grouped in the *Other* heading. Each reportable segment is distinguished by services offered, type of clientele, and marketing strategy.

Personal and Commercial

(millions of Canadian dollars)

	Quarter ended July 31			Nine months ended July 31		
	2022	2021 ⁽¹⁾	% Change	2022	2021 ⁽¹⁾	% Change
Operating results						
Net interest income	741	647	15	2,080	1,893	10
Non-interest income	302	275	10	883	792	11
Total revenues	1,043	922	13	2,963	2,685	10
Non-interest expenses	538	493	9	1,595	1,473	8
Income before provisions for credit losses and income taxes	505	429	18	1,368	1,212	13
Provisions for credit losses	49	17	188	55	45	22
Income before income taxes	456	412	11	1,313	1,167	13
Income taxes	121	109	11	348	309	13
Net income	335	303	11	965	858	12
Net interest margin ⁽²⁾	2.17 %	2.09 %		2.10 %	2.13 %	
Average interest-bearing assets ⁽²⁾	135,615	122,788	10	132,222	118,980	11
Average assets ⁽³⁾	142,462	128,691	11	138,874	124,359	12
Average loans and acceptances ⁽³⁾	141,736	127,966	11	138,139	123,759	12
Net impaired loans ⁽²⁾	168	224	(25)	168	224	(25)
Net impaired loans as a % of loans and acceptances ⁽²⁾	0.1 %	0.2 %		0.1 %	0.2 %	
Average deposits ⁽³⁾	83,023	77,345	7	80,689	75,300	7
Efficiency ratio ⁽²⁾	51.6 %	53.5 %		53.8 %	54.9 %	

(1) For the quarter and nine-month period ended July 31, 2021, certain amounts have been reclassified, in particular amounts of the loan portfolio of borrowers in the "Oil and gas" and "Pipelines" sectors as well as related activities, which were transferred from the Personal and Commercial segment to the Financial Markets segment.

(2) See the Glossary section on pages 45 to 48 for details on the composition of these measures.

(3) Represents an average of the daily balances for the period.

In the Personal and Commercial segment, net income totalled \$335 million compared to \$303 million in the third quarter of 2021, an 11% increase resulting from growth in total revenues, partly offset by higher provisions for credit losses. The segment's third-quarter income before provisions for credit losses and income taxes grew 18% year over year. Third-quarter net interest income rose 15% year over year owing to growth in personal and commercial loans and deposits as well as to a higher net interest margin, which, as a result of recent interest rate hikes, was 2.17% in third-quarter 2022 compared to 2.09% in third-quarter 2021. As for the segment's third-quarter non-interest income, it grew \$27 million or 10% year over year.

Personal Banking's third-quarter total revenues increased by \$40 million year over year. This increase came from an increase in net interest income driven by loan and deposit growth, from an improved net interest margin on deposits, from an increase in credit card revenues given a notable increase in purchasing volume, and from insurance revenues (reflecting a revision to actuarial reserves). Commercial Banking's third-quarter total revenues grew \$81 million year over year, mainly due to an increase in net interest income, driven by loan and deposit growth, to an improved net interest margin on deposits, as well as to increases in revenues from foreign exchange activities and from bankers' acceptances.

For the third quarter of 2022, the Personal and Commercial segment's non-interest expenses stood at \$538 million, a 9% year-over-year increase that was mainly due to compensation and employee benefits (given wage growth and a greater number of employees), to operations support charges, and to investments made as part of the segment's technological evolution. At 51.6%, the segment's third-quarter efficiency ratio improved by 1.9 percentage points year over year as a result of strong revenue growth. The segment recorded \$49 million in provisions for credit losses in the third quarter of 2022 compared to \$17 million in the same quarter of 2021. This increase came from higher provisions for credit losses on impaired loans and on impaired credit card receivables and from higher provisions for credit losses on non-impaired Personal Banking loans (including credit card receivables) recorded to reflect a less favourable macroeconomic outlook, whereas, in the third quarter of 2021, a more favourable macroeconomic outlook had led to reversals of allowances for credit losses on non-impaired loans.

For the nine-month period ended July 31, 2022, the Personal and Commercial segment's net income totalled \$965 million compared to \$858 million in the same period of 2021, a year-over-year increase driven mainly by 10% growth in the segment's nine-month total revenues. The segment's nine-month income before provisions for credit losses and income taxes totalled \$1,368 million, up 13% year over year. Personal Banking's nine-month total revenues were up, mainly due to growth in loans and deposits (partly offset by a lower net interest margin) as well as to increases in credit card revenues, insurance revenues (reflecting a revision to actuarial reserves), and internal commission revenues related to the distribution of Wealth Management products. Commercial Banking's nine-month total revenues grew 17% due to loan and deposit growth as well as to increases in revenues from bankers' acceptances, revenues from derivative financial instruments, and revenues from foreign exchange activities.

For the nine-month period ended July 31, 2022, the Personal and Commercial segment's non-interest expenses stood at \$1,595 million, an 8% year-over-year increase that was mainly due to higher compensation and employee benefits, higher operations support charges, and expenses incurred for the segment's technological evolution. At 53.8%, the nine-month efficiency ratio improved by 1.1 percentage points from the same period in 2021. The segment's nine-month provisions for credit losses stood at \$55 million compared to \$45 million in the same period of 2021. This increase came mainly from higher provisions for credit losses on non-impaired Personal Banking loans (including credit card receivable) recorded to reflect less favourable macroeconomic conditions, whereas, in the first nine months of 2021, a more favourable macroeconomic environment had led to higher reversals of allowances for credit losses on non-impaired loans. These increases were partly offset by lower provisions for credit losses on impaired Commercial Banking loans as well as by higher reversals of allowances for credit losses on non-impaired Commercial Banking loans resulting from more favourable risk parameters during the nine months ended July 31, 2022.

Wealth Management

(millions of Canadian dollars)	Quarter ended July 31			Nine months ended July 31		
	2022	2021 ⁽¹⁾	% Change	2022	2021 ⁽¹⁾	% Change
Operating results						
Net interest income	161	112	44	407	332	23
Fee-based revenues	351	341	3	1,082	963	12
Transaction-based and other revenues	79	93	(15)	273	310	(12)
Total revenues	591	546	8	1,762	1,605	10
Non-interest expenses	344	323	7	1,045	944	11
Income before provisions for credit losses and income taxes	247	223	11	717	661	8
Provisions for credit losses	1	–	–	1	–	–
Income before income taxes	246	223	10	716	661	8
Income taxes	65	59	10	190	175	9
Net income	181	164	10	526	486	8
Average assets ⁽²⁾	8,297	7,367	13	8,187	6,960	18
Average loans and acceptances ⁽²⁾	7,236	6,230	16	7,082	5,811	22
Net impaired loans ⁽³⁾	12	7	–	12	7	–
Average deposits ⁽²⁾	34,870	33,246	5	34,560	34,026	2
Assets under administration ⁽³⁾	621,126	630,019	(1)	621,126	630,019	(1)
Assets under management ⁽³⁾	113,904	112,886	1	113,904	112,886	1
Efficiency ratio ⁽³⁾	58.2 %	59.2 %	–	59.3 %	58.8 %	–

(1) For the quarter and nine-month period ended July 31, 2021, certain amounts have been reclassified.

(2) Represents an average of the daily balances for the period.

(3) See the Glossary section on pages 45 to 48 for details on the composition of these measures.

In the Wealth Management segment, net income totalled \$181 million in the third quarter of 2022, a 10% increase from \$164 million in the same quarter of 2021. The segment's third-quarter total revenues amounted to \$591 million, up \$45 million or 8% from \$546 million in the third quarter of 2021. This revenue growth was mainly driven by a \$49 million or 44% increase in net interest income owing to higher interest rates and to growth in loan and deposit volumes in the third quarter of 2022. Third-quarter fee-based revenues rose 3% year over year due to growth in average assets under management as a result of net inflows into various solutions compared to the third quarter of 2021. As for third-quarter transaction-based and other revenues, they were down 15% year over year given lower commissions on transactions in third-quarter 2022 attributable to a less favourable market.

For the third quarter of 2022, Wealth Management's non-interest expenses stood at \$344 million, a \$21 million or 7% year-over-year increase that stems from higher compensation and employee benefits, notably the variable compensation associated with the segment's revenue growth, as well as from higher operations support charges. At 58.2%, the segment's third-quarter efficiency ratio improved by 1.0 percentage point from 59.2% in the third quarter of 2021. The segment recorded \$1 million in provisions for credit losses in the third quarter of 2022, whereas negligible provisions for credit losses had been recorded for the third quarter of 2021.

For the first nine months of fiscal 2022, the Wealth Management segment's net income totalled \$526 million, up 8% from \$486 million in the same nine-month period of 2021. The segment's nine-month total revenues amounted to \$1,762 million, up 10% from \$1,605 million in the same period of 2021. Nine-month net interest income grew \$75 million or 23% year over year owing to higher interest rates, to growth in loan and deposit volumes, and to the deposit margin. Nine-month fee-based revenues rose 12% year over year due to growth in average assets under administration and under management as a result of net inflows into various solutions and to stronger stock market performance compared to the same period in 2021. As for nine-month transaction-based and other revenues, they decreased 12% year over year as a result of lower commission-generating trading volume during the nine months ended July 31, 2022. The segment's nine-month non-interest expenses stood at \$1,045 million compared to \$944 million in the first nine months of 2021. This increase was due to higher compensation and employee benefits, notably the variable compensation associated with revenue growth, and to an increase in external management fees and operations support charges related to business growth and the segment's initiatives. At 59.3%, the nine-month efficiency ratio compares to 58.8% in the same period of 2021. For the nine-month period ended July 31, 2022, the segment recorded \$1 million in provisions for credit losses compared to a negligible amount recorded in the same period of 2021.

Financial Markets

(taxable equivalent basis)⁽¹⁾

(millions of Canadian dollars)

	Quarter ended July 31			Nine months ended July 31		
	2022	2021 ⁽²⁾	% Change	2022	2021 ⁽²⁾	% Change
Operating results						
Global markets						
Equities	202	171	18	772	510	51
Fixed-income	117	84	39	296	299	(1)
Commodities and foreign exchange	50	24	108	130	94	38
	369	279	32	1,198	903	33
Corporate and investment banking	242	258	(6)	707	819	(14)
Total revenues ⁽¹⁾	611	537	14	1,905	1,722	11
Non-interest expenses	253	224	13	768	684	12
Income before provisions for credit losses and income taxes	358	313	14	1,137	1,038	10
Provisions for credit losses	(23)	(25)	8	(55)	16	
Income before income taxes	381	338	13	1,192	1,022	17
Income taxes ⁽¹⁾	101	89	13	316	270	17
Net income	280	249	12	876	752	16
Average assets ⁽³⁾	149,653	152,275	(2)	152,183	150,983	1
Average loans and acceptances ⁽³⁾ (Corporate Banking only)	22,991	19,392	19	21,549	19,564	10
Net impaired loans ⁽⁴⁾	1	47	(98)	1	47	(98)
Average deposits ⁽³⁾	46,761	45,235	3	46,486	42,863	8
Efficiency ratio ⁽⁴⁾	41.4 %	41.7 %		40.3 %	39.7 %	

(1) The *Total revenues* and *Income taxes* items of the Financial Markets segment 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 been otherwise payable. For the quarter ended July 31, 2022, *Total revenues* were grossed up by \$70 million (\$46 million in 2021) and an equivalent amount was recognized in *Income taxes*. For the nine-month period ended July 31, 2022, *Total revenues* were grossed up by \$183 million (\$143 million in 2021) and an equivalent amount was recognized in *Income taxes*. The effect of these adjustments is reversed under the *Other* heading.

(2) For the quarter and nine-month period ended July 31, 2021, certain amounts have been reclassified, in particular amounts of the loan portfolio of borrowers in the "Oil and gas" and "Pipelines" sectors as well as related activities, which were transferred from the Personal and Commercial segment to the Financial Markets segment.

(3) Represents an average of the daily balances for the period.

(4) See the Glossary section on pages 45 to 48 for details on the composition of these measures.

In the Financial Markets segment, net income totalled \$280 million in the third quarter of 2022, up 12% from \$249 million in the third quarter of 2021. The segment's third-quarter total revenues amounted to \$611 million, up \$74 million or 14% from \$537 million in the third quarter of 2021. The third-quarter global markets revenues rose 32% year over year given growth in all revenue types. Third-quarter corporate and investment banking revenues fell 6% year over year given a decrease in revenues from capital markets activity, tempered by higher revenues from merger and acquisition activity and by an increase in banking service revenues driven by growth in loan and deposit volumes.

For the third quarter of 2022, non-interest expenses stood at \$253 million, a 13% year-over-year increase that was due to higher compensation and employee benefits, notably the variable compensation associated with the segment's revenue growth, as well as to higher technology investment expenses and higher operations support charges. At 41.4%, the segment's third-quarter efficiency ratio improved by 0.3 percentage points from 41.7% in the third quarter of 2021. For the quarter ended July 31, 2022, the segment recorded \$23 million in recoveries of credit losses, mainly due to a recovery on impaired loans from a borrower in the "Oil and gas" sector. In the third quarter of 2021, recoveries of credit losses of \$25 million had been recorded, owing essentially to reversals of allowances for credit losses on non-impaired loans recorded to reflect a more favourable macroeconomic outlook during that period.

For the first nine months of fiscal 2022, the Financial Markets segment's net income totalled \$876 million, a 16% year-over-year increase driven by revenue growth combined with lower provisions for credit losses. The segment's nine-month income before provisions for credit losses and income taxes totalled \$1,137 million, up 10% year over year. Nine-month total revenues amounted to \$1,905 million, up \$183 million or 11% from \$1,722 million in the same period of 2021. Nine-month global markets revenues rose 33% due to higher revenues from equities and from commodities and foreign exchange activities, as market conditions favoured greater client activity. As for nine-month corporate and investment banking revenues, they were down 14% year over year given decreases in revenues related to capital markets activity and in revenues related to merger and acquisition activity.

The segment's nine-month non-interest expenses increased 12% year over year. This increase was attributable to higher compensation and employee benefits, in particular the variable compensation associated with revenue growth, as well as to increases in technology investments and in operations support charges. At 40.3%, the nine-month efficiency ratio compares to 39.7% in the same period of 2021. The segment recorded \$55 million in recoveries of credit losses during the nine-month period ended July 31, 2022 compared to \$16 million in provisions for credit losses in the same period of 2021. This decrease came mainly from a \$102 million year-over-year decrease in provisions for credit losses on impaired loans, partly offset by higher provisions for credit losses on non-impaired loans in the first nine months of fiscal 2022 arising from a less favourable macroeconomic outlook than in the same nine-month period of 2021.

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

(millions of Canadian dollars)	Quarter ended July 31			Nine months ended July 31		
	2022	2021	% Change	2022	2021	% Change
Total revenues						
Credigy	105	116	(9)	351	386	(9)
ABA Bank	168	131	28	490	371	32
International	—	1		2	2	
	273	248	10	843	759	11
Non-interest expenses						
Credigy	31	36	(14)	99	109	(9)
ABA Bank	55	42	31	154	128	20
International	—	1		1	2	
	86	79	9	254	239	6
Income before provisions for credit losses and income taxes	187	169	11	589	520	13
Provisions for credit losses						
Credigy	19	(45)	142	37	(41)	190
ABA Bank	10	10	—	19	23	(17)
	29	(35)		56	(18)	
Income before income taxes	158	204	(23)	533	538	(1)
Income taxes						
Credigy	11	26	(58)	45	71	(37)
ABA Bank	22	17	29	63	41	54
	33	43	(23)	108	112	(4)
Net income						
Credigy	44	99	(56)	170	247	(31)
ABA Bank	81	62	31	254	179	42
International	—	—		1	—	
	125	161	(22)	425	426	—
Average assets ⁽¹⁾	18,941	16,011	18	18,383	15,816	16
Average loans and receivables ⁽¹⁾	15,438	12,539	23	14,826	12,247	21
Purchased or originated credit-impaired (POCI) loans	336	534	(37)	336	534	(37)
Net impaired loans excluding POCI loans ⁽²⁾	120	34		120	34	
Average deposits ⁽¹⁾	8,722	6,773	29	8,320	6,480	28
Efficiency ratio ⁽²⁾	31.5 %	31.9 %		30.1 %	31.5 %	

(1) Represents an average of the daily balances for the period.

(2) See the Glossary section on pages 45 to 48 for details on the composition of these measures.

In the USSF&I segment, net income totalled \$125 million in the third quarter of 2022 compared to \$161 million in the same quarter of 2021, a 22% year-over-year decrease attributable to a decrease in the Credigy subsidiary's total revenues combined with its higher provisions for credit losses. The segment's third-quarter total revenues amounted to \$273 million, up \$25 million or 10% from \$248 million in the third quarter of 2021. This growth in total revenues was driven by a \$37 million increase in ABA Bank's revenues, whereas Credigy's third-quarter revenues declined \$11 million year over year. For the first nine months of fiscal 2022, the segment generated net income of \$425 million, stable compared to \$426 million in the same period of 2021.

Credigy

For the third quarter of 2022, the Credigy subsidiary's net income totalled \$44 million, a \$55 million or 56% year-over-year decrease that was essentially due to lower total revenues and higher provisions for credit losses, whereas reversals of allowances for credit losses on non-impaired loans and on POCI loans had been recorded in the third quarter of 2021. The subsidiary's third-quarter income before provisions for credit losses and income taxes amounted to \$74 million, an 8% year-over-year decrease attributable to the lower revenues, which totalled \$105 million in third-quarter 2022 versus \$116 million in third-quarter 2021, as certain portfolios had delivered stronger performance in the third quarter of 2021. Third-quarter non-interest expenses stood at \$31 million, a \$5 million year-over-year decrease that was essentially due to lower variable compensation associated with the lower revenues experienced in the third quarter of 2022. Third-quarter provisions for credit losses were \$64 million higher than those of third-quarter 2021, mainly because, in the third quarter of 2021, reversals of allowances for credit losses on non-impaired loans had been recorded to reflect improved macroeconomic conditions and also due to a favourable remeasurement of POCI loan portfolios in the third quarter of 2021.

For the nine-month period ended July 31, 2022, the Credigy subsidiary's net income totalled \$170 million, a \$77 million year-over-year decrease that was notably due to a significant increase in provisions for credit losses. The subsidiary's nine-month income before provisions for credit losses and income taxes totalled \$252 million, down 9%. Its nine-month total revenues amounted to \$351 million, down from \$386 million in the same period of 2021. While there was growth in net interest income, it was more than offset by a decrease in non-interest income, as a \$26 million gain had been realized in the first quarter of 2021 upon a disposal of loan portfolios and given a favourable impact of remeasuring the fair value of certain portfolios in the same period of 2021. Nine-month non-interest expenses were down \$10 million due to a decrease in variable compensation. Provisions for credit losses rose \$78 million year over year, whereas in the first nine months of 2021, higher reversals of allowances for credit losses on non-impaired loans had been recorded to reflect more favourable macroeconomic conditions at that time and more favourable remeasurements of POCI loan portfolios were also carried out in 2021.

ABA Bank

For the third quarter of 2022, the ABA Bank subsidiary's net income totalled \$81 million, up \$19 million or 31% from the third quarter of 2021. The subsidiary's third-quarter total revenues grew 28% year over year owing to sustained loan growth, partly offset by lower interest rates on loans given a competitive environment in Cambodia. Third-quarter non-interest expenses stood at \$55 million, a \$13 million year-over-year increase that was attributable to higher variable compensation associated with revenue growth, higher compensation and employee benefits given growth in ABA Bank's business activity, and higher occupancy expenses. ABA Bank recorded \$10 million in provisions for credit losses in the third quarter of 2022, stable compared to the third quarter of 2021.

For the nine-month period ended July 31, 2022, ABA Bank's net income totalled \$254 million, up 42% from the same nine-month period of 2021. The subsidiary's nine-month total revenues grew 32% year over year, mainly driven by the subsidiary's business growth, notably its sustained loan and deposit growth, partly offset by lower interest rates on loans. Nine-month non-interest expenses stood at \$154 million, a 20% year-over-year increase that was due to the same reasons provided above for the third quarter. ABA Bank recorded \$19 million in provisions for credit losses for the first nine months of 2022, a \$4 million year-over-year decrease that stems from lower provisions for credit losses on non-impaired loans.

Other

(millions of Canadian dollars)

	Quarter ended July 31		Nine months ended July 31	
	2022	2021 ⁽¹⁾	2022	2021 ⁽¹⁾
Operating results				
Net interest income ⁽²⁾	(141)	(98)	(381)	(273)
Non-interest income ⁽²⁾	36	99	226	218
Total revenues	(105)	1	(155)	(55)
Non-interest expenses	85	97	214	255
Income before provisions for credit losses and income taxes	(190)	(96)	(369)	(310)
Provisions for credit losses	1	—	1	—
Income before income taxes	(191)	(96)	(370)	(310)
Income taxes (recovery) ⁽²⁾	(96)	(58)	(229)	(189)
Net loss	(95)	(38)	(141)	(121)
Non-controlling interests	—	—	(1)	—
Net loss attributable to the Bank's shareholders and holders of other equity instruments	(95)	(38)	(140)	(121)
Average assets ⁽³⁾	72,830	59,402	71,041	62,817

(1) For the quarter and nine-month period ended July 31, 2021, certain amounts have been reclassified.

(2) For the quarter ended July 31, 2022, *Net interest income* was reduced by \$60 million (\$46 million in 2021), *Non-interest income* was reduced by \$11 million (\$1 million in 2021), and an equivalent amount was recorded in *Income taxes*. For the nine-month period ended July 31, 2022, *Net interest income* was reduced by \$169 million (\$142 million in 2021), *Non-interest income* was reduced by \$18 million (\$6 million in 2021), and an equivalent amount was recorded in *Income taxes*. These adjustments include a reversal of the taxable equivalent of the Financial Markets segment and the *Other* heading. 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.

(3) Represents an average of the daily balances for the period.

For the *Other* heading of segment results, there was a net loss of \$95 million in the third quarter of 2022 compared to a net loss of \$38 million in the same quarter of 2021. This change in net loss stems essentially from a decrease in total revenues arising from a lower contribution from treasury activities, notably higher gains on investments in the third quarter of 2021 due to more favourable market conditions. This decrease was tempered, however, by a reduction in non-interest expenses, mainly due to the pension plan expense.

For the nine-month period ended July 31, 2022, net loss stood at \$141 million compared to a net loss of \$121 million in the same period of 2021. This change in net loss stems from a decrease in total revenues arising from a lower contribution from treasury activities. This decrease was partly offset by a reduction in non-interest expenses, notably variable compensation, the pension plan expense, and a \$20 million reversal of the provision for the compensatory tax on salaries paid in Quebec.

Consolidated Balance Sheet

Consolidated Balance Sheet Summary

(millions of Canadian dollars)	As at July 31, 2022	As at October 31, 2021	% Change
Assets			
Cash and deposits with financial institutions	37,968	33,879	12
Securities	106,188	106,304	–
Securities purchased under reverse repurchase agreements and securities borrowed	16,823	7,516	124
Loans and acceptances, net of allowances	200,924	182,689	10
Other	25,148	25,407	(1)
	387,051	355,795	9
Liabilities and equity			
Deposits	257,190	240,938	7
Other	107,254	95,233	13
Subordinated debt	1,510	768	97
Equity attributable to the Bank's shareholders and holders of other equity instruments	21,095	18,853	12
Non-controlling interests	2	3	(33)
	387,051	355,795	9

Assets

As at July 31, 2022, the Bank had total assets of \$387.1 billion, rising \$31.3 billion or 9% from \$355.8 billion as at October 31, 2021. Cash and deposits with financial institutions, totalling \$38.0 billion as at July 31, 2022, increased by \$4.1 billion, mainly due to deposits with the U.S. Federal Reserve. Cash and deposits with financial institutions remained high given the liquidity obtained from the financing initiatives deployed by the Canadian government in 2020, through the Bank of Canada, to support the Canadian financial system in response to COVID-19.

As at July 31, 2022, securities totalled \$106.2 billion, decreasing \$0.1 billion since October 31, 2021. Securities at fair value through profit or loss decreased by \$1.1 billion or 1%, essentially due to a decrease in equity securities, tempered by increases in securities issued or guaranteed by the Canadian government, by Canadian municipal and provincial governments, and by U.S. Treasury, other U.S. agencies and other foreign governments. Securities other than those measured at fair value through profit or loss rose \$1.0 billion, essentially due to an increase in securities at amortized cost. Securities purchased under reverse repurchase agreements and securities borrowed increased by \$9.3 billion, relating mainly to the activities of the Financial Markets segment.

Totalling \$200.9 billion as at July 31, 2022, loans and acceptances, net of allowances for credit losses, rose \$18.2 billion or 10% since October 31, 2021. The following table provides a breakdown of the main loan and acceptance portfolios.

(millions of Canadian dollars)	As at July 31, 2022	As at October 31, 2021	As at July 31, 2021
Loans and acceptances			
Residential mortgage and home equity lines of credit	107,105	99,146	97,056
Personal	15,669	14,449	13,900
Credit card	2,318	2,150	2,035
Business and government	76,784	67,942	67,009
	201,876	183,687	180,000
Allowances for credit losses	(952)	(998)	(1,054)
	200,924	182,689	178,946

Since October 31, 2021, residential mortgages (including home equity lines of credit) rose \$8.0 billion or 8% given sustained demand for mortgage credit in the Personal and Commercial segment and at the ABA Bank subsidiary, personal loans grew owing to the business activities of Personal Banking and ABA Bank, and credit card receivables also increased, as the consumer spending habits of clients gradually resumed and resulted in notable purchasing growth in the third quarter of 2022. Also since October 31, 2021, loans and acceptances to business and government rose \$8.8 billion or 13%, mainly due to business growth at Commercial Banking and in corporate financial services.

When compared to July 31, 2021, loans and acceptances, net of allowances for credit losses, grew \$22.0 billion or 12%, residential mortgages (including home equity lines of credit) were up \$10.0 billion or 10% due to sustained demand for mortgage credit and to business growth at ABA Bank, and personal loans rose \$1.8 billion due to the business activities of Personal Banking and ABA Bank. Also since July 31, 2021, credit card receivables grew \$0.3 billion as consumer spending resumed, and loans and acceptances to business and government rose \$9.8 billion or 15%, owing essentially to the activities of Commercial Banking and corporate financial services.

Impaired loans include loans classified in Stage 3 of the expected credit loss model and the purchased or originated credit-impaired (POCI) loans of the Credigy subsidiary. As at July 31, 2022, gross impaired loans stood at \$951 million compared to \$1,126 million as at October 31, 2021. Net impaired loans stood at \$712 million as at July 31, 2022 compared to \$836 million as at October 31, 2021, a \$124 million decrease related essentially to POCI loans, which were \$411 million as at July 31, 2022 versus \$553 million as at October 31, 2021, due to maturities and repayments of certain portfolios. However, net impaired loans excluding POCI loans were up due to ABA Bank's loan portfolios given the end of relief measures granted to the subsidiary's clients, partly offset by a decrease in the net impaired loans of the Personal and Commercial Banking, Wealth Management, Financial Markets, and Credigy loan portfolios.

As at July 31, 2022, other assets totalled \$25.1 billion, a \$0.3 billion decrease since October 31, 2021 that was mainly due to a decrease in derivative financial instruments, which were down \$2.5 billion. This decrease was partly offset by increases in certain other assets, notably receivables, prepaid expenses and other items as well as amounts due from clients, dealers and brokers.

Liabilities

As at July 31, 2022, the Bank had total liabilities of \$366.0 billion compared to \$336.9 billion as at October 31, 2021.

The Bank's total deposit liability stood at \$257.2 billion as at July 31, 2022, rising \$16.3 billion or 7% from \$240.9 billion as at October 31, 2021. At \$74.8 billion as at July 31, 2022, personal deposits grew \$4.7 billion since October 31, 2021. This increase came mainly from business growth at Personal Banking, in the Wealth Management segment, and at ABA Bank.

Business and government deposits totalled \$178.3 billion as at July 31, 2022, rising \$10.4 billion since October 31, 2021. This increase came from treasury funding activities, including \$3.1 billion in deposits subject to bank recapitalization (bail-in) conversion regulations as well as business and government deposits from Commercial Banking activities. Deposits from deposit-taking institutions stood at \$4.1 billion as at July 31, 2022, rising \$1.1 billion since October 31, 2021 due to treasury funding activities.

Other liabilities, totalling \$107.3 billion as at July 31, 2022, increased \$12.1 billion since October 31, 2021, resulting essentially from a \$12.8 billion increase in obligations related to securities sold under repurchase agreements and securities loaned and from a \$3.0 billion increase in obligations related to securities sold short, partly offset by a \$3.4 billion decrease in derivative financial instruments.

In addition, the increase in subordinated debt since October 31, 2021 stems from the issuance, on July 25, 2022, of medium-term notes for an amount of \$750 million.

Equity

As at July 31, 2022, equity attributable to the Bank's shareholders and holders of other equity instruments was \$21.1 billion, rising \$2.2 billion since October 31, 2021. This increase was due to net income net of dividends, to issuances of common shares under the Stock Option Plan, to remeasurements of pension plans and other post-employment benefit plans, to the net fair value change attributable to the credit risk on financial liabilities designated at fair value through profit or loss, and to accumulated other comprehensive income, notably net unrealized foreign currency translation gains on investments in foreign operations. These increases were partly offset by repurchases of common shares for cancellation.

Exposure to Certain Activities

The recommendations made by the Financial Stability Board's Enhanced Disclosure Task Force (EDTF) seek to enhance the transparency and measurement of certain exposures, in particular structured entities, subprime and Alt-A exposures, collateralized debt obligations, residential and commercial mortgage-backed securities, and leveraged financing structures. The Bank does not market any specific mortgage financing program to subprime or Alt-A clients. The Bank does not have any significant direct position in residential and commercial mortgage-backed securities that are not insured by the Canada Mortgage and Housing Corporation (CMHC). Credit derivative positions are presented in the *Supplementary Regulatory Capital and Pillar 3 Disclosure* report, which is available on the Bank's website at nbc.ca.

Leveraged finance is commonly used to achieve a specific objective, for example, to make an acquisition, complete a buy-out, or repurchase shares. Leveraged finance risk exposure takes the form of both funded and unfunded commitments. As at July 31, 2022, total commitments for this type of loan stood at \$5,225 million (\$4,048 million as at October 31, 2021). Details about other exposures are provided in the table on structured entities in Note 27 to the audited annual consolidated financial statements for the year ended October 31, 2021.

Related Party Transactions

The Bank's policies and procedures regarding related party transactions have not significantly changed since October 31, 2021. For additional information, see Note 28 to the audited annual consolidated financial statements for the year ended October 31, 2021.

Securitization and Off-Balance-Sheet Arrangements

In the normal course of business, the Bank is party to various financial arrangements that, under IFRS, are not required to be recorded on the Consolidated Balance Sheet or are recorded at amounts other than their notional or contractual values. These arrangements include, among others, transactions with structured entities, derivative financial instruments, issuances of guarantees, credit instruments, and financial assets received as collateral. A complete analysis of these types of arrangements, including their nature, business purpose, and importance, is provided on pages 57 and 58 of the *2021 Annual Report*.

For additional information on guarantees, commitments, and structured entities, see Notes 26 and 27 to the audited annual consolidated financial statements for the year ended October 31, 2021. For additional information about financial assets transferred but not derecognized, see Note 6 to these consolidated financial statements.

Income Taxes

On August 9, 2022, the Government of Canada released for public comment draft legislative proposals to implement tax measures applicable to certain entities of banking and life insurer groups, as presented in its budget of April 7, 2022. These measures include the Canada Recovery Dividend (a one-time, 15% tax on the fiscal 2021 and 2020 average taxable income) and a 1.5% increase in the statutory tax rate. Since these proposed tax measures were not substantively enacted at the reporting date, no amount has been recognized in the Bank's consolidated financial statements as at July 31, 2022.

Capital Management

Capital management has a dual role of ensuring a competitive return to the Bank's shareholders while maintaining a solid capital foundation that covers risks inherent to the Bank's business, supports its business segments, and protects its clients. The Bank's capital management policy defines guiding principles as well as the roles and responsibilities of its internal capital adequacy assessment process. This process aims to determine the capital that the Bank needs to pursue its business activities and accommodate unexpected losses arising from extremely adverse economic and operational conditions. For additional information on the capital management framework, see the Capital Management section on pages 59 to 68 of the Bank's *2021 Annual Report*.

Basel Accord

The Bank and all other major Canadian banks have to maintain minimum capital ratios established by OSFI: a CET1 capital ratio of at least 10.5%, a Tier 1 capital ratio of at least 12.0%, and a Total capital ratio of at least 14.0%. For additional information on the ratio calculations, see page 60 of the *2021 Annual Report*. All of these ratios include a capital conservation buffer of 2.5% established by the BCBS and OSFI as well as a 1.0% surcharge applicable solely to Domestic Systemically Important Banks (D-SIBs) and a 2.5% 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. 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 calculated under Basel II, the difference is added to risk-weighted assets. Lastly, 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.

In addition to those measures, OSFI is requiring that regulatory capital instruments other than common equity have a non-viability contingent capital (NVCC) clause to ensure that investors bear losses before taxpayers should the government determine that it is in the public interest to rescue a non-viable financial institution. Instruments issued before January 1, 2013 that would be Basel-III-compliant if not for the absence of the NVCC clause were grandfathered and phased out over a ten-year period. As at July 31, 2022, the Bank has one remaining non-NVCC Tier 2 subordinated debt capital instrument, which has now been completely phased out of regulatory capital.

OSFI's *Total Loss Absorbing Capacity* (TLAC) guideline, which applies to all D-SIBs under the federal government's bail-in regulations, is to ensure that a D-SIB has sufficient loss-absorbing capacity to support its recapitalization in the unlikely event it becomes non-viable. Available TLAC includes total capital as well as certain senior unsecured debts that satisfy all of the eligibility criteria of OSFI's TLAC guideline. Since November 1, 2021, OSFI has been requiring D-SIBs to maintain a risk-based TLAC ratio of at least 24.0% (including the domestic stability buffer) of risk-weighted assets and a TLAC leverage ratio of at least 6.75%. The TLAC ratio is calculated by dividing available TLAC by risk-weighted assets, and the TLAC leverage ratio is calculated by dividing available TLAC by total exposure. As at July 31, 2022, outstanding liabilities of \$15.0 billion (\$11.9 billion as at October 31, 2021) were subject to conversion regulations for bail-in purposes.

Requirements – Regulatory Capital, Leverage, and TLAC Ratios

							As at July 31, 2022
	Capital conservation buffer	Minimum set by BCBS	D-SIB surcharge	Minimum set by OSFI ⁽¹⁾	Domestic stability buffer ⁽²⁾	Minimum set by OSFI ⁽¹⁾ , including the domestic stability buffer	
Capital ratios							
CET1	4.5 %	2.5 %	7.0 %	1.0 %	8.0 %	2.5 %	10.5 %
Tier 1	6.0 %	2.5 %	8.5 %	1.0 %	9.5 %	2.5 %	12.0 %
Total	8.0 %	2.5 %	10.5 %	1.0 %	11.5 %	2.5 %	14.0 %
Leverage ratio	3.0 %	n.a.	3.0 %	n.a.	3.0 %	n.a.	3.0 %
TLAC ratio	18.0 %	2.5 %	20.5 %	1.0 %	21.5 %	2.5 %	24.0 %
TLAC leverage ratio	6.75 %	n.a.	6.75 %	n.a.	6.75 %	n.a.	6.75 %

n.a. Not applicable

(1) The capital ratios and the TLAC ratio include the capital conservation buffer and the D-SIB surcharge.

(2) On June 22, 2022, OSFI confirmed that the domestic stability buffer was being maintained at 2.5%.

The Bank ensures that its capital levels are always above the minimum capital requirements set by OSFI, including the domestic stability buffer. By maintaining a strong capital structure, the Bank can cover the risks inherent to its business activities, support its business segments, and protect its clients.

Other disclosure requirements pursuant to Pillar 3 of the Basel Accord and a set of recommendations defined by the EDTF are presented in the *Supplementary Regulatory Capital and Pillar 3 Disclosure* report published quarterly and available on the Bank's website at nbc.ca. Also available on the Bank's website is a complete list of capital instruments and their main features.

Regulatory Developments

The Bank closely monitors regulatory developments and participates actively in various consultative processes. On March 27, 2020, in response to the impact of the COVID-19 pandemic, OSFI announced a series of regulatory adjustments to support the financial and operational resilience of banks. For additional information, see the section entitled COVID-19 Pandemic – Key Measures Introduced by the Regulatory Authorities on page 17 of the *2021 Annual Report*. For additional information about the regulatory context on October 31, 2021, see pages 62 and 63 of the Capital Management section in the *2021 Annual Report*. In addition, since November 1, 2021, the below-described regulatory developments should also be considered.

On November 29, 2021, OSFI postponed the implementation of the final Basel III reforms to the second quarter of 2023. The implementation date of the revised market risk framework and the credit valuation adjustment (CVA) risk framework remains the first quarter of 2024. OSFI also announced the details of its final policy positions on a series of key topics associated with guidelines that were the subject of extensive consultations in the spring of 2021.

On January 31, 2022, OSFI released its final capital and liquidity rules that incorporate the final Basel III reforms, and on February 7, 2022, OSFI published corresponding changes to the regulatory returns, i.e., the *Basel Capital Adequacy Return* (BCAR) and the *Leverage Requirements Return* (LRR).

On March 31, 2022, OSFI published, for consultation purposes, a draft guideline entitled *Assurance on Capital, Leverage and Liquidity Returns*. OSFI relies largely on the regulatory returns produced by financial institutions when assessing their safety and soundness. The purpose of this draft guideline is to better inform auditors and institutions on the work to be performed on regulatory returns in order to clarify and align OSFI's assurance expectations across all financial institutions. In particular, the draft guideline addresses the assurance that must be provided by an external audit, attestation by senior management, the assurance that must be provided by an internal audit, and the proposed effective dates. The Bank is actively participating in this consultation.

On June 30, 2022, the BCBS published its second public consultation on the prudential treatment of the cryptoasset risk exposures faced by banks. This consultation builds on preliminary proposals from the first consultation published in June 2021 and the responses received. The BCBS plans to finalize the standards by the end of 2022. The Bank is actively participating in this consultation. On August 18, 2022, OSFI released an advisory on interim arrangements for dealing with cryptoassets held by federally regulated financial institutions, which outlines its prudential expectations on cryptoasset holdings and sets exposure limits. OSFI also provided guidance on the regulatory capital and liquidity treatment of cryptoasset exposures. These interim arrangements will be effective in the second quarter of 2023.

Management Activities

On November 4, 2021, OSFI amended its capital distribution expectations, namely, by permitting financial institutions to increase regular dividends and, subject to OSFI approval, to buy back shares.

On November 30, 2021, the Bank's Board of Directors approved a normal course issuer bid, which began on December 10, 2021, to repurchase for cancellation up to 7,000,000 common shares (representing approximately 2% of its common shares outstanding) over a 12-month period ending no later than December 9, 2022. This normal course issuer bid was approved by OSFI and the Toronto Stock Exchange (TSX) on December 8, 2021. During the nine-month period ended July 31, 2022, the Bank repurchased 2,500,000 common shares under this program for \$245 million, which reduced *Common share* capital by \$24 million and *Retained earnings* by \$221 million.

On July 25, 2022, the Bank issued medium-term notes for an amount of \$750 million, bearing interest at 5.426% and maturing on August 16, 2032. As these medium-term notes satisfy the NVCC requirements, they qualify for the purposes of calculating regulatory capital under Basel III.

Dividends

On August 23, 2022, the Board of Directors declared regular dividends on the various series of first preferred shares and a dividend of 92 cents per common share, payable on November 1, 2022 to shareholders of record on September 26, 2022.

Shares, Other Equity Instruments, and Stock Options

	As at July 31, 2022	
	Number of shares or LRCN ⁽¹⁾	\$ million
First preferred shares		
Series 30	14,000,000	350
Series 32	12,000,000	300
Series 38	16,000,000	400
Series 40	12,000,000	300
Series 42	12,000,000	300
	66,000,000	1,650
Other equity instruments		
LRCN – Series 1	500,000	500
LRCN – Series 2	500,000	500
	1,000,000	1,000
Common shares	67,000,000	2,650
Stock options	336,455,568	3,189
	11,992,580	

(1) Limited Recourse Capital Notes (LRCN).

As at August 19, 2022, there were 336,457,021 common shares and 11,991,490 stock options outstanding. NVCC provisions require the conversion of capital instruments into a variable number of common shares should OSFI deem a bank to be non-viable or should the government publicly announce that a bank has accepted or agreed to accept a capital injection. If an NVCC trigger event were to occur, all of the Bank's preferred shares, LRCNs, and medium-term notes maturing on February 1, 2028 and August 16, 2032, which are NVCC capital instruments, would be converted into common shares of the Bank according to an automatic conversion formula at a conversion price corresponding to the greater of the following amounts: (i) a \$5.00 contractual floor price; or (ii) the market price of the Bank's common shares on the date of the trigger event (10-day weighted average price). Based on a \$5.00 floor price and including an estimate for accrued dividends and interest, these NVCC capital instruments would be converted into a maximum of 990 million Bank common shares, which would have a 74.6% dilutive effect based on the number of Bank common shares outstanding as at July 31, 2022.

Movement in Regulatory Capital⁽¹⁾

(millions of Canadian dollars)

	Nine months ended July 31, 2022
Common Equity Tier 1 (CET1) capital	
Balance at beginning	12,973
Issuance of common shares (including Stock Option Plan)	48
Impact of shares purchased or sold for trading	(1)
Repurchase of common shares	(245)
Other contributed surplus	14
Dividends on preferred and common shares and distributions on other equity instruments	(982)
Net income attributable to the Bank's shareholders and holders of other equity instruments	2,652
Removal of own credit spread (net of income taxes)	(673)
Other	697
Movements in accumulated other comprehensive income	
Translation adjustments	108
Debt securities at fair value through other comprehensive income	(95)
Other	(2)
Change in goodwill and intangible assets (net of related tax liability)	(60)
Other, including regulatory adjustments and transitional arrangements	
Change in defined benefit pension plan asset (net of related tax liability)	(102)
Change in amount exceeding 15% threshold	
Deferred tax assets	—
Significant investment in common shares of financial institutions	—
Deferred tax assets, unless they result from temporary differences (net of related tax liability)	(4)
Other deductions or regulatory adjustments to CET1 implemented by OSFI ⁽²⁾	(58)
Change in other regulatory adjustments	—
Balance at end	14,270
Additional Tier 1 capital	
Balance at beginning	2,649
New Tier 1 eligible capital issuances	—
Redeemed capital	—
Change in non-qualifying Additional Tier 1 subject to phase-out	—
Other, including regulatory adjustments and transitional arrangements	(1)
Balance at end	2,648
Total Tier 1 capital	16,918
Tier 2 capital	
Balance at beginning	1,021
New Tier 2 eligible capital issuances	750
Redeemed capital	—
Change in non-qualifying Tier 2 subject to phase-out	—
Tier 2 instruments issued by subsidiaries and held by third parties	—
Change in certain allowances for credit losses	2
Other, including regulatory adjustments and transitional arrangements	43
Balance at end	1,816
Total regulatory capital	18,734

(1) See the Financial Reporting Method section on pages 4 to 6 for additional information on capital management measures.

(2) This item includes 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 page 17 of the *2021 Annual Report*.

Risk-Weighted Assets by Key Risk Drivers

Risk-weighted assets (RWA) amounted to \$111.4 billion as at July 31, 2022 compared to \$104.4 billion as at October 31, 2021, a \$7.0 billion increase resulting mainly from organic growth in RWA and from foreign exchange movements, partly offset by improvement in the credit quality of the loan portfolio and of exposures to derivative financial instruments and by model updates. The changes in the Bank's RWA by risk type are presented in the following table.

Movement of Risk-Weighted Assets by Key Drivers⁽¹⁾

(millions of Canadian dollars)

			July 31, 2022	April 30, 2022	January 31, 2022	October 31, 2021
	Non-counterparty credit risk	Counterparty credit risk	Total	Total	Total	Total
Credit risk – Risk-weighted assets at beginning	79,537	9,341	88,878	88,889	87,213	85,914
Book size	3,450	(950)	2,500	1,780	1,002	1,944
Book quality	226	(285)	(59)	(1,397)	(22)	(430)
Model updates	(74)	87	13	(666)	29	(7)
Methodology and policy	–	–	–	–	–	–
Acquisitions and disposals	–	–	–	–	–	–
Foreign exchange movements	(90)	(13)	(103)	272	667	(208)
Credit risk – Risk-weighted assets at end	83,049	8,180	91,229	88,878	88,889	87,213
Market risk – Risk-weighted assets at beginning			4,453	3,498	3,770	4,072
Movement in risk levels ⁽²⁾			1,243	542	(272)	(302)
Model updates			–	413	–	–
Methodology and policy			–	–	–	–
Acquisitions and disposals			–	–	–	–
Market risk – Risk-weighted assets at end			5,696	4,453	3,498	3,770
Operational risk – Risk-weighted assets at beginning			14,147	13,781	13,375	13,153
Movement in risk levels			305	366	406	222
Acquisitions and disposals			–	–	–	–
Operational risk – Risk-weighted assets at end			14,452	14,147	13,781	13,375
Risk-weighted assets at end			111,377	107,478	106,168	104,358

(1) See the Financial Reporting Method section on pages 4 to 6 for additional information on capital management measures.

(1) See the Financial Reporting Method section on pages 4 to 6 for additional information.
 (2) Also includes foreign exchange rate movements that are not considered material.

The table above provides risk-weighted asset movements by the key drivers underlying the different risk categories.

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

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

The *Model updates* item is used to reflect implementations of new models, changes in model scope, and any other change applied to address model malfunctions. During the quarter ended January 31, 2022, the Bank updated the model used for retail lines of credit. During the quarter ended April 30, 2022, the Bank transitioned a retail loan portfolio from the standardized approach to the Advanced Internal Ratings-Based (AIRB) approach for measuring credit risk. It also changed the SVaR period of the 2008 Global Financial Crisis (GFC) to the 2020 COVID-19 period at the start of the second quarter of 2022 and then returned to the 2008 GFC period towards the end of the quarter. During the quarter ended July 31, 2022, the Bank updated the model used for home equity line of credit.

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

Regulatory Capital and TLAC Ratios

As at July 31, 2022, the Bank's CET1, Tier 1, and Total capital ratios were, respectively, 12.8%, 15.2% and 16.8%, compared to ratios of, respectively, 12.4%, 15.0% and 15.9% as at October 31, 2021. All of the capital ratios have therefore increased since October 31, 2021, essentially due to net income net of dividends and common share issuances under the Stock Option Plan. These factors were partly offset by growth in RWA, common share repurchases, and the impact of the transitional measures applicable to ECL provisioning, of which the scaling factor decreased from 50% to 25%. The increase in the Total capital ratio was also due to the \$750 million issuance of medium-term notes on July 25, 2022. As at July 31, 2022, the leverage ratio was 4.4%, stable compared to October 31, 2021. The growth in Tier 1 capital was partly offset by growth in total exposure, which continues to benefit from the temporary measures provided by OSFI with respect to the exclusion of exposures from central bank reserves.

As at July 31, 2022, the Bank's TLAC ratio and TLAC leverage ratio were, respectively, 28.3% and 8.2%, compared with 26.3% and 7.8%, respectively, as at October 31, 2021. The increase in the TLAC ratio was due to the same factors as those provided for the Total capital ratio and the net TLAC instrument issuances during the period. The increase in the TLAC leverage ratio was due to the same factors as those provided for the leverage ratio and to the net TLAC instrument issuances.

During the quarter and nine-month period ended July 31, 2022, the Bank was in compliance with all of OSFI's regulatory capital, leverage, and TLAC requirements.

Regulatory Capital⁽¹⁾ and TLAC⁽²⁾

(millions of Canadian dollars)	As at July 31, 2022		As at October 31, 2021	
	Adjusted ⁽³⁾		Adjusted ⁽³⁾	
Capital				
CET1	14,221	14,270	12,866	12,973
Tier 1	16,869	16,918	15,515	15,622
Total	18,734	18,734	16,643	16,643
Risk-weighted assets	111,377	111,377	104,358	104,358
Total exposure	383,360	383,360	351,160	351,160
Capital ratios				
CET1	12.8 %	12.8 %	12.3 %	12.4 %
Tier 1	15.1 %	15.2 %	14.9 %	15.0 %
Total	16.8 %	16.8 %	15.9 %	15.9 %
Leverage ratio	4.4 %	4.4 %	4.4 %	4.4 %
Available TLAC⁽²⁾	31,549	31,549	27,492	27,492
TLAC ratio⁽²⁾	28.3 %	28.3 %	26.3 %	26.3 %
TLAC leverage ratio⁽²⁾	8.2 %	8.2 %	7.8 %	7.8 %

(1) Capital, risk-weighted assets, total exposure, the capital ratios, and the leverage ratio are calculated in accordance with the Basel III rules, as set out in OSFI's *Capital Adequacy Requirements* and *Leverage Requirements* guidelines.

(2) Available TLAC, the TLAC ratio, and the TLAC leverage ratio are calculated in accordance with OSFI's *Total Loss Absorbing Capacity* guideline.

(3) Adjusted amounts are calculated in accordance with the Basel III rules, as set out in OSFI's *Capital Adequacy Requirements* guideline, and exclude the transitional measure for provisioning expected credit losses. For additional information, see the section entitled COVID-19 Pandemic – Key Measures Introduced by the Regulatory Authorities on page 17 of the *2021 Annual Report*.

Global Systemically Important Banks – Public Disclosure Requirements

On July 3, 2013, the BCBS published *Global Systemically Important Banks: Assessment Methodology and the Additional Loss Absorbency Requirement*, which describes the annual assessment methodology and indicators used by the BCBS and the Financial Stability Board to evaluate global systemically important banks (G-SIBs). On July 5, 2018, the BCBS published a revised version that provides an update to the assessment methodology. The document also sets out the annual public disclosure requirements applicable to large globally active banks.

In September 2015, OSFI published an advisory entitled *Global Systemically Important Banks – Public Disclosure Requirements* addressing the implementation of G-SIB public disclosure requirements in Canada. On August 13, 2021, OSFI published a revised version of its advisory that incorporates the updated assessment methodology used to identify global systemically important banks published by the BCBS on July 5, 2018. The new disclosure requirements, which took effect as of first-quarter 2022, consist of a new trading volume indicator and the inclusion of insurance activities for certain existing indicators. Canadian banks, including the Bank, which have not been identified as G-SIBs and whose total exposure (as calculated using the Basel III leverage ratio) is greater than the equivalent of 200 billion euros at year-end, are required to publish the indicators annually. The indicators, updated annually, are calculated and presented based on specific instructions issued by the BCBS. As a result, values may not be directly comparable to other measures disclosed in this report. The following table provides the indicators used in BCBS's assessment methodology for evaluating G-SIBs.

Indicators – Global Systemically Important Banks (G-SIBs)⁽¹⁾

(millions of Canadian dollars)		As at October 31	
Category	Indicators	2021	2020
Cross-jurisdictional activity ⁽²⁾	Cross-jurisdictional claims	87,661	82,516
	Cross-jurisdictional liabilities	65,214	62,282
Size ⁽³⁾	Total exposures as defined for use in the Basel III leverage ratio ⁽⁴⁾	387,725	359,980
Interconnectedness ⁽⁵⁾	Intra-financial system assets ⁽⁴⁾	50,614	40,412
	Intra-financial system liabilities ⁽⁴⁾	40,301	28,938
	Securities outstanding ⁽⁴⁾	105,213	82,474
Substitutability / financial institutions infrastructure ⁽⁶⁾	Payment activity ⁽⁷⁾	14,059,326	14,045,497
	Assets under custody	651,345	596,656
	Underwritten transactions in debt and equity markets	35,658	35,095
	Trading volume ⁽⁸⁾		
	Fixed-income securities ⁽⁸⁾	740,927	
	Equities and other securities ⁽⁸⁾	1,289,087	
Complexity ⁽⁹⁾	Notional amount of over-the-counter derivative financial instruments ⁽⁴⁾	1,481,260	1,177,539
	Trading and investment securities ⁽¹⁰⁾	52,936	45,988
	Level 3 financial assets ⁽⁴⁾	1,077	1,232

(1) As at October 31, 2021, the G-SIB indicators were prepared using the methodology prescribed in the BCBS guidelines published in July 2018 and in the guidance provided by the BCBS in January 2022. As at October 31, 2020, the G-SIB indicators had been prepared using the methodology prescribed in the BCBS guidelines published in July 2013 and in the guidance provided by the BCBS in January 2021. The indicators are based on the scope of regulatory consolidation unless indicated otherwise.

(2) Represents the Bank's level of interaction outside Canada.

(3) Represents the Bank's total on-and-off balance sheet exposures, as determined by OSFI's Basel III leverage ratio rules before regulatory adjustments.

(4) Includes insurance activities. The comparative figures have not been restated to reflect this change.

(5) Represents transactions with other financial institutions.

(6) Represents the extent to which the Bank's services could be substituted by other institutions.

(7) For the fiscal years ended October 31, 2021 and 2020.

(8) Trading volume is a new indicator in effect for the fiscal year ended October 31, 2021, as per OSFI's revised advisory entitled *Global Systemically Important Bank – Public Disclosure Requirements*. This new indicator consists of two sub-indicators: fixed-income securities as well as equities and other securities. OSFI is not requiring comparative figures to be reported for this new indicator.

(9) Includes the level of complexity and volume of the Bank's trading activities represented through derivative financial instruments, trading securities, investment securities, and Level 3 financial assets.

(10) The amount as at October 31, 2021 has been revised from the previously reported amount.

Risk Management

Risk-taking is intrinsic to a financial institution's business. The Bank views risk as an integral part of its development and the diversification of its activities. It advocates a risk management approach consistent with its business strategy. The Bank voluntarily exposes itself to certain risk categories, particularly credit and market risk, in order to generate revenue. It assumes certain risks that are inherent to its activities—to which it does not choose to expose itself—and that do not generate revenue, i.e., mainly operational risks.

Risks	Description
COVID-19 Pandemic	The Bank is continuing to monitor the impacts and potential consequences of the COVID-19 pandemic. From its onset, the pandemic has had disruptive and adverse effects in the countries where the Bank does business and, more broadly, on the global economy. COVID-19 has also shed light, and could continue to shed light, on several top and emerging risks to which the Bank is exposed. Despite the exceptional nature of this situation, the risks are being rigorously managed. For additional information, see the section entitled COVID-19 Pandemic – Impact of the COVID-19 Risk Factor on page 16 of the <i>2021 Annual Report</i> .
Emerging risks – Geopolitical risks	On February 24, 2022, the geopolitical situation in Eastern Europe intensified with the invasion of Ukraine by Russia. The war between both countries continues to evolve as military action unfolds and additional sanctions are imposed. The war is increasingly affecting global financial and economic markets and exacerbating current economic conditions, including such issues as rising inflation and a disrupted global supply chain. Given the conflict's broader impact on macroeconomic conditions, the Bank is closely monitoring the impacts and potential consequences on its financial position and that of its clients. The extent to which entities are or will be affected depends largely on the nature and duration of uncertain and unpredictable events, such as new military action, additional sanctions, and reactions to ongoing changes by global financial markets.

Despite the exercise of stringent risk management and the mitigation measures in place, risk cannot be eliminated entirely, and residual risks may occasionally cause significant losses. Certain risks are discussed hereafter. For additional information, see the Risk Management section on pages 69 to 107 of the *2021 Annual Report*. Risk management information is also provided in Note 5 to these consolidated financial statements, which covers loans.

Credit Risk

Credit risk is the risk of incurring a financial loss if an obligor does not fully honour its contractual commitments to the Bank. Obligors may be debtors, issuers, counterparties, or guarantors. Credit risk is the most significant risk facing the Bank in the normal course of business. Obligors have been affected by the economic environment resulting from COVID-19 and its impact on global and local economies. This exceptional situation has led to significant changes in the overall market environment, including business closures and temporary layoffs. However, certain government measures have been implemented to assist retail and business clients affected by COVID-19.

Regulatory Developments

On December 17, 2021, OSFI confirmed the qualifying rate for uninsured mortgages (i.e., residential mortgages with a down payment of 20% or more) will remain as the greater of the mortgage contract interest rate plus 2% and a minimum floor of 5.25%. OSFI is well aware that the country's post-pandemic economic recovery must be backed by a strong financial system capable of supporting the Canadian population in the current environment and that real estate market conditions in Canada could heighten the financial risk weighing on lenders. The minimum qualifying interest rate provides an additional level of safety to ensure that borrowers would have the ability to make mortgage payments should circumstances change, e.g., in the case of reduced income or a rise in interest rates.

On June 28, 2022, OSFI published an Advisory entitled *Clarification on the Treatment of Innovative Real Estate Secured Lending Products Under Guideline B-20*. The Advisory complements the existing expectations set out in Guideline B-20 – *Residential Mortgage Underwriting Practices and Procedures*. The Advisory specifies OSFI's expectations concerning underwriting practices and procedures for reverse residential mortgages, residential mortgages with shared equity features, and combined loan plans (CLPs), notably for CLPs and the re-advanceability of credit above the 65% loan-to-value (LTV) limit. For loans that exceed the 65% LTV limit, there will be a transition period where a portion of the principal payments will go towards repaying the overall mortgage amount until it is below 65% of the original LTV ratio and not re-advanceable. The implementation date for this change is October 31, 2023.

The amounts shown in the following tables represent the Bank's maximum exposure to credit risk as at the financial reporting date, without taking into account any collateral held or any other credit enhancements. These amounts do not include allowances for credit losses nor amounts pledged as collateral. The table also excludes equity securities.

Maximum Credit Risk Exposure Under the Basel Asset Categories⁽¹⁾

(millions of Canadian dollars)							As at July 31, 2022	
	Drawn ⁽²⁾	Undrawn commitments	Repo-style transactions ⁽³⁾	Derivative financial instruments	Other off-balance-sheet items ⁽⁴⁾	Total	Standardized approach ⁽⁵⁾	AIRB approach
Retail								
Residential mortgages	71,654	8,550	–	–	–	80,204	10 %	90 %
Qualifying revolving retail	2,387	6,850	–	–	–	9,237	– %	100 %
Other retail	17,589	2,648	–	–	34	20,271	23 %	77 %
	91,630	18,048	–	–	34	109,712		
Non-retail								
Corporate	78,962	28,464	39,420	267	5,244	152,357	13 %	87 %
Sovereign	62,997	6,180	68,359	1	124	137,661	2 %	98 %
Financial institutions	6,529	126	78,179	1,814	758	87,406	26 %	74 %
	148,488	34,770	185,958	2,082	6,126	377,424		
Trading portfolio								
	–	–	–	13,097	–	13,097	1 %	99 %
Securitization								
	4,530	–	–	–	3,848	8,378	85 %	15 %
Total – Gross credit risk	244,648	52,818	185,958	15,179	10,008	508,611	13 %	87 %
Standardized approach⁽⁵⁾	28,813	332	29,933	1,849	4,220	65,147		
AIRB approach	215,835	52,486	156,025	13,330	5,788	443,464		
Total – Gross credit risk	244,648	52,818	185,958	15,179	10,008	508,611	13 %	87 %

(millions of Canadian dollars)							As at October 31, 2021	
	Drawn ⁽²⁾	Undrawn commitments	Repo-style transactions ⁽³⁾	Derivative financial instruments	Other off-balance-sheet items ⁽⁴⁾	Total	Standardized approach ⁽⁵⁾	AIRB approach
Retail								
Residential mortgages	66,791	10,578	–	–	–	77,369	9 %	91 %
Qualifying revolving retail	2,270	6,282	–	–	–	8,552	– %	100 %
Other retail	15,519	2,481	–	–	31	18,031	29 %	71 %
	84,580	19,341	–	–	31	103,952		
Non-retail								
Corporate	70,589	27,783	26,190	161	5,415	130,138	11 %	89 %
Sovereign	55,323	6,217	58,452	294	83	120,369	2 %	98 %
Financial institutions	7,228	126	72,122	2,248	619	82,343	28 %	72 %
	133,140	34,126	156,764	2,703	6,117	332,850		
Trading portfolio								
	–	–	–	17,010	–	17,010	– %	100 %
Securitization								
	3,269	–	–	–	4,206	7,475	68 %	32 %
Total – Gross credit risk	220,989	53,467	156,764	19,713	10,354	461,287	13 %	87 %
Standardized approach⁽⁵⁾	25,009	258	26,385	2,203	3,955	57,810		
AIRB approach	195,980	53,209	130,379	17,510	6,399	403,477		
Total – Gross credit risk	220,989	53,467	156,764	19,713	10,354	461,287	13 %	87 %

- (1) See the Financial Reporting Method section on pages 4 to 6 for additional information on capital management measures.
- (2) Excludes equity securities and certain other assets such as investments in deconsolidated subsidiaries and joint ventures, right-of-use properties and assets, goodwill, deferred tax assets, and intangible assets.
- (3) Securities purchased under reverse repurchase agreements and sold under repurchase agreements as well as securities loaned and borrowed.
- (4) Letters of guarantee, documentary letters of credit, and securitized assets that represent the Bank's commitment to make payments in the event that a client cannot meet its financial obligations to third parties.
- (5) Includes exposures to qualifying central counterparties (QCCP).

To meet OSFI's mortgage loan disclosure requirements, additional information has been provided in *Supplementary Financial Information – Third Quarter 2022* and in *Supplementary Regulatory Capital and Pillar 3 Disclosure – Third Quarter 2022*, which are available on the Bank's website at nbc.ca.

Market Risk

Market risk is the risk of losses arising from movements in market prices. The Bank is exposed to market risk through its participation in trading, investment, and asset/liability management activities. As a result of the COVID-19 pandemic and its impact on global and local economies, the Bank faces a volatile environment. At its onset, the pandemic sent stock markets into sharp decline and rendered them more volatile, pushed interest rates downwards, triggered a rapid and sudden rise in unemployment, and prompted an economic slowdown. Governments, monetary authorities, and regulators intervened to support the economy and the financial system, notably by deploying fiscal and monetary measures designed to increase liquidity and support incomes. Although the global economy recovered during fiscal 2021, if the COVID-19 pandemic persists, in particular through subsequent waves, its impacts on the global economy could worsen, and the measures in place might not be sufficient over the long term to completely avoid recessionary conditions. Adding to this uncertainty is the Russian-Ukrainian war, which is increasingly affecting global financial and economic markets and exacerbating current economic conditions, including such issues as rising inflation, a disrupted global supply chain and higher interest rates.

The following tables provide a breakdown of the Bank's Consolidated Balance Sheet into assets and liabilities by those that carry market risk and those that do not carry market risk, distinguishing between trading positions whose main risk measures are Value-at-Risk (VaR) and stressed VaR (SVaR) and non-trading positions that use other risk measures.

Reconciliation of Market Risk With Consolidated Balance Sheet Items

(millions of Canadian dollars)	As at July 31, 2022				
	Balance sheet	Market risk measures			
		Trading ⁽¹⁾	Non-trading ⁽²⁾	Not subject to market risk	
Assets					
Cash and deposits with financial institutions	37,968	1,195	20,251	16,522	Interest rate ⁽³⁾
Securities					
At fair value through profit or loss	83,651	82,067	1,584	–	Interest rate ⁽³⁾ and equity
At fair value through other comprehensive income	9,247	–	9,247	–	Interest rate ⁽³⁾ and equity ⁽⁴⁾
At amortized cost	13,290	–	13,290	–	Interest rate ⁽³⁾
Securities purchased under reverse repurchase agreements and securities borrowed	16,823	–	16,823	–	Interest rate ⁽³⁾⁽⁵⁾
Loans and acceptances, net of allowances	200,924	9,279	191,645	–	Interest rate ⁽³⁾
Derivative financial instruments	13,956	13,019	937	–	Interest rate and exchange rate
Defined benefit asset	855	–	855	–	Other
Other	10,337	–	–	10,337	
	387,051	105,560	254,632	26,859	
Liabilities					
Deposits	257,190	15,003	242,187	–	Interest rate ⁽³⁾
Acceptances	6,287	–	6,287	–	Interest rate ⁽³⁾
Obligations related to securities sold short	23,331	23,331	–	–	
Obligations related to securities sold under repurchase agreements and securities loaned	30,138	–	30,138	–	Interest rate ⁽³⁾⁽⁵⁾
Derivative financial instruments	16,044	15,550	494	–	Interest rate and exchange rate
Liabilities related to transferred receivables	25,110	9,055	16,055	–	Interest rate ⁽³⁾
Defined benefit liability	119	–	119	–	Other
Other	6,225	–	77	6,148	Interest rate ⁽³⁾
Subordinated debt	1,510	–	1,510	–	Interest rate ⁽³⁾
	365,954	62,939	296,867	6,148	

(1) Trading positions whose risk measures are VaR as well as total SVaR. For additional information, see the table in the pages ahead and in the Market Risk section of the *2021 Annual Report* that shows the VaR distribution of the trading portfolios by risk category and their diversification effect as well as total SVaR.

(2) Non-trading positions that use other risk measures.

(3) For additional information, see the table in the pages ahead and in the Market Risk section of the *2021 Annual Report* that shows the VaR distribution of the trading portfolios by risk category and their diversification effect as well as total SVaR and the interest rate sensitivity table.

(4) The fair value of equity securities designated at fair value through other comprehensive income is presented in Notes 2 and 4 to the consolidated financial statements.

(5) These instruments are recorded at amortized cost and are subject to credit risk for capital management purposes. For trading-related transactions with maturities of more than one day, interest rate risk is included in the VaR and SVaR measures.

(millions of Canadian dollars)

As at October 31, 2021

	Balance sheet	Market risk measures			
		Trading ⁽¹⁾	Non-trading ⁽²⁾	Not subject to market risk	Non-traded risk primary risk sensitivity
Assets					
Cash and deposits with financial institutions	33,879	401	16,518	16,960	Interest rate ⁽³⁾
Securities					
At fair value through profit or loss	84,811	82,995	1,816	–	Interest rate ⁽³⁾ and equity ⁽⁴⁾
At fair value through other comprehensive income	9,583	–	9,583	–	Interest rate ⁽³⁾ and equity ⁽⁵⁾
Amortized cost	11,910	–	11,910	–	Interest rate ⁽³⁾
Securities purchased under reverse repurchase agreements and securities borrowed	7,516	–	7,516	–	Interest rate ⁽³⁾⁽⁶⁾
Loans and acceptances, net of allowances	182,689	7,827	174,862	–	Interest rate ⁽³⁾
Derivative financial instruments	16,484	16,033	451	–	Interest rate ⁽⁷⁾ and exchange rate ⁽⁷⁾
Defined benefit asset	691	–	691	–	Other ⁽⁸⁾
Other	8,232	–	–	8,232	
	355,795	107,256	223,347	25,192	
Liabilities					
Deposits	240,938	14,215	226,723	–	Interest rate ⁽³⁾
Acceptances	6,836	–	6,836	–	Interest rate ⁽³⁾
Obligations related to securities sold short	20,266	20,266	–	–	
Obligations related to securities sold under repurchase agreements and securities loaned	17,293	–	17,293	–	Interest rate ⁽³⁾⁽⁶⁾
Derivative financial instruments	19,367	18,999	368	–	Interest rate ⁽⁷⁾ and exchange rate ⁽⁷⁾
Liabilities related to transferred receivables	25,170	9,058	16,112	–	Interest rate ⁽³⁾
Defined benefit liability	143	–	143	–	Other ⁽⁸⁾
Other	6,158	–	113	6,045	Interest rate ⁽³⁾
Subordinated debt	768	–	768	–	Interest rate ⁽³⁾
	336,939	62,538	268,356	6,045	

(1) Trading positions whose risk measures are VaR as well as total SVaR. For additional information, see the table on the following page and in the Market Risk section of the *2021 Annual Report* that shows the VaR distribution of the trading portfolios by risk category and their diversification effect as well as total SVaR.

(2) Non-trading positions that use other risk measures.

(3) For additional information, see the table in the pages ahead and in the Market Risk section of the *2021 Annual Report* that shows the VaR distribution of the trading portfolios by risk category and their diversification effect as well as total SVaR and the interest rate sensitivity table.

(4) For additional information, see Note 6 to the audited annual consolidated financial statements for the year ended October 31, 2021.

(5) The fair value of equity securities designated at fair value through other comprehensive income is presented in Notes 2 and 4 to these consolidated financial statements.

(6) These instruments are recorded at amortized cost and are subject to credit risk for capital management purposes. For trading-related transactions with maturities of more than one day, interest rate risk is included in the VaR and SVaR measures.

(7) For additional information, see Notes 16 and 17 to the audited annual consolidated financial statements for the year ended October 31, 2021.

(8) For additional information, see Note 23 to the audited annual consolidated financial statements for the year ended October 31, 2021.

Trading Activities

The table below shows the VaR distribution of trading portfolios by risk category and their diversification effect as well as the total SVaR, i.e., the VaR of the Bank's current portfolios obtained following the calibration of risk factors over a 12-month stress period.

VaR and SVaR of Trading Portfolios⁽¹⁾⁽²⁾

	(millions of Canadian dollars)				Quarter ended				Nine months ended	
	July 31, 2022				April 30, 2022		July 31, 2021		July 31, 2022	July 31, 2021
	Low	High	Average	Period end	Average	Period end	Average	Period end	Average	Average
Interest rate	(4.0)	(6.5)	(5.4)	(5.9)	(4.8)	(4.6)	(7.3)	(6.6)	(5.8)	(7.4)
Exchange rate	(1.1)	(4.5)	(2.5)	(1.7)	(1.5)	(1.5)	(0.6)	(0.9)	(1.9)	(0.8)
Equity	(5.8)	(10.3)	(7.9)	(6.4)	(6.9)	(8.5)	(6.6)	(6.7)	(7.0)	(6.1)
Commodity	(0.6)	(1.1)	(0.9)	(0.8)	(0.9)	(0.8)	(1.0)	(0.9)	(0.9)	(0.8)
Diversification effect ⁽³⁾	n.m.	n.m.	8.1	7.6	6.6	6.7	7.7	7.3	8.0	7.5
Total trading VaR	(5.4)	(11.1)	(8.6)	(7.2)	(7.5)	(8.7)	(7.8)	(7.8)	(7.6)	(7.6)
Total trading SVaR	(13.9)	(23.6)	(18.5)	(14.4)	(12.7)	(18.5)	(12.2)	(9.3)	(13.4)	(14.7)

n.m. Computation of a diversification effect for the high and low is not meaningful, as highs and lows may occur on different days and be attributable to different types of risk.

(1) See the Glossary section on pages 45 to 48 for details on the composition of these measures.

(2) Amounts are presented on a pre-tax basis and represent one-day VaR and SVaR using a 99% confidence level.

(3) The total trading VaR is less than the sum of the individual risk factor VaR results due to the diversification effect.

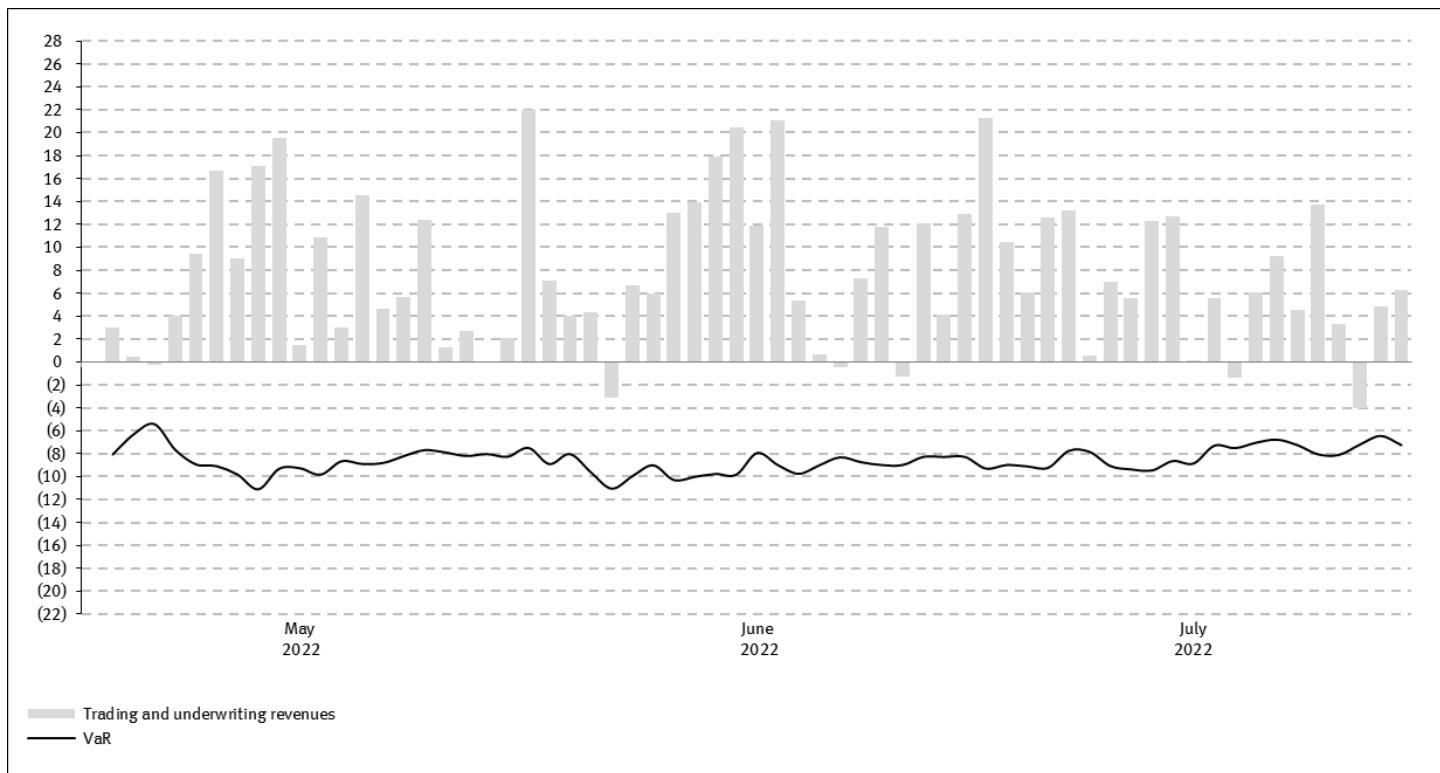
Between the second quarter and the third quarter of 2022, the average total trading VaR increased from \$7.5 million to \$8.6 million, and the average total trading SVaR increased from \$12.7 million to \$18.5 million. These increases were mainly driven by higher market volatility and partly offset by an increase in the diversification effect.

Daily Trading and Underwriting Revenues

The following table shows daily trading and underwriting revenues as well as VaR. During the quarter ended July 31, 2022, daily trading and underwriting revenues were positive 89% of the days. Four trading days were marked by daily trading and underwriting net losses of more than \$1 million. None of these losses exceeded the VaR.

Quarter Ended July 31, 2022

(millions of Canadian dollars)



Interest Rate Sensitivity – Non-Trading Activities (Before Tax)

The following table presents the potential before-tax impact of an immediate and sustained 100-basis-point increase or of an immediate and sustained 100-basis-point decrease in interest rates on the economic value of equity and on the net interest income of the Bank's non-trading portfolios for the next 12 months, assuming no further hedging is undertaken.

(millions of Canadian dollars)	As at July 31, 2022			As at October 31, 2021		
	Canadian dollar	Other currencies	Total	Canadian dollar	Other currencies	Total
Impact on equity						
100-basis-point increase in the interest rate	(201)	3	(198)	(277)	39	(238)
100-basis-point decrease in the interest rate	201	(6)	195	253	(34)	219
Impact on net interest income						
100-basis-point increase in the interest rate	146	5	151	91	17	108
100-basis-point decrease in the interest rate	(156)	(7)	(163)	(67)	(17)	(84)

Liquidity and Funding Risks

Liquidity and funding risks are the risks that the Bank will be unable to honour daily cash and financial obligations without resorting to costly and untimely measures. Liquidity and funding risks arise when sources of funds become insufficient to meet scheduled payments under the Bank's commitments.

Liquidity risk stems from mismatched cash flows related to assets and liabilities as well as the characteristics of certain products such as credit commitments and non-fixed-term deposits.

Funding risk is defined as the risk to the Bank's ongoing ability to raise sufficient funds to finance actual or proposed business activities on an unsecured or secured basis at an acceptable price. The funding management priority is to achieve an optimal balance between deposits, securitization, secured funding, and unsecured funding, which brings optimal stability to the funding and reduces vulnerability to unpredictable events.

COVID-19 has affected overall economic and market conditions, but the Bank's sound management of the liquidity and funding risks is helping it to maintain an optimal balance between its sources of cash and anticipated payments.

Regulatory Developments

The Bank continues to closely monitor regulatory developments and participates actively in various consultative processes. For additional information about the regulatory context as at October 31, 2021, refer to page 94 of the Risk Management section in the *2021 Annual Report* as well as to the section entitled COVID-19 Pandemic – Key Measures Introduced by the Regulatory Authorities on pages 17 and 18 of the *2021 Annual Report*. Since November 1, 2021, the below-described regulatory developments should also be considered.

On January 31, 2022, OSFI published a final version of the liquidity rules, which reflects the most recent Basel III reforms and, on February 16, 2022, OSFI published the corresponding changes to the regulatory return, i.e., the Net Cumulative Cash Flow (NCCF) return.

On March 31, 2022, OSFI published, for consultation purposes, a draft guideline entitled *Assurance on Capital, Leverage and Liquidity Returns*. OSFI relies largely on the regulatory returns produced by financial institutions when assessing their safety and soundness. The purpose of this draft guideline is to better inform auditors and institutions on the work to be performed on regulatory returns in order to clarify and align OSFI's assurance expectations across all financial institutions. In particular, the draft guideline addresses the assurance that must be provided by an external audit, attestation by senior management, the assurance that must be provided by an internal audit, and the proposed effective dates. The Bank is actively participating in this consultation.

Liquidity Management

Liquid Assets

To protect depositors and creditors from unexpected crisis situations, the Bank holds a portfolio of unencumbered liquid assets that can be readily liquidated to meet financial obligations. Most of the unencumbered liquid assets are held in Canadian or U.S. dollars. Moreover, all assets that can be quickly monetized are considered liquid assets. The Bank's liquidity reserves do not factor in the availability of the emergency liquidity facilities of central banks. The following tables provide information on the Bank's encumbered and unencumbered assets.

Liquid Asset Portfolio⁽¹⁾

(millions of Canadian dollars)					As at July 31, 2022	As at October 31, 2021
	Bank-owned liquid assets ⁽²⁾	Liquid assets received ⁽³⁾	Total liquid assets	Encumbered liquid assets ⁽⁴⁾	Unencumbered liquid assets	Unencumbered liquid assets
Cash and deposits with financial institutions	37,968	–	37,968	7,179	30,789	27,098
Securities						
Issued or guaranteed by the Canadian government, U.S.						
Treasury, other U.S. agencies and other foreign governments	34,017	30,391	64,408	41,640	22,768	29,002
Issued or guaranteed by Canadian provincial and municipal governments	13,742	6,660	20,402	14,456	5,946	4,678
Other debt securities	9,737	2,393	12,130	2,216	9,914	7,201
Equity securities	48,692	47,444	96,136	73,825	22,311	26,824
Loans						
Securities backed by insured residential mortgages	11,452	–	11,452	7,604	3,848	3,545
As at July 31, 2022	155,608	86,888	242,496	146,920	95,576	
As at October 31, 2021	149,431	74,070	223,501	125,153		98,348

(millions of Canadian dollars)		As at July 31, 2022	As at October 31, 2021
Unencumbered liquid assets by entity			
National Bank (parent)		47,537	62,438
Domestic subsidiaries		15,240	12,471
Foreign subsidiaries and branches		32,799	23,439
		95,576	98,348

(millions of Canadian dollars)		As at July 31, 2022	As at October 31, 2021
Unencumbered liquid assets by currency			
Canadian dollar		47,917	47,293
U.S. dollar		26,648	40,999
Other currencies		21,011	10,056
		95,576	98,348

Liquid Asset Portfolio⁽¹⁾ – Average⁽⁵⁾

(millions of Canadian dollars)					July 31, 2022	October 31, 2021
	Bank-owned liquid assets ⁽²⁾	Liquid assets received ⁽³⁾	Total liquid assets	Encumbered liquid assets ⁽⁴⁾	Unencumbered liquid assets	Unencumbered liquid assets
Cash and deposits with financial institutions	37,481	–	37,481	7,681	29,800	30,479
Securities						
Issued or guaranteed by the Canadian government, U.S.						
Treasury, other U.S. agencies and other foreign governments	34,086	30,710	64,796	42,317	22,479	24,298
Issued or guaranteed by Canadian provincial and municipal governments	13,455	8,611	22,066	15,489	6,577	5,758
Other debt securities	10,219	2,457	12,676	2,248	10,428	7,170
Equity securities	50,332	45,070	95,402	73,616	21,786	31,242
Loans						
Securities backed by insured residential mortgages	11,135	–	11,135	7,155	3,980	4,008
	156,708	86,848	243,556	148,506	95,050	102,955

(1) See the Financial Reporting Method section on pages 4 to 6 for additional information on capital management measures.

(2) Bank-owned liquid assets include assets for which there are no legal or geographic restrictions.

(3) Securities received as collateral with respect to securities financing and derivative transactions and securities purchased under reverse repurchase agreements and securities borrowed.

(4) In the normal course of its funding activities, the Bank pledges assets as collateral in accordance with standard terms. Encumbered liquid assets include assets used to cover short sales, obligations related to securities sold under repurchase agreements and securities loaned, guarantees related to security-backed loans and borrowings, collateral related to derivative financial instrument transactions, asset-backed securities, and liquid assets legally restricted from transfers.

(5) The average is based on the sum of the end-of-period balances of the three months of the quarter divided by three.

Summary of Encumbered and Unencumbered Assets⁽¹⁾

(millions of Canadian dollars)					As at July 31, 2022	
	Encumbered assets ⁽²⁾		Unencumbered assets		Total	Encumbered assets as a % of total assets
	Pledged as collateral	Other ⁽³⁾	Available as collateral	Other ⁽⁴⁾		
Cash and deposits with financial institutions	292	6,887	30,789	—	37,968	1.9
Securities	45,249	—	60,939	—	106,188	11.7
Securities purchased under reverse repurchase agreements and securities borrowed	—	16,823	—	—	16,823	4.3
Loans and acceptances, net of allowances	38,013	—	3,848	159,063	200,924	9.8
Derivative financial instruments	—	—	—	13,956	13,956	—
Investments in associates and joint ventures	—	—	—	138	138	—
Premises and equipment	—	—	—	1,355	1,355	—
Goodwill	—	—	—	1,509	1,509	—
Intangible assets	—	—	—	1,579	1,579	—
Other assets	—	—	—	6,611	6,611	—
	83,554	23,710	95,576	184,211	387,051	27.7

(millions of Canadian dollars)					As at October 31, 2021	
	Encumbered assets ⁽²⁾		Unencumbered assets		Total	Encumbered assets as a % of total assets
	Pledged as collateral	Other ⁽³⁾	Available as collateral	Other ⁽⁴⁾		
Cash and deposits with financial institutions	275	6,506	27,098	—	33,879	1.9
Securities	38,599	—	67,705	—	106,304	10.9
Securities purchased under reverse repurchase agreements and securities borrowed	—	7,516	—	—	7,516	2.1
Loans and acceptances, net of allowances	37,307	—	3,545	141,837	182,689	10.5
Derivative financial instruments	—	—	—	16,484	16,484	—
Investments in associates and joint ventures	—	—	—	225	225	—
Premises and equipment	—	—	—	1,216	1,216	—
Goodwill	—	—	—	1,504	1,504	—
Intangible assets	—	—	—	1,510	1,510	—
Other assets	—	—	—	4,468	4,468	—
	76,181	14,022	98,348	167,244	355,795	25.4

(1) See the Financial Reporting Method section on pages 4 to 6 for additional information on capital management measures.
 (2) In the normal course of its funding activities, the Bank pledges assets as collateral in accordance with standard terms. Encumbered assets include assets used to cover short sales, obligations related to securities sold under repurchase agreements and securities loaned, guarantees related to security-backed loans and borrowings, collateral related to derivative financial instrument transactions, asset-backed securities, residential mortgage loans securitized and transferred under the Canada Mortgage Bond program, assets held in consolidated trusts supporting the Bank's funding activities, and mortgage loans transferred under the covered bond program.
 (3) Other encumbered assets include assets for which there are restrictions and that cannot therefore be used for collateral or funding purposes as well as assets used to cover short sales.
 (4) Other unencumbered assets are assets that cannot be used for collateral or funding purposes in their current form. This category includes assets that are potentially eligible as funding program collateral (e.g., mortgages insured by the Canada Mortgage and Housing Corporation that can be securitized into mortgage-backed securities under the *National Housing Act* (Canada)).

Liquidity Coverage Ratio

The liquidity coverage ratio (LCR) was introduced primarily to ensure that banks could withstand periods of severe short-term stress. LCR is calculated by dividing the total amount of high-quality liquid assets (HQLA) by the total amount of net cash outflows. OSFI has been requiring Canadian banks to maintain a minimum LCR of 100%. An LCR above 100% ensures that banks are holding sufficient high-quality liquid assets to cover net cash outflows given a severe, 30-day liquidity crisis. The assumptions underlying the LCR scenario were established by the BCBS and OSFI's *Liquidity Adequacy Requirements* guideline.

The following table provides average LCR data calculated using the daily figures in the quarter. For the quarter ended July 31, 2022, the Bank's average LCR was 148%, well above the 100% regulatory requirement and demonstrating the Bank's solid short-term liquidity position.

LCR Disclosure Requirements⁽¹⁾⁽²⁾

(millions of Canadian dollars)

		July 31, 2022	Quarter ended
		Total unweighted value ⁽³⁾ (average)	Total weighted value ⁽⁴⁾ (average)
High-quality liquid assets (HQLA)			
Total HQLA	n.a.	71,388	72,197
Cash outflows			
Retail deposits and deposits from small business customers, of which:			
Stable deposits	63,929	5,281	5,190
Less stable deposits	29,189	876	878
Unsecured wholesale funding, of which:			
Operational deposits (all counterparties) and deposits in networks of cooperative banks	34,740	4,405	4,312
Non-operational deposits (all counterparties)	103,141	56,563	57,418
Unsecured debt	23,532	5,715	5,207
Secured wholesale funding	11,228	11,228	10,827
Additional requirements, of which:			
Outflows related to derivative exposures and other collateral requirements	49,492	15,955	16,004
Outflows related to loss of funding on secured debt securities	13,640	5,718	5,347
Backstop liquidity and credit enhancement facilities and commitments to extend credit	1,864	1,864	1,141
Other contractual commitments to extend credit	33,988	4,977	5,165
Other contingent commitments to extend credit	1,773	758	1,093
Total cash outflows	117,807	1,771	1,710
	n.a.	92,887	93,068
Cash inflows			
Secured lending (e.g., reverse repos)	106,531	20,976	18,042
Inflows from fully performing exposures	9,309	5,910	5,970
Other cash inflows	17,496	17,496	19,125
Total cash inflows	133,336	44,382	43,137
		Total adjusted value⁽⁵⁾	Total adjusted value ⁽⁵⁾
Total HQLA		71,388	72,197
Total net cash outflows		48,505	49,931
Liquidity coverage ratio (%)⁽⁶⁾	148	%	145

n.a. Not applicable

(1) See the Financial Reporting Method section on pages 4 to 6 for additional information on capital management measures.

(2) OSFI prescribed a table format in order to standardize disclosure throughout the banking industry.

(3) Unweighted values are calculated as outstanding balances maturing or callable within 30 days (for inflows and outflows).

(4) Weighted values are calculated after the application of respective haircuts (for HQLA) or inflow and outflow rates.

(5) Total adjusted values are calculated after the application of both haircuts and inflow and outflow rates and any applicable caps.

(6) The data in this table is calculated using averages of the daily figures in the quarter.

As at July 31, 2022, Level 1 liquid assets represented 85% of the Bank's HQLA, which includes cash, central bank deposits, and bonds issued or guaranteed by the Canadian government and Canadian provincial governments.

Cash outflows arise from the application of OSFI-prescribed assumptions on deposits, debt, secured funding, commitments and additional collateral requirements. The cash outflows are partly offset by cash inflows, which come mainly from secured loans and performing loans. The Bank expects some quarter-over-quarter variation between reported LCRs without such variation being necessarily indicative of a trend. The variation between the quarter ended July 31, 2022 and the preceding quarter were a result of normal business operations. The Bank's liquid asset buffer is well in excess of its total net cash outflows.

The LCR assumptions differ from the assumptions used for the liquidity disclosures presented in the tables on the previous pages or those used for internal liquidity management rules. While the liquidity disclosure framework is prescribed by the EDTF, the Bank's internal liquidity metrics use assumptions that are calibrated according to its business model and experience.

Net Stable Funding Ratio

The BCBS has developed the net stable funding ratio (NSFR) to promote a more resilient banking sector. The NSFR requires institutions to maintain a stable funding profile in relation to the composition of their assets and off-balance-sheet activities. A viable funding structure is intended to reduce the likelihood that disruptions to an institution's regular sources of funding will erode its liquidity position in a way that would increase the risk of its failure and potentially lead to broader systemic stress. The NSFR is calculated by dividing available stable funding by required stable funding. OSFI has been requiring Canadian banks to maintain a minimum NSFR of 100%.

The following table provides the available stable funding and required stable funding in accordance with OSFI's *Liquidity Adequacy Requirements* guideline. As at July 31, 2022, the Bank's NSFR was 119%, well above the 100% regulatory requirement and demonstrating the Bank's solid long-term liquidity position.

NSFR Disclosure Requirements⁽¹⁾⁽²⁾

(millions of Canadian dollars)	As at July 31, 2022				As at April 30, 2022
	Unweighted value by residual maturity				
	No maturity	6 months or less	6 months to 1 year	Over 1 year	Weighted value ⁽³⁾
Available Stable Funding (ASF) Items					
Capital:	21,097	—	—	1,510	22,607
Regulatory capital	21,097	—	—	1,510	22,607
Other capital instruments	—	—	—	—	—
Retail deposits and deposits from small business customers:	57,167	8,640	6,627	17,540	83,433
Stable deposits	27,140	2,976	2,634	6,638	37,750
Less stable deposits	30,027	5,664	3,993	10,902	45,683
Wholesale funding:	66,235	80,501	10,666	42,216	96,027
Operational deposits	21,201	—	—	—	10,600
Other wholesale funding	45,034	80,501	10,666	42,216	85,427
Liabilities with matching interdependent assets ⁽⁴⁾	—	2,919	1,647	20,544	—
Other liabilities ⁽⁵⁾ :	25,617	19,126		704	764
NSFR derivative liabilities ⁽⁵⁾	n.a.	14,463		n.a.	n.a.
All other liabilities and equity not included in the above categories	25,617	3,210	141	1,312	764
Total ASF	n.a.	n.a.	n.a.	n.a.	202,771
Required Stable Funding (RSF) Items					
Total NSFR high-quality liquid assets (HQLA)	n.a.	n.a.	n.a.	n.a.	7,235
Deposits held at other financial institutions for operational purposes	—	—	—	—	—
Performing loans and securities:	52,471	61,434	22,237	97,177	140,975
Performing loans to financial institutions secured by Level 1 HQLA	1,118	305	—	12	83
Performing loans to financial institutions secured by non-Level-1 HQLA and unsecured performing loans to financial institutions	6,380	27,826	731	1,176	5,383
Performing loans to non-financial corporate clients, loans to retail and small business customers, and loans to sovereigns, central banks and PSEs, of which:	23,342	26,511	14,231	34,160	67,324
With a risk weight of less than or equal to 35% under the Basel II standardized approach for credit risk	44	2,196	378	999	1,965
Performing residential mortgages, of which:	9,436	5,162	5,474	57,280	52,236
With a risk weight of less than or equal to 35% under the Basel II standardized approach for credit risk	9,436	5,162	5,474	57,280	52,236
Securities that are not in default and do not qualify as HQLA, including exchange-traded equities	12,195	1,630	1,801	4,549	15,949
Assets with matching interdependent liabilities ⁽⁴⁾	—	2,919	1,647	20,544	—
Other assets ⁽⁵⁾ :	2,111	50,098		18,428	21,383
Physical traded commodities, including gold	292	n.a.	n.a.	n.a.	338
Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs ⁽⁵⁾	n.a.	8,918		7,581	8,078
NSFR derivative assets ⁽⁵⁾	n.a.	12,714		—	2,778
NSFR derivative liabilities before deduction of the variation margin posted ⁽⁵⁾	n.a.	18,980		949	977
All other assets not included in the above categories	1,819	7,910	1,030	546	9,606
Off-balance-sheet items ⁽⁵⁾	n.a.	98,802		3,677	3,575
Total RSF	n.a.	n.a.	n.a.	n.a.	170,315
Net Stable Funding Ratio (%)	n.a.	n.a.	n.a.	n.a.	119 %
					114 %

n.a. Not applicable

(1) See the Financial Reporting Method section on pages 4 to 6 for additional information on capital management measures.

(2) OSFI prescribed a table format in order to standardize disclosure throughout the banking industry.

(3) Weighted values are calculated after application of the weightings set out in OSFI's *Liquidity Adequacy Requirements* guideline.

(4) As per OSFI's specifications, liabilities arising from transactions involving the Canada Mortgage Bond program and their corresponding encumbered mortgages are given ASF and RSF weights of 0%, respectively.

(5) As per OSFI's specifications, there is no need to differentiate by maturities.

The NSFR represents the amount of ASF relative to the amount of RSF. ASF is defined as the portion of capital and liabilities expected to be reliable over the time horizon considered by the NSFR, which extends to one year. The amount of RSF of a specific institution is a function of the liquidity characteristics and residual maturities of the various assets held by that institution as well as those of its off-balance-sheet exposures. The amounts of available and required stable funding are calibrated to reflect the degree of stability of liabilities and liquidity of assets. The Bank expects some quarter-over-quarter variation between reported NSFRs without such variation being necessarily indicative of a long-term trend.

The NSFR assumptions differ from the assumptions used for the liquidity disclosures provided in the tables on the preceding pages or those used for internal liquidity management rules. While the liquidity disclosure framework is prescribed by the EDTF, the Bank's internal liquidity metrics use assumptions that are calibrated according to its business model and experience.

Funding

The Bank continuously monitors and analyzes the possibilities for accessing less expensive and more flexible funding. The deposit strategy remains a priority for the Bank, which continues to prefer deposits to institutional funding. On April 29, 2022, DBRS Limited (DBRS) raised the ratings of the Bank and its related entities, including the rating for long-term deposits and for long-term non-bail-inable senior debt to AA from AA(low), and it raised the rating for short-term senior debt to R-1(high) from R-1(mid). DBRS also changed the trends of all the ratings to "Stable" from "Positive." This change reflects DBRS's recognition of the Bank's solid performance in recent years, notably its expanded footprint into targeted markets and niches throughout Canada, in particular in the Wealth Management and Financial Markets segments, as well as the greater contribution by the Personal and Commercial segment to the Bank's net income.

The table below presents the residual contractual maturities of the Bank's wholesale funding. The information has been presented in accordance with the categories recommended by the EDTF for comparison purposes with other banks.

Residual Contractual Maturities of Wholesale Funding⁽¹⁾

(millions of Canadian dollars)	As at July 31, 2022							
	1 month or less	Over 1 month to 3 months	Over 3 months to 6 months	Over 6 months to 12 months	Subtotal 1 year or less	Over 1 year to 2 years	Over 2 years	Total
Deposits from banks ⁽²⁾	481	6	8	—	495	—	—	495
Certificates of deposit and commercial paper ⁽³⁾	4,607	6,218	6,490	989	18,304	—	—	18,304
Senior unsecured medium-term notes ⁽⁴⁾⁽⁵⁾	150	1,027	921	2,657	4,755	3,309	7,321	15,385
Senior unsecured structured notes	—	—	131	238	369	—	2,725	3,094
Covered bonds and asset-backed securities								
Mortgage securitization	—	426	2,379	1,641	4,446	6,100	14,564	25,110
Covered bonds	—	—	—	981	981	1,960	7,288	10,229
Securitization of credit card receivables	—	—	—	28	28	—	48	76
Subordinated liabilities ⁽⁶⁾	—	—	—	—	—	—	1,510	1,510
	5,238	7,677	9,929	6,534	29,378	11,369	33,456	74,203
Secured funding	—	426	2,379	2,650	5,455	8,060	21,900	35,415
Unsecured funding	5,238	7,251	7,550	3,884	23,923	3,309	11,556	38,788
	5,238	7,677	9,929	6,534	29,378	11,369	33,456	74,203
As at October 31, 2021	2,643	8,872	9,802	7,390	28,707	10,400	29,331	68,438

(1) Bankers' acceptances are not included in this table.

(2) Deposits from banks include all non-negotiable term deposits from banks.

(3) Includes bearer deposit notes.

(4) Certificates of deposit denominated in euros are included in senior unsecured medium-term notes.

(5) Includes deposits subject to bank recapitalization (bail-in) conversion regulations.

(6) Subordinated debt is presented in this table, but the Bank does not consider it as part of its wholesale funding.

As part of a comprehensive liquidity management framework, the Bank regularly reviews its contracts that stipulate that additional collateral could be required in the event of a downgrade of the Bank's credit rating. The Bank's liquidity position management approach already incorporates additional collateral requirements in the event of a one-notch to three-notch downgrade in credit rating. The table below presents the additional collateral requirements in the event of a one-notch or three-notch credit rating downgrade.

(millions of Canadian dollars)	As at July 31, 2022	
	One-notch downgrade	Three-notch downgrade
Derivatives ⁽¹⁾	4	41

(1) Contractual requirements related to agreements known as Credit Support Annexes.

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 July 31, 2022 with comparative figures as at October 31, 2021. 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 or its liquidity risk and funding needs. The Bank considers factors other than contractual maturity when assessing liquid assets or 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 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.

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

(millions of Canadian dollars)										As at July 31, 2022
	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	14,555	292	273	225	18	–	–	–	22,605	37,968
Securities										
At fair value through profit or loss	993	3,146	2,015	3,862	2,501	4,033	8,301	10,654	48,146	83,651
At fair value through other comprehensive income	3	47	69	14	21	558	5,456	2,533	546	9,247
At amortized cost	27	664	248	1,774	1,011	1,089	7,525	952	–	13,290
	1,023	3,857	2,332	5,650	3,533	5,680	21,282	14,139	48,692	106,188
Securities purchased under reverse repurchase agreements and securities borrowed	5,641	1,204	649	–	384	960	–	–	7,985	16,823
Loans⁽¹⁾										
Residential mortgage	1,142	1,190	1,777	1,865	2,760	8,320	53,443	7,091	548	78,136
Personal	372	460	710	839	1,214	3,397	18,014	5,044	14,588	44,638
Credit card										2,318
Business and government	19,343	4,356	3,627	3,807	2,683	6,083	9,572	4,608	16,418	70,497
Customers' liability under acceptances	5,778	500	9	–	–	–	–	–	–	6,287
Allowances for credit losses									(952)	(952)
	26,635	6,506	6,123	6,511	6,657	17,800	81,029	16,743	32,920	200,924
Other										
Derivative financial instruments	1,565	1,538	2,423	961	639	1,340	3,000	2,490	–	13,956
Investments in associates and joint ventures									138	138
Premises and equipment									1,355	1,355
Goodwill									1,509	1,509
Intangible assets									1,579	1,579
Other assets ⁽¹⁾	2,667	129	520	554	91	467	14	–	2,169	6,611
	4,232	1,667	2,943	1,515	730	1,807	3,014	2,490	6,750	25,148
	52,086	13,526	12,320	13,901	11,322	26,247	105,325	33,372	118,952	387,051

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

(millions of Canadian dollars)		As at July 31, 2022									
		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		1,211	1,218	2,057	2,833	5,797	7,475	7,289	4,199	42,755	74,834
Business and government		29,336	11,745	10,948	4,278	3,903	6,397	14,115	4,914	92,632	178,268
Deposit-taking institutions		1,328	40	495	38	118	—	6	34	2,029	4,088
		31,875	13,003	13,500	7,149	9,818	13,872	21,410	9,147	137,416	257,190
Other											
Acceptances		5,778	500	9	—	—	—	—	—	—	6,287
Obligations related to securities sold short ⁽³⁾		608	1,430	124	62	88	3,822	3,444	6,760	6,993	23,331
Obligations related to securities sold under repurchase agreements and securities loaned		16,072	2,695	1,808	3,202	—	—	—	—	6,361	30,138
Derivative financial instruments		1,819	2,169	1,578	1,046	535	1,615	4,786	2,496	—	16,044
Liabilities related to transferred receivables ⁽⁴⁾		—	426	2,379	416	1,225	6,100	9,808	4,756	—	25,110
Securitization – Credit card ⁽⁵⁾		—	—	—	—	28	—	48	—	—	76
Lease liabilities ⁽⁵⁾		7	15	24	23	23	91	217	162	—	562
Other liabilities – Other items ⁽¹⁾⁽⁵⁾		941	48	39	37	170	35	23	55	4,358	5,706
		25,225	7,283	5,961	4,786	2,069	11,663	18,326	14,229	17,712	107,254
Subordinated debt		—	—	—	—	—	—	—	—	1,510	—
Equity										21,097	21,097
		57,100	20,286	19,461	11,935	11,887	25,535	39,736	24,886	176,225	387,051
Off-balance-sheet commitments											
Letters of guarantee and documentary letters of credit		125	429	2,470	1,193	821	698	107	—	—	5,843
Credit card receivables ⁽⁶⁾										9,238	9,238
Backstop liquidity and credit enhancement facilities ⁽⁷⁾		—	—	15	5,552	15	—	—	—	2,837	8,419
Commitments to extend credit ⁽⁸⁾		3,822	9,560	6,690	4,317	3,910	4,364	2,664	50	45,288	80,665
Obligations related to:											
Lease commitments ⁽⁹⁾		1	1	1	1	2	5	10	6	—	27
Other contracts ⁽¹⁰⁾		38	44	56	50	69	24	23	—	112	416

(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 \$5.6 billion.
 (8) These amounts include \$43.8 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 \$0.2 billion in contractual commitments related to the head office building under construction.

(millions of Canadian dollars)										As at October 31, 2021
	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	7,510	334	374	146	368	–	–	–	25,147	33,879
Securities										
At fair value through profit or loss	1,946	1,929	1,061	702	792	3,037	6,454	9,410	59,480	84,811
At fair value through other comprehensive income	1	–	1	624	63	227	4,867	3,183	617	9,583
At amortized cost	1	181	213	425	804	3,589	5,865	832	–	11,910
	1,948	2,110	1,275	1,751	1,659	6,853	17,186	13,425	60,097	106,304
Securities purchased under reverse repurchase agreements and securities borrowed										
	1,113	1,199	59	–	371	619	–	–	4,155	7,516
Loans⁽¹⁾										
Residential mortgage	702	965	1,581	2,587	2,320	8,850	48,455	6,504	578	72,542
Personal Credit card	214	315	512	877	843	3,527	16,056	4,308	14,401	41,053
Business and government	16,842	3,986	2,614	3,508	3,253	6,290	10,180	3,605	10,828	61,106
Customers' liability under acceptances	6,200	618	18	–	–	–	–	–	–	6,836
Allowances for credit losses									(998)	(998)
	23,958	5,884	4,725	6,972	6,416	18,667	74,691	14,417	26,959	182,689
Other										
Derivative financial instruments	1,868	3,678	1,019	2,190	823	1,865	2,491	2,550	–	16,484
Investments in associates and joint ventures									225	225
Premises and equipment									1,216	1,216
Goodwill									1,504	1,504
Intangible assets									1,510	1,510
Other assets ⁽¹⁾	1,829	137	148	129	56	727	88	17	1,337	4,468
	3,697	3,815	1,167	2,319	879	2,592	2,579	2,567	5,792	25,407
	38,226	13,342	7,600	11,188	9,693	28,731	94,456	30,409	122,150	355,795

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

(millions of Canadian dollars)

As at October 31, 2021

	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	1,396	3,433	4,596	2,194	1,945	4,157	6,468	4,914	40,973	70,076
Business and government	24,814	12,796	10,782	5,785	2,691	5,453	10,054	4,765	90,730	167,870
Deposit-taking institutions	1,011	128	38	66	23	1	—	36	1,689	2,992
	27,221	16,357	15,416	8,045	4,659	9,611	16,522	9,715	133,392	240,938
Other										
Acceptances	6,200	618	18	—	—	—	—	—	—	6,836
Obligations related to securities sold short ⁽³⁾	186	123	182	175	22	3,099	3,743	4,797	7,939	20,266
Obligations related to securities sold under repurchase agreements and securities loaned	7,330	2,668	3,633	246	—	—	—	—	3,416	17,293
Derivative financial instruments	3,048	3,061	1,171	1,921	880	1,485	3,273	4,528	—	19,367
Liabilities related to transferred receivables ⁽⁴⁾	—	1,688	1,523	1,054	411	5,501	10,771	4,222	—	25,170
Securitization – Credit card ⁽⁵⁾	36	—	—	—	—	28	48	—	—	112
Lease liabilities ⁽⁵⁾	7	15	21	22	22	88	214	186	—	575
Other liabilities – Other items ⁽¹⁾⁽⁵⁾	640	477	117	125	100	41	25	75	4,014	5,614
	17,447	8,650	6,665	3,543	1,435	10,242	18,074	13,808	15,369	95,233
Subordinated debt	—	—	—	—	—	—	—	768	—	768
Equity										
	44,668	25,007	22,081	11,588	6,094	19,853	34,596	24,291	167,617	355,795
Off-balance-sheet commitments										
Letters of guarantee and documentary letters of credit	320	1,561	828	2,092	793	575	74	—	—	6,243
Credit card receivables ⁽⁶⁾									9,081	9,081
Backstop liquidity and credit enhancement facilities ⁽⁷⁾	15	—	4,502	15	—	—	—	—	2,732	7,264
Commitments to extend credit ⁽⁸⁾	2,848	9,139	6,195	6,737	3,872	3,105	3,667	48	42,372	77,983
Obligations related to:										
Lease commitments ⁽⁹⁾	1	1	1	1	1	1	3	3	—	12
Other contracts ⁽¹⁰⁾	54	58	50	48	46	152	19	—	124	551

(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 \$40.8 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.

Environmental and Social Risk

The risks related to environmental, social and governance (ESG) principles and disclosure requirements continue to be priorities for regulatory and standard-setting bodies. With climate change at the forefront of ESG-related issues, new proposed regulations and disclosure standards were published recently to address climate-related and sustainability-related risks. Specifically, on October 18, 2021, the CSA issued the proposed National Instrument 51-107 – *Disclosure of Climate-related Matters* requiring reporting issuers in Canada to make certain climate-related disclosures. On March 31, 2022, the International Sustainability Standards Board issued two proposed standards on climate-related and sustainability-related disclosures. And on May 26, 2022, OSFI issued draft Guideline B-15: *Climate Risk Management* which outlines OSFI's risk management expectations for climate-related risks and disclosures. As these proposed regulations and standards have yet to be finalized, the Bank continues to closely monitor regulatory developments in this area.

For additional information on the management of ESG-related risks and regulatory developments, refer to the Environmental and Social Risk section on page 107 of the *2021 Annual Report*.

Risk Disclosures

One of the purposes of the *2021 Annual Report*, the *Report to Shareholders – Third Quarter 2022*, and the related supplementary information documents is to provide transparent, high-quality risk disclosures in accordance with the recommendations made by the Financial Stability Board's EDTF group. The following table lists the references where users can find information that responds to the EDTF's 32 recommendations.

		2021 Annual Report	Report to Shareholders ⁽¹⁾	Supplementary Regulatory Capital and Pillar 3 Disclosure ⁽¹⁾	Pages
General					
1	Location of risk disclosures	13	41		
	Management's Discussion and Analysis	59 to 107, 119, 121 and 122	19 to 40		
	Consolidated Financial Statements	Notes 1, 7, 16, 23 and 29	Notes 5 and 12		
	Supplementary Financial Information				19 to 29 ⁽²⁾
	Supplementary Regulatory Capital and Pillar 3 Disclosure				5 to 48
2	Risk terminology and risk measures	69 to 107			
3	Top and emerging risks	16 to 18, 26 and 73 to 78	8, 26 and 40		
4	New key regulatory ratios	60 to 63, 94 and 98 to 101	20, 21, 31 and 33 to 36		
Risk governance and risk management					
5	Risk management organization, processes and key functions	69 to 88, 94 to 96 and 101			
6	Risk management culture	69 and 70			
7	Key risks by business segment, risk management and risk appetite	68 to 70, 73 and 74			
8	Stress testing	59, 70, 82, 92, 93 and 96			
Capital adequacy and risk-weighted assets (RWA)					
9	Minimum Pillar 1 capital requirements	60 to 63	19 to 21		
10	Reconciliation of the accounting balance sheet to the regulatory balance sheet				7 to 13, 16 and 17
11	Movements in regulatory capital	66	22		
12	Capital planning	59 to 68			
13	RWA by business segment and by risk type	68			6
14	Capital requirements by risk and the RWA calculation method	78 to 82			6
15	Banking book credit risk				6
16	Movements in RWA by risk type	67	23		6
17	Assessment of credit risk model performance	73, 79 to 82 and 87			31
Liquidity					
18	Liquidity management and components of the liquidity buffer	94 to 101	31 to 36		
Funding					
19	Summary of encumbered and unencumbered assets	97 and 98	33		
20	Residual contractual maturities of balance sheet items and off-balance-sheet commitments	221 to 225	37 to 40		
21	Funding strategy and funding sources	101 to 103	36		
Market risk					
22	Linkage of market risk measures to balance sheet	89 and 90	28 and 29		
23	Market risk factors	87 to 93, 210 and 211	28 to 31		
24	VaR: Assumptions, limitations and validation procedures	91			
25	Stress tests, stressed VaR and backtesting	87 to 93			
Credit risk					
26	Credit risk exposures	86 and 172 to 183	27 and 65 to 76	18 to 40 and 19 to 27 ⁽²⁾	
27	Policies for identifying impaired loans	83, 84, 146 and 147			
28	Movements in impaired loans and allowances for credit losses	119, 121, 122 and 172 to 183	65 to 76	24 to 26 ⁽²⁾	
29	Counterparty credit risk relating to derivatives transactions	83 to 85 and 190 to 193		33 to 40, 28 ⁽²⁾ and 29 ⁽²⁾	
30	Credit risk mitigation	81 to 84 and 169		20, 24 and 38 to 48	
Other risks					
31	Other risks: Governance, measurement and management	77, 78 and 103 to 107			
32	Publicly known risk events	16 to 18, 26, 103 and 104	8, 26 and 40		

(1) Third quarter 2022.

(2) These pages are included in the document entitled *Supplementary Financial Information – Third Quarter 2022*.

Accounting Policies and Financial Disclosure

Accounting Policies and Critical Accounting Estimates

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 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 unaudited interim condensed consolidated financial statements for the quarter and nine-month period ended July 31, 2022 were prepared in accordance with IAS 34 – *Interim Financial Reporting* using the same accounting policies as those described in Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2021.

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. Some accounting policies are considered critical given their importance to the presentation of the Bank's financial position and operating results and require difficult, subjective, and complex judgments and estimates on matters that are inherently uncertain. Any change in these judgments and estimates could have a significant impact on the Bank's consolidated financial statements. The critical accounting estimates are the same as those described on pages 108 to 113 of the *2021 Annual Report*.

Given the uncertainty surrounding the unprecedented nature of the COVID-19 pandemic, developing reliable estimates and applying judgment continue to be substantially complex. Some of the Bank's accounting policies, such as the measurement of expected credit losses (ECLs), require particularly complex judgment and estimates. See Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2021 for a summary of the most significant estimation processes used to prepare the consolidated financial statements in accordance with IFRS and for the valuation techniques used to determine the carrying values and fair values of assets and liabilities. The uncertainty regarding certain key inputs used in measuring ECLs is described in Note 5 to these unaudited interim condensed consolidated financial statements.

Interest Rate Benchmark Reform

The interest rate benchmark reform is a global initiative that is being coordinated and led by central banks and governments around the world, including those in Canada. In August 2020, the IASB finalized its response to the ongoing reform of interbank offered rates (LIBOR) and other interest rate benchmarks by issuing amendments to its new and former financial instrument standards, IFRS 9 – *Financial Instruments* (IFRS 9) and IAS 39 – *Financial Instruments: Recognition and Measurement* (IAS 39) as well as to related standard IFRS 7 – *Financial Instruments: Disclosures* (IFRS 7), to IFRS 4 – *Insurance Contracts* (IFRS 4), and to IFRS 16 – *Leases* (IFRS 16). These amendments address how financial statements will be affected once current interest rate benchmarks are replaced with alternative interest rate benchmarks and notably cover amendments to contractual cash flows, hedge accounting, and disclosures. On November 1, 2020, the Bank early adopted the amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4, and IFRS 16. For additional information, see Note 17 and the Accounting Policy Changes section in Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2021.

The Bank has transitioned its LIBOR-related (London Interbank Offered Rates) contracts that involve pound sterling (GBP), the euro (EUR), the Japanese yen (JPY), and the Swiss franc (CHF), for which the cessation or loss of representativeness was December 31, 2021. As for USD LIBOR, the Bank included rate replacement clauses in contracts negotiated during 2021 and, since January 1, 2022, the Bank has no longer been using USD LIBOR in new contracts except in circumstances compliant with regulatory guidance.

The Bank is continuing to monitor all of the developments of this initiative, as it is exposed to several risks, including interest rate risk and operational risk, which arise from non-derivative financial assets, non-derivative financial liabilities, and derivative financial instruments. The project team ensures that risks are mitigated while ensuring a positive experience for its clients. The Bank is taking all necessary steps to identify, measure, and control all risks to ensure a smooth transition to the interest rate benchmark reform. As at July 31, 2022, the project was progressing according to schedule.

Recent Developments

On December 16, 2021, the Bank of Canada announced that a white paper published by the Canadian Alternative Reference Rate (CARR) Working Group was recommending that CDOR (Canadian Dollar Offered Rate) be declared unrepresentative by its administrator, namely, Refinitiv Benchmark Services (UK) Limited (Refinitiv) and also that CDOR cease to exist as of June 30, 2024 (including a recommendation to cease using CDOR on the derivative financial instrument market as of June 30, 2023).

On January 31, 2022, Refinitiv launched a public consultation on the future of CDOR. The consultation ended on March 2, 2022, after which Refinitiv published an update to the consultation on April 14, 2022. On May 16, 2022, Refinitiv published the consultation conclusions and announced that the publication of CDOR would cease as of June 28, 2024.

Following this announcement, the CARR Working Group welcomed Refinitiv's decision and, at the same time, OSFI published its prudential expectations regarding the cessation of CDOR. First, OSFI expects all new derivative contracts (bilateral, cleared, and exchange-traded) and securities (assets and debt liabilities) to transition to alternative reference rates by June 30, 2023, with no new CDOR exposure being recorded after that date, with limited exceptions for risk mitigation requirements. Thereafter, by June 28, 2024, OSFI expects federally regulated financial institutions to have transitioned all loan agreements referencing CDOR to alternative reference rates.

The following table discloses the non-derivative financial assets, non-derivative financial liabilities, and derivative financial instruments subject to the interest rate benchmark reform as at July 31, 2022 that will mature after June 28, 2024 and that have not yet transitioned to alternative benchmark rates from the CDOR rate.

(millions of Canadian dollars)	As at July 31, 2022
Non-derivative financial assets ⁽¹⁾	13,695
Non-derivative financial liabilities ⁽²⁾	9,628
Notional amount of derivative financial instruments	340,485

(1) Non-derivative financial assets include the carrying value of securities as well as the outstanding balances on loans and the customers' liability under acceptances.

(2) Non-derivative financial liabilities include the nominal amounts of deposits and subordinated debt as well as the carrying value of acceptances.

Financial Disclosure

On February 1, 2022, the Bank deployed a new integrated accounting software package, and certain processes that affect internal control over financial reporting were modified. The Bank has assessed the impact of this deployment and has made sure that the key controls impacted and the newly implemented controls are well designed.

During the third quarter of 2022, no changes were made to the policies, procedures, and other processes that comprise the Bank's internal control over financial reporting that had or could reasonably have a significant impact on the internal control over financial reporting.

Quarterly Financial Information

(millions of Canadian dollars,
except per share amounts)

	2022			2021		2020		2021	2020	
	Q3	Q2	Q1	Q4	Q3	Q2	Q1	Q4	Total	Total
Total revenues	2,413	2,439	2,466	2,211	2,254	2,238	2,224	2,000	8,927	7,927
Net income	826	893	932	776	839	801	761	492	3,177	2,083
Earnings per share (\$)										
Basic	2.38	2.58	2.68	2.22	2.39	2.28	2.16	1.37	9.06	5.73
Diluted	2.35	2.55	2.65	2.19	2.36	2.25	2.15	1.36	8.96	5.70
Dividends per common share (\$)	0.92	0.87	0.87	0.71	0.71	0.71	0.71	0.71	2.84	2.84
Return on common shareholders' equity (%)⁽¹⁾	17.7	20.6	21.7	18.7	21.3	22.0	21.2	13.7	20.7	14.9
Total assets	387,051	369,785	366,888	355,795	354,040	350,742	343,637	331,625		
Net impaired loans excluding POCI loans⁽¹⁾⁽²⁾	301	293	287	283	312	349	400	465		
Per common share (\$)										
Book value ⁽¹⁾	54.82	52.81	50.23	47.95	46.00	43.59	41.48	39.97		
Share price										
High	97.87	104.59	105.44	104.32	96.97	89.42	73.81	72.85		
Low	83.33	89.33	94.37	95.00	89.47	72.30	65.54	62.99		

(1) See the Glossary section on pages 45 to 48 for details on the composition of these measures.

(2) All loans classified in Stage 3 of the expected credit loss model are impaired loans; the net impaired loans presented in this table exclude POCI loans.

Glossary

Acceptances

Acceptances and the customers' liability under 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 on behalf of the clients who own the assets. Such services include custodial services, collection of investment income, settlement of purchase and sale transactions, and record-keeping. Assets under administration are not reported on the balance sheet of the institution offering such services.

Assets under management

Assets managed by a financial institution and 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 assets under administration, are not reported on the balance sheet of the institution offering such services.

Available TLAC

Available TLAC includes total capital as well as certain senior unsecured debt subject to the federal government's bail-in regulations that satisfy all of the eligibility criteria in OSFI's *Total Loss Absorbing Capacity (TLAC)* guideline.

Average interest-bearing assets

Average interest-bearing assets include interest-bearing deposits with financial institutions and certain cash items, securities, securities purchased under reverse repurchase agreements and securities borrowed, and loans, while excluding customers' liability under acceptances and other assets. The average is calculated based on the daily balances for the period.

Average interest-bearing assets, non-trading

Average interest-bearing assets, non-trading, include interest-bearing deposits with financial institutions and certain cash items, securities purchased under reverse repurchase agreements and securities borrowed, and loans, while excluding other assets and assets related to trading activities. The average is calculated based on the daily balances for the period.

Average volumes

Average volumes represent the average of the daily balances for the period of the consolidated balance sheet items.

Basic earnings per share

Basic earnings per share – Adjusted

Basic earnings per share is calculated by dividing net income attributable to common shareholders by the weighted average basic number of common shares outstanding. Adjusted basic earnings per share is calculated by dividing adjusted net income attributable to common shareholders by the weighted average basic number of common shares outstanding.

Basis point

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

Book value of a common share

The book value of a common share is calculated by dividing common shareholders' equity by the number of common shares on a given date.

Common Equity Tier 1 (CET1) capital ratio

CET1 capital consists of common shareholders' equity less goodwill, intangible assets, and other capital deductions. The CET1 capital ratio is calculated by dividing Common Equity Tier 1 capital by the corresponding risk-weighted assets.

Compound annual growth rate (CAGR)

CAGR is a rate of growth that shows, for a period exceeding one year, the annual change as though the growth had been constant throughout the period.

Derivative financial instruments

Derivative financial instruments are financial contracts whose value is derived from an underlying interest rate, exchange rate, 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.

Diluted earnings per share

Diluted earnings per share – Adjusted

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. Adjusted diluted earnings per share is calculated by dividing adjusted 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.

Dividend payout ratio

Dividend payout ratio – Adjusted

The dividend payout ratio represents the dividends on common shares (per share amount) expressed as a percentage of basic earnings per share. The adjusted dividend payout ratio represents the dividends on common shares (per share amount) expressed as a percentage of adjusted basic earnings per share.

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

Efficiency ratio – Adjusted

The efficiency ratio represents non-interest expenses expressed as a percentage of total revenues. It measures the efficiency of the Bank's operations. The adjusted efficiency ratio represents adjusted non-interest expenses expressed as a percentage of adjusted total revenues.

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).

Gross impaired loans as a percentage of total loans and acceptances

This measure represents gross impaired loans expressed as a percentage of the balance of loans and acceptances.

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 dates: 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 financial instrument exposures and securities financing transaction exposures) and off-balance-sheet items.

Liquidity coverage ratio (LCR)

The LCR 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.

Loans and acceptances

Loans and acceptances represent the sum of loans and of the customers' liability under acceptances.

Loan-to-value ratio

The loan-to-value ratio is calculated according to the total facility amount for residential mortgages and home equity lines of credit divided by the value of the related residential property.

Master netting agreement

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

Net impaired loans

Net impaired loans are gross impaired loans presented net of allowances for credit losses on Stage 3 loan amounts drawn.

Net impaired loans as a percentage of total loans and acceptances

This measure represents net impaired loans expressed as a percentage of the balance of loans and acceptances.

Net impaired loans excluding purchased or originated credit-impaired (POCI) loans

Net impaired loans excluding POCI loans are gross impaired loans excluding POCI loans presented net of allowances for credit losses on amounts drawn on Stage 3 loans granted by the Bank.

Net interest income, non-trading

Net interest income, non-trading – Adjusted

Net interest income, non-trading, comprises revenues related to financial assets and liabilities associated with non-trading activities, net of interest expenses and interest income related to the financing of these financial assets and liabilities. Adjusted net interest income, non-trading, comprises revenues related to financial assets and liabilities associated with non-trading activities on a taxable equivalent basis, net of interest expenses and interest income related to the financing of these financial assets and liabilities.

Net interest income from trading activities

Net interest income from trading activities – Adjusted

Net interest income from trading activities 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. Adjusted net interest income from trading activities comprises dividends related to financial assets and liabilities associated with trading activities on a taxable equivalent basis, net of interest expenses and interest income related to the financing of these financial assets and liabilities.

Net interest margin

Net interest margin is calculated by dividing net interest income by average interest-bearing assets.

Net interest margin, non-trading – Adjusted

Adjusted net interest margin, non-trading, is calculated by dividing adjusted net interest income related to non-trading activities by average interest-bearing assets excluding the average interest-bearing assets related to trading activities.

Net stable funding ratio (NSFR)

The NSFR ratio is a measure that helps guarantee that the Bank is maintaining a stable funding profile to reduce the risk of funding stress.

Net write-offs as a percentage of average loans and acceptances

This measure represents the net write-offs (net of recoveries) expressed as a percentage of average loans and acceptances.

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

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

Operating leverage

Operating leverage – Adjusted

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

Provisioning rate

This measure represents the allowances for credit losses on impaired loans expressed as a percentage of gross impaired loans.

Provisions for credit losses

Amount charged to income necessary to bring the allowances for credit losses to a level deemed appropriate by management and comprised of provisions for credit losses on impaired and non-impaired financial assets.

Provisions for credit losses as a percentage of average loans and acceptances

This measure represents the provisions for credit losses expressed as a percentage of average loans and acceptances.

Provisions for credit losses on impaired loans as a percentage of average loans and acceptances

This measure represents the provisions for credit losses on impaired loans expressed as a percentage of average loans and acceptances.

Return on average assets

Return on average assets represents net income expressed as a percentage of average assets.

Return on common shareholders' equity (ROE)

Return on common shareholders' equity (ROE) – Adjusted

ROE represents net income attributable to common shareholders expressed as a percentage of average equity attributable to common shareholders. It's a general measure of the Bank's efficiency in using equity. Adjusted ROE represents adjusted net income attributable to common shareholders as a percentage of adjusted average equity attributable to common shareholders.

Risk-weighted assets

Assets are risk-weighted according to the guidelines established by OSFI. Using the standardized approach, risk factors are applied to the face value of certain assets in order to reflect comparable risk levels. Using the advanced internal ratings-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 faces. 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.

Stressed VaR (SVaR)

SVaR is a statistical measure of risk that replicates the VaR calculation method but uses, instead of a two-year history of risk factor changes, a 12-month data period corresponding to a continuous period of significant financial stress that is relevant in terms of the Bank's portfolios.

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 (particularly dividends) by the amount of income tax that would have otherwise been payable. The Bank uses the taxable equivalent basis to calculate net interest income, non-interest income, and income taxes.

Tier 1 capital ratio

Tier 1 capital consists of Common Equity Tier 1 capital and Additional Tier 1 instruments, namely, qualifying non-cumulative preferred shares and the eligible amount of innovative instruments. The Tier 1 capital ratio is calculated by dividing Tier 1 capital, less regulatory adjustments, by the corresponding risk-weighted assets.

TLAC leverage ratio

The TLAC leverage ratio is an independent risk measure that is calculated by dividing available TLAC by total exposure, as set out in OSFI's *Total Loss Absorbing Capacity (TLAC)* guideline.

TLAC ratio

The TLAC ratio is a measure used to assess whether a non-viable domestic systemically important bank (D-SIB) has sufficient loss-absorbing capacity to support its recapitalization. It is calculated by dividing available TLAC by risk-weighted assets, as set out in OSFI's *Total Loss Absorbing Capacity (TLAC)* guideline.

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 allowances for credit losses. The Total capital ratio is calculated by dividing total capital, less regulatory adjustments, by the corresponding risk-weighted assets.

Total shareholder return (TSR)

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.

Trading activity revenues

Trading activity revenues – Adjusted

Trading activity revenues consist of the net interest income and the non-interest income related to trading activities. 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, certain commission income, other trading activity revenues, and any applicable transaction costs. Trading activity revenues on a taxable equivalent basis includes adjusted net interest income and adjusted non-interest income related to trading activities.

Value-at-Risk (VaR)

VaR is a statistical measure of risk that is used to quantify market risks across products, 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.

Interim Condensed Consolidated Financial Statements

(unaudited)

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Consolidated Balance Sheets

(unaudited) (millions of Canadian dollars)

	As at July 31, 2022	As at October 31, 2021
Assets		
Cash and deposits with financial institutions	37,968	33,879
Securities (Notes 2, 3 and 4)		
At fair value through profit or loss	83,651	84,811
At fair value through other comprehensive income	9,247	9,583
At amortized cost	13,290	11,910
	106,188	106,304
Securities purchased under reverse repurchase agreements and securities borrowed	16,823	7,516
Loans (Note 5)		
Residential mortgage	78,136	72,542
Personal	44,638	41,053
Credit card	2,318	2,150
Business and government	70,497	61,106
	195,589	176,851
Customers' liability under acceptances	6,287	6,836
Allowances for credit losses	(952)	(998)
	200,924	182,689
Other		
Derivative financial instruments	13,956	16,484
Investments in associates and joint ventures	138	225
Premises and equipment	1,355	1,216
Goodwill	1,509	1,504
Intangible assets	1,579	1,510
Other assets (Note 7)	6,611	4,468
	25,148	25,407
	387,051	355,795
Liabilities and equity		
Deposits (Notes 3 and 8)	257,190	240,938
Other		
Acceptances	6,287	6,836
Obligations related to securities sold short	23,331	20,266
Obligations related to securities sold under repurchase agreements and securities loaned (Note 6)	30,138	17,293
Derivative financial instruments	16,044	19,367
Liabilities related to transferred receivables (Notes 3 and 6)	25,110	25,170
Other liabilities (Note 9)	6,344	6,301
	107,254	95,233
Subordinated debt (Note 10)	1,510	768
Equity		
Equity attributable to the Bank's shareholders and holders of other equity instruments (Notes 11 and 13)		
Preferred shares and other equity instruments	2,650	2,650
Common shares	3,189	3,160
Contributed surplus	55	47
Retained earnings	15,174	13,028
Accumulated other comprehensive income	27	(32)
	21,095	18,853
Non-controlling interests	2	3
	21,097	18,856
	387,051	355,795

The accompanying notes are an integral part of these unaudited interim condensed financial statements.

Consolidated Statements of Income

(unaudited) (millions of Canadian dollars)

	Quarter ended July 31		Nine months ended July 31	
	2022	2021	2022	2021
Interest income				
Loans	1,845	1,390	4,736	4,091
Securities at fair value through profit or loss	470	282	1,155	829
Securities at fair value through other comprehensive income	47	41	109	137
Securities at amortized cost	58	45	156	135
Deposits with financial institutions	125	19	188	57
	2,545	1,777	6,344	5,249
Interest expense				
Deposits	870	407	1,705	1,230
Liabilities related to transferred receivables	119	92	325	270
Subordinated debt	5	5	13	13
Other	132	43	237	143
	1,126	547	2,280	1,656
Net interest income⁽¹⁾	1,419	1,230	4,064	3,593
Non-interest income				
Underwriting and advisory fees	68	110	230	335
Securities brokerage commissions	46	56	162	188
Mutual fund revenues	143	144	446	414
Investment management and trust service fees	244	231	753	649
Credit fees	121	122	365	380
Card revenues	48	37	139	106
Deposit and payment service charges	76	72	220	204
Trading revenues (losses)	71	34	314	213
Gains (losses) on non-trading securities, net	9	45	116	131
Insurance revenues, net	48	35	132	98
Foreign exchange revenues, other than trading	46	49	154	157
Share in the net income of associates and joint ventures	4	6	24	17
Other	70	83	199	231
	994	1,024	3,254	3,123
Total revenues	2,413	2,254	7,318	6,716
Non-interest expenses				
Compensation and employee benefits	828	773	2,453	2,273
Occupancy	77	73	229	224
Technology	226	202	680	594
Communications	14	14	44	42
Professional fees	61	60	181	171
Other	100	94	289	291
	1,306	1,216	3,876	3,595
Income before provisions for credit losses and income taxes	1,107	1,038	3,442	3,121
Provisions for credit losses (Note 5)	57	(43)	58	43
Income before income taxes	1,050	1,081	3,384	3,078
Income taxes	224	242	733	677
Net income	826	839	2,651	2,401
Net income attributable to				
Preferred shareholders and holders of other equity instruments	26	31	77	97
Common shareholders	800	808	2,575	2,304
Bank shareholders and holders of other equity instruments	826	839	2,652	2,401
Non-controlling interests	–	–	(1)	–
	826	839	2,651	2,401
Earnings per share (dollars) (Note 16)				
Basic	2.38	2.39	7.63	6.84
Diluted	2.35	2.36	7.55	6.77
Dividends per common share (dollars) (Note 11)	0.92	0.71	2.66	2.13

The accompanying notes are an integral part of these unaudited interim condensed consolidated financial statements.

(1) Net interest income includes dividend income. For additional information, see Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2021.

Consolidated Statements of Comprehensive Income

(unaudited) (millions of Canadian dollars)

	Quarter ended July 31		Nine months ended July 31	
	2022	2021	2022	2021
Net income	826	839	2,651	2,401
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	(15) 10	58 (17)	149 (41)	(277) 86
Impact of hedging net foreign currency translation gains (losses)	(5)	41	108	(191)
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	(56)	(7)	(176)	19
Net (gains) losses on debt securities at fair value through other comprehensive income reclassified to net income	37	(14)	81	(41)
Change in allowances for credit losses on debt securities at fair value through other comprehensive income reclassified to net income	—	—	—	(1)
	(19)	(21)	(95)	(23)
Net change in cash flow hedges				
Net gains (losses) on derivative financial instruments designated as cash flow hedges	(9)	(10)	25	151
Net (gains) losses on designated derivative financial instruments reclassified to net income	7	9	23	17
	(2)	(1)	48	168
Share in the other comprehensive income of associates and joint ventures	(1)	(1)	(2)	—
Items that will not be subsequently reclassified to net income				
Remeasurements of pension plans and other post-employment benefit plans	(41)	173	131	447
Net gains (losses) on equity securities designated at fair value through other comprehensive income	(9)	10	(26)	59
Net fair value change attributable to the credit risk on financial liabilities designated at fair value through profit or loss	266 216	37 220	591 696	(29) 477
	189	238	755	431
Total other comprehensive income, net of income taxes	1,015	1,077	3,406	2,832
Comprehensive income	1,015	1,077	3,406	2,832
Comprehensive income attributable to				
Bank shareholders and holders of other equity instruments	1,015	1,077	3,407	2,845
Non-controlling interests	—	—	(1)	(13)
	1,015	1,077	3,406	2,832

The accompanying notes are an integral part of these unaudited interim condensed financial statements.

Consolidated Statements of Comprehensive Income (cont.)

(unaudited) (millions of Canadian dollars)

Income Taxes – Other Comprehensive Income

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

	Quarter ended July 31		Nine months ended July 31	
	2022	2021	2022	2021
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	1	(1)	(4)	9
Impact of hedging net foreign currency translation gains (losses)	(4)	(5)	(9)	22
	(3)	(6)	(13)	31
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	(20)	(2)	(63)	7
Net (gains) losses on debt securities at fair value through other comprehensive income reclassified to net income	13	(4)	29	(14)
Change in allowances for credit losses on debt securities at fair value through other comprehensive income reclassified to net income	–	–	–	–
	(7)	(6)	(34)	(7)
Net change in cash flow hedges				
Net gains (losses) on derivative financial instruments designated as cash flow hedges	(3)	(5)	9	53
Net (gains) losses on designated derivative financial instruments reclassified to net income	3	3	8	6
	–	(2)	17	59
Share in the other comprehensive income of associates and joint ventures				
	–	–	(1)	–
Items that will not be subsequently reclassified to net income				
Remeasurements of pension plans and other post-employment benefit plans	(15)	62	47	160
Net gains (losses) on equity securities designated at fair value through other comprehensive income	(3)	4	(9)	21
Net fair value change attributable to the credit risk on financial liabilities designated at fair value through profit or loss	96	13	212	(11)
	78	79	250	170
	68	65	219	253

The accompanying notes are an integral part of these unaudited interim condensed financial statements.

Consolidated Statements of Changes in Equity

(unaudited) (millions of Canadian dollars)

	Nine months ended July 31	
	2022	2021
Preferred shares and other equity instruments at beginning (Note 11)	2,650	2,950
Issuances of preferred shares and other equity instruments	–	500
Redemption of preferred shares and other equity instruments for cancellation	–	(400)
Preferred shares and other equity instruments at end	2,650	3,050
Common shares at beginning (Note 11)	3,160	3,057
Issuances of common shares pursuant to the Stock Option Plan	54	87
Repurchases of common shares for cancellation	(24)	–
Impact of shares purchased or sold for trading	(1)	(3)
Common shares at end	3,189	3,141
Contributed surplus at beginning	47	47
Stock option expense (Note 13)	12	8
Stock options exercised	(6)	(9)
Other	2	1
Contributed surplus at end	55	47
Retained earnings at beginning	13,028	10,444
Net income attributable to the Bank's shareholders and holders of other equity instruments	2,652	2,401
Dividends on preferred shares and distributions on other equity instruments (Note 11)	(85)	(103)
Dividends on common shares (Note 11)	(897)	(718)
Premium paid on common shares repurchased for cancellation (Note 11)	(221)	–
Issuance expenses for shares and other equity instruments, net of income taxes	–	(4)
Remeasurements of pension plans and other post-employment benefit plans	131	447
Net gains (losses) on equity securities designated at fair value through other comprehensive income	(26)	59
Net fair value change attributable to the credit risk on financial liabilities designated at fair value through profit or loss	591	(29)
Impact of a financial liability resulting from put options written to non-controlling interests	(7)	–
Other	8	(5)
Retained earnings at end	15,174	12,492
Accumulated other comprehensive income at beginning	(32)	(118)
Net foreign currency translation adjustments	108	(178)
Net change in unrealized gains (losses) on debt securities at fair value through other comprehensive income	(95)	(23)
Net change in gains (losses) on cash flow hedges	48	168
Share in the other comprehensive income of associates and joint ventures	(2)	–
Accumulated other comprehensive income at end	27	(151)
Equity attributable to the Bank's shareholders and holders of other equity instruments	21,095	18,579
Non-controlling interests at beginning	3	3
Purchase of the non-controlling interest of the Credigy Ltd. subsidiary	–	10
Net income attributable to non-controlling interests	(1)	–
Other comprehensive income attributable to non-controlling interests	–	(13)
Non-controlling interests at end	2	–
Equity	21,097	18,579

Accumulated Other Comprehensive Income

	As at July 31, 2022	As at July 31, 2021
Accumulated other comprehensive income		
Net foreign currency translation adjustments	(21)	(117)
Net unrealized gains (losses) on debt securities at fair value through other comprehensive income	(24)	78
Net gains (losses) on instruments designated as cash flow hedges	71	(115)
Share in the other comprehensive income of associates and joint ventures	1	3
27	(151)	

The accompanying notes are an integral part of these unaudited interim condensed consolidated financial statements.

Consolidated Statements of Cash Flows

(unaudited) (millions of Canadian dollars)

	Nine months ended July 31	
	2022	2021
Cash flows from operating activities		
Net income	2,651	2,401
Adjustments for		
Provisions for credit losses	58	43
Amortization of premises and equipment, including right-of-use assets	151	152
Amortization of intangible assets	238	214
Deferred taxes	98	–
Losses (gains) on sales of non-trading securities, net	(116)	(131)
Share in the net income of associates and joint ventures	(24)	(17)
Stock option expense	12	8
Change in operating assets and liabilities		
Securities at fair value through profit or loss	1,160	(6,268)
Securities purchased under reverse repurchase agreements and securities borrowed	(9,307)	5,721
Loans and acceptances, net of securitization	(18,862)	(13,587)
Deposits	16,252	20,666
Obligations related to securities sold short	3,065	2,286
Obligations related to securities sold under repurchase agreements and securities loaned	12,845	(7,217)
Derivative financial instruments, net	(795)	1,836
Securitization – Credit cards	(37)	–
Interest and dividends receivable and interest payable	(50)	(235)
Current tax assets and liabilities	(321)	257
Other items	(1,551)	1,192
	5,467	7,321
Cash flows from financing activities		
Issuances of preferred shares and other equity instruments	–	500
Redemption of preferred shares and other equity instruments for cancellation	–	(400)
Issuances of common shares (including the impact of shares purchased for trading)	47	75
Repurchases of common shares for cancellation	(245)	–
Issuance of subordinated debt	748	–
Purchase of the non-controlling interest of the Credigy Ltd. subsidiary	–	(300)
Issuance expenses for shares and other equity instruments	–	(4)
Repayments of lease liabilities	(73)	(71)
Dividends paid on shares and distributions on other equity instruments	(982)	(827)
	(505)	(1,027)
Cash flows from investing activities		
Net change in investments in associates and joint ventures	202	141
Purchases of non-trading securities	(8,479)	(4,934)
Maturities of non-trading securities	1,594	1,940
Sales of non-trading securities	5,643	5,789
Net change in premises and equipment, excluding right-of-use assets	(227)	(157)
Net change in intangible assets	(307)	(268)
	(1,574)	2,511
Impact of currency rate movements on cash and cash equivalents	701	(861)
Increase (decrease) in cash and cash equivalents	4,089	7,944
Cash and cash equivalents at beginning	33,879	29,142
Cash and cash equivalents at end⁽¹⁾	37,968	37,086
Supplementary information about cash flows from operating activities		
Interest paid	2,059	1,792
Interest and dividends received	6,073	5,149
Income taxes paid	911	492

The accompanying notes are an integral part of these unaudited interim condensed financial statements.

(1) This item is the equivalent of Consolidated Balance Sheet item *Cash and deposits with financial institutions*. It includes an amount of \$7.2 billion as at July 31, 2022 (\$6.8 billion as at October 31, 2021) for which there are restrictions and of which \$4.6 billion (\$4.9 billion as at October 31, 2021) represent the balances that the Bank must maintain with central banks, other regulatory agencies, and certain counterparties.

Notes to the Interim Condensed Consolidated Financial Statements

(unaudited) (millions of Canadian dollars)

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Note 1 – Basis of Presentation

On August 23, 2022, the Board of Directors authorized the publication of the Bank's unaudited interim condensed consolidated financial statements (the consolidated financial statements) for the quarter and nine-month period ended July 31, 2022.

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.

These consolidated financial statements were prepared in accordance with IAS 34 – *Interim Financial Reporting* and using the same accounting policies, judgments, estimation processes, and valuation techniques as those described in Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2021. Given the uncertainty surrounding the unprecedented nature of the COVID-19 pandemic, developing reliable estimates and applying judgment continue to be substantially complex. The uncertainty surrounding certain key inputs used in measuring expected credit losses is described in Note 5 to these consolidated financial statements. Future accounting policy changes that have not yet come into effect are described in Note 2 to the audited annual consolidated financial statements for the year ended October 31, 2021.

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

Interest Rate Benchmark Reform

The interest rate benchmark reform is a global initiative that is being coordinated and led by central banks and governments around the world, including those in Canada. 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 its new and former financial instrument standards, IFRS 9 – *Financial Instruments* (IFRS 9) and IAS 39 – *Financial Instruments: Recognition and Measurement* (IAS 39) as well as to related standard IFRS 7 – *Financial Instruments: Disclosures* (IFRS 7), to IFRS 4 – *Insurance Contracts* (IFRS 4), and to IFRS 16 – *Leases* (IFRS 16). These amendments address how financial statements will be affected once current interest rate benchmarks are replaced with alternative interest rate benchmarks and notably cover amendments to contractual cash flows, hedge accounting, and disclosures. On November 1, 2020, the Bank early adopted the amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4, and IFRS 16. For additional information, see Note 17 and the Accounting Policy Changes section in Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2021.

The Bank has transitioned its LIBOR-related (London Interbank Offered Rates) contracts that involve pound sterling (GBP), the euro (EUR), the Japanese yen (JPY), and the Swiss franc (CHF), for which the cessation or loss of representativeness was December 31, 2021. As for USD LIBOR, the Bank included rate replacement clauses in contracts negotiated during 2021 and, since January 1, 2022, the Bank has no longer been using USD LIBOR in new contracts except in circumstances compliant with regulatory guidance.

The Bank is continuing to monitor all of the developments of this initiative, as it is exposed to several risks, including interest rate risk and operational risk, which arise from non-derivative financial assets, non-derivative financial liabilities, and derivative financial instruments. The project team ensures that risks are mitigated while ensuring a positive experience for its clients. The Bank is taking all necessary steps to identify, measure, and control all risks to ensure a smooth transition to the interest rate benchmark reform. As at July 31, 2022, the project was progressing according to schedule.

Recent Developments

On December 16, 2021, the Bank of Canada announced that a white paper published by the Canadian Alternative Reference Rate (CARR) Working Group was recommending that CDOR (Canadian Dollar Offered Rate) be declared unrepresentative by its administrator, namely, Refinitiv Benchmark Services (UK) Limited (Refinitiv) and also that CDOR cease to exist as of June 30, 2024 (including a recommendation to cease using CDOR on the derivative financial instrument market as of June 30, 2023).

On January 31, 2022, Refinitiv launched a public consultation on the future of CDOR. The consultation ended on March 2, 2022, after which Refinitiv published an update to the consultation on April 14, 2022. On May 16, 2022, Refinitiv published the consultation conclusions and announced that the publication of CDOR would cease as of June 28, 2024.

Following this announcement, the CARR Working Group welcomed Refinitiv's decision and, at the same time, OSFI published its prudential expectations regarding the cessation of CDOR. First, OSFI expects all new derivative contracts (bilateral, cleared, and exchange-traded) and securities (assets and debt liabilities) to transition to alternative reference rates by June 30, 2023, with no new CDOR exposure being recorded after that date, with limited exceptions for risk mitigation requirements. Thereafter, by June 28, 2024, OSFI expects federally regulated financial institutions to have transitioned all loan agreements referencing CDOR to alternative reference rates.

The following table discloses the non-derivative financial assets, non-derivative financial liabilities, and derivative financial instruments subject to the interest rate benchmark reform as at July 31, 2022 that will mature after June 28, 2024 and that have not yet transitioned to alternative benchmark rates from the CDOR rate.

	As at July 31, 2022
Non-derivative financial assets ⁽¹⁾	13,695
Non-derivative financial liabilities ⁽²⁾	9,628
Notional amount of derivative financial instruments	340,485

(1) Non-derivative financial assets include the carrying value of securities as well as the outstanding balances on loans and the customers' liability under acceptances.

(2) Non-derivative financial liabilities include the nominal amounts of deposits and subordinated debt as well as the carrying value of acceptances.

Note 2 – 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 July 31, 2022	
	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	Fair value	Total carrying value	Total fair value
Financial assets								
Cash and deposits with financial institutions	–	–	–	–	37,968	37,968	37,968	37,968
Securities	82,580	1,071	8,701	546	13,290	12,958	106,188	105,856
Securities purchased under reverse repurchase agreements and securities borrowed	–	–	–	–	16,823	16,823	16,823	16,823
Loans and acceptances, net of allowances	10,082	–	–	–	190,842	186,655	200,924	196,737
Other								
Derivative financial instruments	13,956	–	–	–	–	–	13,956	13,956
Other assets	82	–	–	–	2,667	2,667	2,749	2,749
Financial liabilities								
Deposits⁽¹⁾	–	14,803			242,387	241,575	257,190	256,378
Other								
Acceptances	–	–			6,287	6,287	6,287	6,287
Obligations related to securities sold short	23,331	–			–	–	23,331	23,331
Obligations related to securities sold under repurchase agreements and securities loaned	–	–			30,138	30,138	30,138	30,138
Derivative financial instruments	16,044	–			–	–	16,044	16,044
Liabilities related to transferred receivables	–	10,495			14,615	14,115	25,110	24,610
Other liabilities	–	–			2,431	2,427	2,431	2,427
Subordinated debt	–	–			1,510	1,523	1,510	1,523

(1) Includes embedded derivative financial instruments.

As at October 31, 2021

	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	—	—	—	—	33,879	33,879	33,879	33,879
Securities	83,464	1,347	8,966	617	11,910	11,897	106,304	106,291
Securities purchased under reverse repurchase agreements and securities borrowed	—	—	—	—	7,516	7,516	7,516	7,516
Loans and acceptances, net of allowances	8,539	—	—	—	174,150	173,769	182,689	182,308
Other								
Derivative financial instruments	16,484	—	—	—	—	—	16,484	16,484
Other assets	—	—	—	—	1,684	1,684	1,684	1,684
Financial liabilities								
Deposits⁽¹⁾	—	14,018			226,920	227,054	240,938	241,072
Other								
Acceptances	—	—			6,836	6,836	6,836	6,836
Obligations related to securities sold short	20,266	—			—	—	20,266	20,266
Obligations related to securities sold under repurchase agreements and securities loaned	—	—			17,293	17,293	17,293	17,293
Derivative financial instruments	19,367	—			—	—	19,367	19,367
Liabilities related to transferred receivables	—	11,398			13,772	13,724	25,170	25,122
Other liabilities	—	—			1,709	1,709	1,709	1,709
Subordinated debt	—	—			768	773	768	773

(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 valuations were based on its assessment of the conditions prevailing as at July 31, 2022 and may change in the future. Furthermore, there may be valuation uncertainty resulting from the choice of valuation model used.

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. The Bank's valuation governance structure has remained largely unchanged from that described in Note 3 to the audited annual consolidated financial statements for the year ended October 31, 2021. The valuation techniques used to determine the fair value of financial assets and financial liabilities are also described in this note, and no significant changes have been made to the valuation techniques.

Note 2 – Fair Value of Financial Instruments (cont.)

Financial Instruments Recorded at Fair Value on the Consolidated Balance Sheet

Hierarchy of Fair Value Measurements

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 in an active market 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. For additional information, see Note 3 to the audited annual consolidated financial statements for the year ended October 31, 2021.

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 the quarter ended July 31, 2022, \$4 million in securities classified as at fair value through profit or loss were transferred from Level 2 to Level 1 as a result of changing market conditions (\$23 million in securities classified as at fair value through profit or loss during the quarter ended July 31, 2021). In addition, during the quarter ended July 31, 2022, \$16 million in securities classified as at fair value through profit or loss were transferred from Level 1 to Level 2 as a result of changing market conditions (\$5 million in securities classified as at fair value through profit or loss during the quarter ended July 31, 2021). During the nine-month periods ended July 31, 2022 and 2021, financial instruments were transferred to (or from) Level 3 due to changes in the availability of observable market inputs resulting from changing market conditions.

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

	As at July 31, 2022			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	5,702	7,862	–	13,564
Canadian provincial and municipal governments	–	10,023	–	10,023
U.S. Treasury, other U.S. agencies and other foreign governments	4,933	3,864	–	8,797
Other debt securities	–	3,066	55	3,121
Equity securities	47,251	505	390	48,146
	57,886	25,320	445	83,651
At fair value through other comprehensive income				
Securities issued or guaranteed by				
Canadian government	145	3,511	–	3,656
Canadian provincial and municipal governments	–	1,932	–	1,932
U.S. Treasury, other U.S. agencies and other foreign governments	1,632	195	–	1,827
Other debt securities	–	1,286	–	1,286
Equity securities	–	234	312	546
	1,777	7,158	312	9,247
Loans				
Other				
Derivative financial instruments	360	13,586	10	13,956
Other assets – other items	–	–	82	82
	60,023	55,885	1,110	117,018
Financial liabilities				
Deposits				
Deposits	–	15,083	4	15,087
Other				
Obligations related to securities sold short	17,126	6,205	–	23,331
Derivative financial instruments	845	15,191	8	16,044
Liabilities related to transferred receivables	–	10,495	–	10,495
	17,971	46,974	12	64,957

	As at October 31, 2021			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	2,661	6,716	—	9,377
Canadian provincial and municipal governments	—	8,998	—	8,998
U.S. Treasury, other U.S. agencies and other foreign governments	2,547	1,878	—	4,425
Other debt securities	—	2,484	47	2,531
Equity securities	58,539	517	424	59,480
	63,747	20,593	471	84,811
At fair value through other comprehensive income				
Securities issued or guaranteed by				
Canadian government	19	4,214	—	4,233
Canadian provincial and municipal governments	—	2,313	—	2,313
U.S. Treasury, other U.S. agencies and other foreign governments	1,384	252	—	1,636
Other debt securities	—	784	—	784
Equity securities	—	311	306	617
	1,403	7,874	306	9,583
Loans	—	8,242	297	8,539
Other				
Derivative financial instruments	203	16,278	3	16,484
	65,353	52,987	1,077	119,417
Financial liabilities				
Deposits	—	14,215	—	14,215
Other				
Obligations related to securities sold short	15,546	4,720	—	20,266
Derivative financial instruments	693	18,673	1	19,367
Liabilities related to transferred receivables	—	11,398	—	11,398
	16,239	49,006	1	65,246

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 Bank maximizes the use of observable inputs to determine the fair value of financial instruments.

For a description of the valuation techniques and significant unobservable inputs used in determining the fair value of financial instruments classified in Level 3, see Note 3 to the audited annual consolidated financial statements for the year ended October 31, 2021. For the quarter and nine-month period ended July 31, 2022, no significant change was made to the valuation techniques and significant unobservable inputs used in determining fair value.

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 additional information on how a change in an unobservable input might affect the fair value measurements of Level 3 financial instruments, see Note 3 to the audited annual consolidated financial statements for the year ended October 31, 2021. For the nine-month period ended July 31, 2022, there were no significant changes in the sensitivity analyses of Level 3 financial instruments.

Note 2 – Fair Value of Financial Instruments (cont.)

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 on 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 Level 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.

	Nine months ended July 31, 2022				
	Securities at fair value through profit or loss	Securities at fair value through other comprehensive income	Loans and other assets	Derivative financial instruments ⁽¹⁾	Deposits ⁽²⁾
Fair value as at October 31, 2021	471	306	297	2	–
Total realized and unrealized gains (losses) included in <i>Net income</i> ⁽³⁾	5	–	(27)	(1)	2
Total realized and unrealized gains (losses) included in <i>Other comprehensive income</i>	–	(1)	–	–	–
Purchases	43	7	71	–	–
Sales	(62)	–	–	–	–
Issuances	–	–	16	–	(3)
Settlements and other	–	–	(14)	–	–
Financial instruments transferred into Level 3	–	–	–	1	(3)
Financial instruments transferred out of Level 3	(12)	–	–	–	–
Fair value as at July 31, 2022	445	312	343	2	(4)
Change in unrealized gains and losses included in <i>Net income</i> with respect to financial assets and financial liabilities held as at July 31, 2022 ⁽⁴⁾	(12)	–	(27)	(1)	2
	Nine months ended July 31, 2021				
	Securities at fair value through profit or loss	Securities at fair value through other comprehensive income	Loans and other assets	Derivative financial instruments ⁽¹⁾	Deposits ⁽²⁾
Fair value as at October 31, 2020	457	373	372	29	2
Total realized and unrealized gains (losses) included in <i>Net income</i> ⁽⁵⁾	53	–	25	(25)	–
Total realized and unrealized gains (losses) included in <i>Other comprehensive income</i>	–	(6)	–	–	–
Purchases	38	–	–	–	–
Sales	(36)	(112)	–	–	–
Issuances	–	–	10	–	–
Settlements and other	–	–	(96)	(1)	–
Financial instruments transferred into Level 3	–	–	–	–	–
Financial instruments transferred out of Level 3	–	–	–	3	(2)
Fair value as at July 31, 2021	512	255	311	6	–
Change in unrealized gains and losses included in <i>Net income</i> with respect to financial assets and financial liabilities held as at July 31, 2021 ⁽⁶⁾	49	–	25	(25)	–

(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 in deposits.

(3) Total gains (losses) included in *Non-interest income* was a loss of \$21 million.

(4) Total unrealized gains (losses) included in *Non-interest income* was an unrealized loss of \$38 million.

(5) Total gains (losses) included in *Non-interest income* was a gain of \$53 million.

(6) Total unrealized gains (losses) included in *Non-interest income* was an unrealized gain of \$49 million.

Note 3 – 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 the audited annual consolidated financial statements for the year ended October 31, 2021. 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 financial liabilities or recognizing the gains and losses thereon on different bases, the Bank designated, at fair value through profit or loss, certain securities 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 July 31, 2022	Unrealized gains (losses) for the quarter ended July 31, 2022	Unrealized gains (losses) for the nine months ended July 31, 2022	Unrealized gains (losses) since the initial recognition of the instrument
Financial assets designated at fair value through profit or loss				
Securities	1,071	10	(18)	–
Financial liabilities designated at fair value through profit or loss				
Deposits ⁽¹⁾⁽²⁾	14,803	322	2,063	2,130
Liabilities related to transferred receivables	10,495	9	330	355
	25,298	331	2,393	2,485
	Carrying value as at July 31, 2021	Unrealized gains (losses) for the quarter ended July 31, 2021	Unrealized gains (losses) for the nine months ended July 31, 2021	Unrealized gains (losses) since the initial recognition of the instrument
Financial assets designated at fair value through profit or loss				
Securities	1,518	1	(30)	55
Financial liabilities designated at fair value through profit or loss				
Deposits ⁽¹⁾⁽²⁾	13,611	(211)	(798)	(440)
Liabilities related to transferred receivables	10,344	(10)	77	(148)
	23,955	(221)	(721)	(588)

(1) For the quarter ended July 31, 2022, 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 gain of \$362 million (\$50 million gain for the quarter ended July 31, 2021). For the nine-month period ended July 31, 2022, the corresponding change in this item resulted in a gain of \$803 million (\$40 million loss for the nine-month period ended July 31, 2021).

(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 4 – Securities

Credit Quality

As at July 31, 2022 and as at October 31, 2021, 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 5 to these consolidated financial statements.

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

	As at July 31, 2022			
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Carrying value ⁽¹⁾
Securities issued or guaranteed by				
Canadian government	3,794	2	(140)	3,656
Canadian provincial and municipal governments	1,996	21	(85)	1,932
U.S. Treasury, other U.S. agencies and other foreign governments	1,859	5	(37)	1,827
Other debt securities	1,348	2	(64)	1,286
Equity securities	556	22	(32)	546
	9,553	52	(358)	9,247
	As at October 31, 2021			
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Carrying value ⁽¹⁾
Securities issued or guaranteed by				
Canadian government	4,241	30	(38)	4,233
Canadian provincial and municipal governments	2,345	27	(59)	2,313
U.S. Treasury, other U.S. agencies and other foreign governments	1,648	–	(12)	1,636
Other debt securities	782	9	(7)	784
Equity securities	569	57	(9)	617
	9,585	123	(125)	9,583

(1) The allowances for credit losses on securities at fair value through other comprehensive income (excluding the equity securities), representing an amount of \$1 million as at July 31, 2022 (\$1 million as at October 31, 2021), are reported in *Other comprehensive income*. For additional information, see Note 5 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 nine-month period ended July 31, 2022, a dividend income amount of \$10 million was recognized for these investments (\$27 million for the nine-month period ended July 31, 2021), including \$3 million in dividend income for investments that were sold during the nine-month period ended July 31, 2022 (\$15 million for investments that were sold during the nine-month period ended July 31, 2021).

	Nine months ended July 31, 2022			Nine months ended July 31, 2021		
	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	306	311	617	373	246	619
Change in fair value	(1)	(34)	(35)	(6)	86	80
Designated at fair value through other comprehensive income	7	106	113	–	36	36
Sales ⁽¹⁾	–	(149)	(149)	(112)	(59)	(171)
Fair value at end	312	234	546	255	309	564

(1) The Bank disposed of public company equity securities for economic reasons.

Securities at Amortized Cost

	As at July 31, 2022	As at October 31, 2021
Securities issued or guaranteed by		
Canadian government	6,026	5,811
Canadian provincial and municipal governments	1,787	2,225
U.S. Treasury, other U.S. agencies and other foreign governments	147	–
Other debt securities	5,335	3,877
Gross carrying value	13,295	11,913
Allowances for credit losses	5	3
Carrying value	13,290	11,910

Gains (Losses) on Disposals of Securities at Amortized Cost

During the nine-month periods ended July 31, 2022 and 2021, the Bank sold certain debt securities measured at amortized cost. The carrying value of these securities upon disposal was \$337 million for the nine-month period ended July 31, 2022 (\$144 million for the nine-month period ended July 31, 2021), and the Bank recognized gains of \$4 million for the nine-month period ended July 31, 2022 (negligible amount for the nine-month period ended July 31, 2021) in *Non-interest income – Gains (losses) on non-trading securities, net* in the Consolidated Statement of Income.

Note 5 – Loans and Allowances for Credit Losses

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.

For additional information, see Notes 1 and 7 to the audited annual consolidated financial statements for the year ended October 31, 2021.

Credit Quality of Loans

The following tables present the gross carrying amounts of loans as at July 31, 2022 and as at October 31, 2021, 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 Ratings-Based (AIRB) categories, see the Internal Default Risk Ratings table on page 81 in the Credit Risk section of the *2021 Annual Report*.

Note 5 – Loans and Allowances for Credit Losses (cont.)

	As at July 31, 2022				
	Non-impaired loans		Impaired loans		Loans at fair value through profit or loss ⁽¹⁾
	Stage 1	Stage 2	Stage 3	POCI	Total
Residential mortgage					
Excellent	30,467	–	–	–	30,467
Good	17,364	78	–	–	17,442
Satisfactory	10,581	2,484	–	–	13,065
Special mention	262	268	–	–	530
Substandard	60	131	–	–	191
Default	–	–	48	–	48
AIRB approach	58,734	2,961	48	–	61,743
Standardized approach	6,543	170	144	252	9,284
Gross carrying amount	65,277	3,131	192	252	78,136
Allowances for credit losses ⁽²⁾	48	58	45	(60)	91
Carrying amount	65,229	3,073	147	312	78,045
Personal					
Excellent	22,199	8	–	–	22,207
Good	8,634	402	–	–	9,036
Satisfactory	6,684	1,300	–	–	7,984
Special mention	365	686	–	–	1,051
Substandard	126	183	–	–	309
Default	–	–	111	–	111
AIRB approach	38,008	2,579	111	–	40,698
Standardized approach	3,751	79	26	84	3,940
Gross carrying amount	41,759	2,658	137	84	44,638
Allowances for credit losses ⁽²⁾	71	108	67	(15)	231
Carrying amount	41,688	2,550	70	99	44,407
Credit card					
Excellent	596	–	–	–	596
Good	364	–	–	–	364
Satisfactory	675	44	–	–	719
Special mention	288	154	–	–	442
Substandard	36	62	–	–	98
Default	–	–	–	–	–
AIRB approach	1,959	260	–	–	2,219
Standardized approach	99	–	–	–	99
Gross carrying amount	2,058	260	–	–	2,318
Allowances for credit losses ⁽²⁾	34	91	–	–	125
Carrying amount	2,024	169	–	–	2,193
Business and government⁽³⁾					
Excellent	5,286	–	–	–	207
Good	26,835	88	–	–	53
Satisfactory	27,726	6,218	–	–	144
Special mention	109	1,458	–	–	–
Substandard	22	246	–	–	268
Default	–	–	269	–	269
AIRB approach	59,978	8,010	269	–	404
Standardized approach	7,699	13	17	–	394
Gross carrying amount	67,677	8,023	286	–	798
Allowances for credit losses ⁽²⁾	129	174	202	–	–
Carrying amount	67,548	7,849	84	–	76,279
Total loans and acceptances					
Gross carrying amount	176,771	14,072	615	336	10,082
Allowances for credit losses ⁽²⁾	282	431	314	(75)	–
Carrying amount	176,489	13,641	301	411	10,082
					200,924

(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.

As at October 31, 2021

	Non-impaired loans		Impaired loans		Loans at fair value through profit or loss ⁽¹⁾	
	Stage 1	Stage 2	Stage 3	POCI		Total
Residential mortgage						
Excellent	28,911	1	–	–	–	28,912
Good	17,083	53	–	–	–	17,136
Satisfactory	9,165	2,318	–	–	–	11,483
Special mention	314	266	–	–	–	580
Substandard	83	128	–	–	–	211
Default	–	–	82	–	–	82
AIRB approach	55,556	2,766	82	–	–	58,404
Standardized approach	5,803	129	57	332	7,817	14,138
Gross carrying amount	61,359	2,895	139	332	7,817	72,542
Allowances for credit losses ⁽²⁾	50	52	29	(60)	–	71
Carrying amount	61,309	2,843	110	392	7,817	72,471
Personal						
Excellent	16,211	57	–	–	–	16,268
Good	11,439	1,041	–	–	–	12,480
Satisfactory	4,665	1,580	–	–	–	6,245
Special mention	336	483	–	–	–	819
Substandard	121	129	–	–	–	250
Default	–	–	101	–	–	101
AIRB approach	32,772	3,290	101	–	–	36,163
Standardized approach	4,692	51	15	132	–	4,890
Gross carrying amount	37,464	3,341	116	132	–	41,053
Allowances for credit losses ⁽²⁾	70	98	63	(29)	–	202
Carrying amount	37,394	3,243	53	161	–	40,851
Credit card						
Excellent	559	–	–	–	–	559
Good	322	–	–	–	–	322
Satisfactory	623	38	–	–	–	661
Special mention	294	149	–	–	–	443
Substandard	38	62	–	–	–	100
Default	–	–	–	–	–	–
AIRB approach	1,836	249	–	–	–	2,085
Standardized approach	65	–	–	–	–	65
Gross carrying amount	1,901	249	–	–	–	2,150
Allowances for credit losses ⁽²⁾	33	89	–	–	–	122
Carrying amount	1,868	160	–	–	–	2,028
Business and government⁽³⁾						
Excellent	5,086	–	–	–	269	5,355
Good	24,395	131	–	–	53	24,579
Satisfactory	22,808	6,254	–	–	140	29,202
Special mention	128	1,509	–	–	–	1,637
Substandard	45	194	–	–	–	239
Default	–	–	326	–	–	326
AIRB approach	52,462	8,088	326	–	462	61,338
Standardized approach	6,179	84	81	–	260	6,604
Gross carrying amount	58,641	8,172	407	–	722	67,942
Allowances for credit losses ⁽²⁾	111	205	287	–	–	603
Carrying amount	58,530	7,967	120	–	722	67,339
Total loans and acceptances						
Gross carrying amount	159,365	14,657	662	464	8,539	183,687
Allowances for credit losses ⁽²⁾	264	444	379	(89)	–	998
Carrying amount	159,101	14,213	283	553	8,539	182,689

(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.

Note 5 – Loans and Allowances for Credit Losses (cont.)

The following table presents the credit risk exposures of off-balance-sheet commitments as at July 31, 2022 and as at October 31, 2021 according to credit quality and ECL impairment stage.

	As at July 31, 2022				As at October 31, 2021			
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Off-balance-sheet commitments⁽¹⁾								
Retail								
Excellent	15,287	6	–	15,293	17,053	72	–	17,125
Good	3,275	146	–	3,421	3,750	323	–	4,073
Satisfactory	1,168	182	–	1,350	1,085	229	–	1,314
Special mention	200	64	–	264	197	57	–	254
Substandard	14	13	–	27	16	13	–	29
Default	–	–	1	1	–	–	3	3
Non-retail								
Excellent	13,612	–	–	13,612	14,097	–	–	14,097
Good	17,848	11	–	17,859	17,497	2	–	17,499
Satisfactory	7,506	2,582	–	10,088	7,575	2,377	–	9,952
Special mention	17	377	–	394	14	336	–	350
Substandard	5	25	–	30	5	38	–	43
Default	–	–	2	2	–	–	3	3
AIRB approach	58,932	3,406	3	62,341	61,289	3,447	6	64,742
Standardized approach	15,555	–	–	15,555	14,872	–	1	14,873
Total exposure	74,487	3,406	3	77,896	76,161	3,447	7	79,615
Allowances for credit losses	85	45	–	130	104	58	–	162
Total exposure, net of allowances	74,402	3,361	3	77,766	76,057	3,389	7	79,453

(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 July 31, 2022				As at October 31, 2021			
	Residential mortgage	Personal	Credit card	Business and government ⁽²⁾	Residential mortgage	Personal	Credit card	Business and government ⁽²⁾
Past due but not impaired								
31 to 60 days	62	92	19	23	48	71	20	24
61 to 90 days	30	28	9	10	18	21	9	13
Over 90 days ⁽³⁾	–	–	20	–	–	–	21	–
	92	120	48	33	66	92	50	37

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

(2) Includes customers' liability under acceptances.

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

Impaired Loans

	As at July 31, 2022			As at October 31, 2021		
	Gross	Allowances for credit losses	Net	Gross	Allowances for credit losses	Net
Loans – Stage 3						
Residential mortgage	192	45	147	139	29	110
Personal	137	67	70	116	63	53
Credit card ⁽¹⁾	–	–	–	–	–	–
Business and government ⁽²⁾	286	202	84	407	287	120
	615	314	301	662	379	283
POCI loans	336	(75)	411	464	(89)	553
	951	239	712	1,126	290	836

(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.

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.

	Quarter ended July 31, 2022				
	Allowances for credit losses as at April 30, 2022	Provisions for credit losses	Write-offs ⁽¹⁾	Disposals	Recoveries and other
Balance sheet					
Cash and deposits with financial institutions⁽²⁾⁽³⁾	5	–	–	–	–
Securities⁽³⁾					
At fair value through other comprehensive income ⁽⁴⁾	1	–	–	–	–
At amortized cost ⁽²⁾	6	(1)	–	–	–
Securities purchased under reverse repurchase agreements and securities borrowed⁽²⁾⁽³⁾	–	–	–	–	–
Loans⁽⁵⁾					
Residential mortgage	81	10	(1)	–	1
Personal	215	26	(13)	–	3
Credit card	122	15	(15)	–	3
Business and government	448	9	(1)	–	1
Customers' liability under acceptances	49	(1)	–	–	–
	915	59	(30)	–	8
Other assets⁽²⁾⁽³⁾	–	–	–	–	–
Off-balance-sheet commitments⁽⁶⁾					
Letters of guarantee and documentary letters of credit	11	1	–	–	–
Undrawn commitments	115	(2)	–	–	–
Backstop liquidity and credit enhancement facilities	5	–	–	–	–
	131	(1)	–	–	130
	1,058	57	(30)	–	8
					1,093

	Quarter ended July 31, 2021				
	Allowances for credit losses as at April 30, 2021	Provisions for credit losses	Write-offs ⁽¹⁾	Disposals	Recoveries and other
Balance sheet					
Cash and deposits with financial institutions⁽²⁾⁽³⁾	5	–	–	–	–
Securities⁽³⁾					
At fair value through other comprehensive income ⁽⁴⁾	1	1	–	–	–
At amortized cost ⁽²⁾	1	–	–	–	–
Securities purchased under reverse repurchase agreements and securities borrowed⁽²⁾⁽³⁾	–	–	–	–	–
Loans⁽⁵⁾					
Residential mortgage	79	(2)	(1)	–	–
Personal	246	(36)	(14)	–	7
Credit card	155	(10)	(14)	–	4
Business and government	543	27	(10)	–	1
Customers' liability under acceptances	91	(12)	–	–	–
	1,114	(33)	(39)	–	12
Other assets⁽²⁾⁽³⁾	–	–	–	–	–
Off-balance-sheet commitments⁽⁶⁾					
Letters of guarantee and documentary letters of credit	11	2	–	–	–
Undrawn commitments	173	(14)	–	–	–
Backstop liquidity and credit enhancement facilities	4	1	–	–	–
	188	(11)	–	–	177
	1,309	(43)	(39)	–	12
					1,239

(1) The contractual amount outstanding on financial assets that were written off during the quarter ended July 31, 2022 and that are still subject to enforcement activity was \$21 million (\$24 million for the quarter ended July 31, 2021).

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

(3) As at July 31, 2022 and 2021, 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 5 – Loans and Allowances for Credit Losses (cont.)

	Nine months ended July 31, 2022					
	Allowances for credit losses as at October 31, 2021	Provisions for credit losses	Write-offs ⁽¹⁾	Disposals	Recoveries and other	Allowances for credit losses as at July 31, 2022
Balance sheet						
Cash and deposits with financial institutions⁽²⁾⁽³⁾	5	–	–	–	–	5
Securities⁽³⁾						
At fair value through other comprehensive income ⁽⁴⁾	1	–	–	–	–	1
At amortized cost ⁽²⁾	3	2	–	–	–	5
Securities purchased under reverse repurchase agreements and securities borrowed⁽²⁾⁽³⁾	–	–	–	–	–	–
Loans⁽⁵⁾						
Residential mortgage	71	21	(3)	–	2	91
Personal	202	52	(36)	–	13	231
Credit card	122	36	(45)	–	12	125
Business and government	515	19	(82)	–	5	457
Customers' liability under acceptances	88	(40)	–	–	–	48
	998	88	(166)	–	32	952
Other assets⁽²⁾⁽³⁾	–	–	–	–	–	–
Off-balance-sheet commitments⁽⁶⁾						
Letters of guarantee and documentary letters of credit	13	(1)	–	–	–	12
Undrawn commitments	143	(30)	–	–	–	113
Backstop liquidity and credit enhancement facilities	6	(1)	–	–	–	5
	162	(32)	–	–	–	130
	1,169	58	(166)	–	32	1,093

	Nine months ended July 31, 2021					
	Allowances for credit losses as at October 31, 2020	Provisions for credit losses	Write-offs ⁽¹⁾	Disposals	Recoveries and other	Allowances for credit losses as at July 31, 2021
Balance sheet						
Cash and deposits with financial institutions⁽²⁾⁽³⁾	5	–	–	–	–	5
Securities⁽³⁾						
At fair value through other comprehensive income ⁽⁴⁾	3	(1)	–	–	–	2
At amortized cost ⁽²⁾	1	–	–	–	–	1
Securities purchased under reverse repurchase agreements and securities borrowed⁽²⁾⁽³⁾	–	–	–	–	–	–
Loans⁽⁵⁾						
Residential mortgage	65	16	(4)	–	(1)	76
Personal	298	(34)	(58)	(14)	11	203
Credit card	169	(2)	(45)	–	13	135
Business and government	533	77	(47)	–	(2)	561
Customers' liability under acceptances	93	(14)	–	–	–	79
	1,158	43	(154)	(14)	21	1,054
Other assets⁽²⁾⁽³⁾	–	–	–	–	–	–
Off-balance-sheet commitments⁽⁶⁾						
Letters of guarantee and documentary letters of credit	15	(2)	–	–	–	13
Undrawn commitments	157	2	–	–	–	159
Backstop liquidity and credit enhancement facilities	4	1	–	–	–	5
	176	1	–	–	–	177
	1,343	43	(154)	(14)	21	1,239

(1) The contractual amount outstanding on financial assets that were written off during the nine-month period ended July 31, 2022 and that are still subject to enforcement activity was \$68 million (\$82 million for the nine-month period ended July 31, 2021).

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

(3) As at July 31, 2022 and 2021, 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.

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

	Quarter ended July 31, 2022						Quarter ended July 31, 2021			
	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		
	Stage 1	Stage 2	Stage 3	POCI ⁽¹⁾		Stage 1	Stage 2	Stage 3	POCI ⁽¹⁾	
Residential mortgage										
Balance at beginning	44	57	39	(59)	81	66	28	30	(45)	79
Originations or purchases	5	–	–	–	5	3	–	–	–	3
Transfers ⁽²⁾ :										
to Stage 1	5	(4)	(1)	–	–	3	(3)	–	–	–
to Stage 2	(1)	3	(2)	–	–	–	–	–	–	–
to Stage 3	–	(1)	1	–	–	–	–	–	–	–
Net remeasurement of loss allowances ⁽³⁾	(4)	3	9	(1)	7	(22)	21	(1)	(2)	(4)
Derecognitions ⁽⁴⁾	(1)	–	(1)	–	(2)	(1)	–	–	–	(1)
Changes to models	–	–	–	–	–	–	–	–	–	–
Provisions for credit losses	4	1	6	(1)	10	(17)	18	(1)	(2)	(2)
Write-offs	–	–	(1)	–	(1)	–	–	(1)	–	(1)
Disposals	–	–	–	–	–	–	–	–	–	–
Recoveries	–	–	1	–	1	–	–	–	–	–
Foreign exchange movements and other	–	–	–	–	–	1	–	–	(1)	–
Balance at end	48	58	45	(60)	91	50	46	28	(48)	76
Includes:										
Amounts drawn	48	58	45	(60)	91	50	46	28	(48)	76
Undrawn commitments ⁽⁵⁾	–	–	–	–	–	–	–	–	–	–
Personal										
Balance at beginning	70	109	65	(22)	222	72	121	63	(5)	251
Originations or purchases	14	–	–	–	14	12	–	–	–	12
Transfers ⁽²⁾ :										
to Stage 1	19	(18)	(1)	–	–	18	(17)	(1)	–	–
to Stage 2	(3)	4	(1)	–	–	(3)	3	–	–	–
to Stage 3	–	(6)	6	–	–	–	(5)	5	–	–
Net remeasurement of loss allowances ⁽³⁾	(22)	30	9	8	25	(24)	13	5	(34)	(40)
Derecognitions ⁽⁴⁾	(3)	(4)	(2)	–	(9)	(3)	(4)	(1)	–	(8)
Changes to models	(2)	(2)	–	–	(4)	–	–	–	–	–
Provisions for credit losses	3	4	11	8	26	–	(10)	8	(34)	(36)
Write-offs	–	–	(13)	–	(13)	–	–	(14)	–	(14)
Disposals	–	–	–	–	–	–	–	–	–	–
Recoveries	–	–	3	–	3	–	–	6	–	6
Foreign exchange movements and other	–	–	1	(1)	–	–	1	–	–	1
Balance at end	73	113	67	(15)	238	72	112	63	(39)	208
Includes:										
Amounts drawn	71	108	67	(15)	231	70	109	63	(39)	203
Undrawn commitments ⁽⁵⁾	2	5	–	–	7	2	3	–	–	5

(1) The total amount of undiscounted initially expected credit losses on the POCI loans acquired during the quarter ended July 31, 2022 was \$3 million (\$11 million during the quarter ended July 31, 2021). The expected credit losses reflected in the purchase price have been 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.

Note 5 – Loans and Allowances for Credit Losses (cont.)

	Quarter ended July 31, 2022						Quarter ended July 31, 2021			
	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		
	Stage 1	Stage 2	Stage 3	POCI ⁽¹⁾		Stage 1	Stage 2	Stage 3	POCI ⁽¹⁾	
Credit card										
Balance at beginning	55	102	–	–	157	69	125	–	–	194
Originations or purchases	3	–	–	–	3	3	–	–	–	3
Transfers ⁽²⁾ :										
to Stage 1	24	(24)	–	–	–	26	(26)	–	–	–
to Stage 2	(3)	3	–	–	–	(4)	4	–	–	–
to Stage 3	(1)	(6)	7	–	–	–	(8)	8	–	–
Net remeasurement of loss allowances ⁽³⁾	(21)	29	5	–	13	(28)	14	2	–	(12)
Derecognitions ⁽⁴⁾	(1)	–	–	–	(1)	(1)	–	–	–	(1)
Changes to models	–	–	–	–	–	–	–	–	–	–
Provisions for credit losses	1	2	12	–	15	(4)	(16)	10	–	(10)
Write-offs	–	–	(15)	–	(15)	–	–	(14)	–	(14)
Disposals	–	–	–	–	–	–	–	–	–	–
Recoveries	–	–	3	–	3	–	–	4	–	4
Foreign exchange movements and other	–	–	–	–	–	–	–	–	–	–
Balance at end	56	104	–	–	160	65	109	–	–	174
Includes:										
Amounts drawn	34	91	–	–	125	37	98	–	–	135
Undrawn commitments ⁽⁵⁾	22	13	–	–	35	28	11	–	–	39
Business and government⁽⁶⁾										
Balance at beginning	166	190	214	–	570	185	289	289	–	763
Originations or purchases	23	–	–	–	23	37	–	–	–	37
Transfers ⁽²⁾ :										
to Stage 1	16	(16)	–	–	–	27	(27)	–	–	–
to Stage 2	(5)	6	(1)	–	–	(5)	6	(1)	–	–
to Stage 3	–	(1)	1	–	–	–	(4)	4	–	–
Net remeasurement of loss allowances ⁽³⁾	(15)	24	(11)	–	(2)	(35)	21	15	–	1
Derecognitions ⁽⁴⁾	(6)	(8)	(1)	–	(15)	(12)	(24)	(1)	–	(37)
Changes to models	–	–	–	–	–	–	–	–	–	–
Provisions for credit losses	13	5	(12)	–	6	12	(28)	17	–	1
Write-offs	–	–	(1)	–	(1)	–	–	(10)	–	(10)
Disposals	–	–	–	–	–	–	–	–	–	–
Recoveries	–	–	1	–	1	–	–	1	–	1
Foreign exchange movements and other	–	–	–	–	–	–	–	–	–	–
Balance at end	179	195	202	–	576	197	261	297	–	755
Includes:										
Amounts drawn	129	174	202	–	505	119	225	296	–	640
Undrawn commitments ⁽⁵⁾	50	21	–	–	71	78	36	1	–	115
Total allowances for credit losses at end⁽⁷⁾	356	470	314	(75)	1,065	384	528	388	(87)	1,213
Includes:										
Amounts drawn	282	431	314	(75)	952	276	478	387	(87)	1,054
Undrawn commitments ⁽⁵⁾	74	39	–	–	113	108	50	1	–	159

- (1) The total amount of undiscounted initially expected credit losses on the POCI loans acquired during the quarter ended July 31, 2022 was \$3 million (\$11 million during the quarter ended July 31, 2021). The expected credit losses reflected in the purchase price have been 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.

	Nine months ended July 31, 2022						Nine months ended July 31, 2021			
	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	50	52	29	(60)	71	63	23	35	(56)	65
Originations or purchases	14	—	—	—	14	8	—	—	—	8
Transfers ⁽²⁾ :										
to Stage 1	15	(13)	(2)	—	—	15	(10)	(5)	—	—
to Stage 2	(3)	5	(2)	—	—	(2)	2	—	—	—
to Stage 3	—	(1)	1	—	—	—	(1)	1	—	—
Net remeasurement of loss allowances ⁽³⁾	(27)	16	21	2	12	(29)	33	2	5	11
Derecognitions ⁽⁴⁾	(2)	(2)	(1)	—	(5)	(2)	(1)	—	—	(3)
Changes to models	—	—	—	—	—	—	—	—	—	—
Provisions for credit losses	(3)	5	17	2	21	(10)	23	(2)	5	16
Write-offs	—	—	(3)	—	(3)	—	—	(4)	—	(4)
Disposals	—	—	—	—	—	—	—	—	—	—
Recoveries	—	—	2	—	2	—	—	2	—	2
Foreign exchange movements and other	1	1	—	(2)	—	(3)	—	(3)	3	(3)
Balance at end	48	58	45	(60)	91	50	46	28	(48)	76
Includes:										
Amounts drawn	48	58	45	(60)	91	50	46	28	(48)	76
Undrawn commitments ⁽⁵⁾	—	—	—	—	—	—	—	—	—	—
Personal										
Balance at beginning	73	103	63	(29)	210	89	148	76	(10)	303
Originations or purchases	38	—	—	—	38	28	—	—	—	28
Transfers ⁽²⁾ :										
to Stage 1	50	(46)	(4)	—	—	59	(53)	(6)	—	—
to Stage 2	(9)	11	(2)	—	—	(9)	10	(1)	—	—
to Stage 3	—	(19)	19	—	—	—	(21)	21	—	—
Net remeasurement of loss allowances ⁽³⁾	(67)	69	17	15	34	(75)	46	18	(29)	(40)
Derecognitions ⁽⁴⁾	(8)	(12)	(3)	—	(23)	(9)	(11)	(2)	—	(22)
Changes to models	(4)	6	—	—	2	—	—	—	—	—
Provisions for credit losses	—	9	27	15	51	(6)	(29)	30	(29)	(34)
Write-offs	—	—	(36)	—	(36)	—	—	(58)	—	(58)
Disposals	—	—	—	—	—	(8)	(6)	—	—	(14)
Recoveries	—	—	13	—	13	—	—	16	—	16
Foreign exchange movements and other	—	1	—	(1)	—	(3)	(1)	(1)	—	(5)
Balance at end	73	113	67	(15)	238	72	112	63	(39)	208
Includes:										
Amounts drawn	71	108	67	(15)	231	70	109	63	(39)	203
Undrawn commitments ⁽⁵⁾	2	5	—	—	7	2	3	—	—	5

(1) The total amount of undiscounted initially expected credit losses on the POCI loans acquired during the nine-month period ended July 31, 2022 was \$12 million (\$11 million during the nine-month period ended July 31, 2021). The expected credit losses reflected in the purchase price have been 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.

Note 5 – Loans and Allowances for Credit Losses (cont.)

	Nine months ended July 31, 2022						Nine months ended July 31, 2021			
	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		
	Stage 1	Stage 2	Stage 3	POCI ⁽¹⁾		Stage 1	Stage 2	Stage 3	POCI ⁽¹⁾	
Credit card										
Balance at beginning	57	101	–	–	158	68	137	–	–	205
Originations or purchases	9	–	–	–	9	7	–	–	–	7
Transfers ⁽²⁾ :										
to Stage 1	67	(67)	–	–	–	76	(76)	–	–	–
to Stage 2	(12)	12	–	–	–	(11)	11	–	–	–
to Stage 3	(1)	(17)	18	–	–	–	(23)	23	–	–
Net remeasurement of loss allowances ⁽³⁾	(62)	76	15	–	29	(73)	61	9	–	(3)
Derecognitions ⁽⁴⁾	(2)	(1)	–	–	(3)	(2)	(1)	–	–	(3)
Changes to models	–	–	–	–	–	–	–	–	–	–
Provisions for credit losses	(1)	3	33	–	35	(3)	(28)	32	–	1
Write-offs	–	–	(45)	–	(45)	–	–	(45)	–	(45)
Disposals	–	–	–	–	–	–	–	–	–	–
Recoveries	–	–	12	–	12	–	–	13	–	13
Foreign exchange movements and other	–	–	–	–	–	–	–	–	–	–
Balance at end	56	104	–	–	160	65	109	–	–	174
Includes:										
Amounts drawn	34	91	–	–	125	37	98	–	–	135
Undrawn commitments ⁽⁵⁾	22	13	–	–	35	28	11	–	–	39
Business and government⁽⁶⁾										
Balance at beginning	177	238	287	–	702	214	287	241	–	742
Originations or purchases	59	–	–	–	59	91	–	–	–	91
Transfers ⁽²⁾ :										
to Stage 1	56	(56)	–	–	–	48	(47)	(1)	–	–
to Stage 2	(17)	20	(3)	–	–	(35)	38	(3)	–	–
to Stage 3	–	(2)	2	–	–	–	(20)	20	–	–
Net remeasurement of loss allowances ⁽³⁾	(72)	20	(4)	–	(56)	(95)	41	93	–	39
Derecognitions ⁽⁴⁾	(24)	(25)	(3)	–	(52)	(26)	(37)	(5)	–	(68)
Changes to models	–	–	–	–	–	–	–	–	–	–
Provisions for credit losses	2	(43)	(8)	–	(49)	(17)	(25)	104	–	62
Write-offs	–	–	(82)	–	(82)	–	–	(47)	–	(47)
Disposals	–	–	–	–	–	–	–	–	–	–
Recoveries	–	–	3	–	3	–	–	3	–	3
Foreign exchange movements and other	–	–	2	–	2	–	(1)	(4)	–	(5)
Balance at end	179	195	202	–	576	197	261	297	–	755
Includes:										
Amounts drawn	129	174	202	–	505	119	225	296	–	640
Undrawn commitments ⁽⁵⁾	50	21	–	–	71	78	36	1	–	115
Total allowances for credit losses at end⁽⁷⁾	356	470	314	(75)	1,065	384	528	388	(87)	1,213
Includes:										
Amounts drawn	282	431	314	(75)	952	276	478	387	(87)	1,054
Undrawn commitments ⁽⁵⁾	74	39	–	–	113	108	50	1	–	159

- (1) The total amount of undiscounted initially expected credit losses on the POCI loans acquired during the nine-month period ended July 31, 2022 was \$12 million (\$11 million during the nine-month period ended July 31, 2021). The expected credit losses reflected in the purchase price have been 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.

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 scenario, upside scenario, and downside scenario, the average values of the macroeconomic 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 July 31, 2022					
		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⁾	1.2 %	1.3 %		1.7 %	1.6 %	(5.3) %	2.9 %
Unemployment rate	5.4 %	5.9 %		5.1 %	5.0 %	7.3 %	6.4 %
Housing price index growth ⁽²⁾	(7.6) %	0.4 %		2.0 %	0.2 %	(13.9) %	0.3 %
BBB spread ⁽³⁾	2.1 %	2.2 %		1.9 %	2.0 %	3.3 %	2.5 %
S&P/TSX growth ⁽²⁾⁽⁴⁾	(0.3) %	2.1 %		5.1 %	2.6 %	(25.6) %	5.5 %
WTI oil price ⁽⁵⁾ (US\$ per barrel)	103	80		118	113	51	60

		As at October 31, 2021					
		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⁾	4.2 %	1.6 %		4.7 %	1.9 %	(5.5) %	3.7 %
Unemployment rate	6.6 %	6.3 %		6.3 %	5.6 %	9.5 %	7.8 %
Housing price index growth ⁽²⁾	2.0 %	0.2 %		4.0 %	1.9 %	(11.5) %	1.2 %
BBB spread ⁽³⁾	1.7 %	1.9 %		1.6 %	1.7 %	3.1 %	2.2 %
S&P/TSX growth ⁽²⁾⁽⁴⁾	4.8 %	2.1 %		8.6 %	3.1 %	(25.6) %	5.5 %
WTI oil price ⁽⁵⁾ (US\$ per barrel)	70	65		77	77	35	34

(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 growth in the housing price index, based on the economy of Canada or Quebec. The main macroeconomic factors used for the business and government credit portfolio are unemployment rate, spread on corporate BBB bonds, S&P/TSX growth, and WTI oil price. An increase in unemployment rate or BBB spread will generally lead to 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 lead to lower allowances for credit losses.

Note 5 – Loans and Allowances for Credit Losses (cont.)

During the nine-month period ended July 31, 2022, the macroeconomic outlook evolved.

According to the base scenario, the global economy will still be dealing with persisting problems from COVID-19, supply chain issues, and inflationary pressures but with some signs of improvement. Geopolitical uncertainty remains high. A normalization of monetary policy continues and already affects the residential sector in 2022. Still, the Canadian economy remains in a good position, as consumers have accumulated considerable excess savings in a labour market at full employment. While commodity prices declined from recent peak levels, they remain historically high but partly offset the shock to consumption arising from higher interest rates. After 12 months, the unemployment rate stands at 5.6%, up slightly but close to the pre-recession level (5.7%). Housing prices slide 7.6% year over year. After one year, the S&P/TSX sits at 20,500 points, and the price of oil at US\$95.

According to the upside scenario, the economy will be surprisingly positive, with the labour market continuing to improve. A decrease in geopolitical tension bolsters confidence and provides a supportive landscape. Governments maintain considerable fiscal stimulus in Canada and the United States, which favours an even stronger recovery. Consumer spending trends upward given the excess savings accumulated since the start of the pandemic. Inflation is under control once again, as supply chains return to normal without any significant tightening of monetary policy. After one year, the unemployment rate is more favourable than the base scenario (five-tenths lower). Housing prices grow 2.0%, the S&P/TSX reaches 21,600 points after one year, and the price of oil at US\$118.

According to the downside scenario, supply chain issues will persist and China will experience bottlenecks. Combined with a deteriorating geopolitical environment, global markets stagnate with several countries seeing a drop in economic activity. In addition, central banks underestimated the impact of rising interest rates in a context of persistent supply shock. Given budgetary constraints, governments cannot continue to support households and businesses. The economic contraction pushes the unemployment rate to 8.1% after 12 months. Housing prices decrease considerably. After one year, the S&P/TSX stands at 15,300 points, and the price of oil at US\$42.

Given the uncertainty surrounding key inputs used to measure credit losses, the Bank has applied expert credit judgment to adjust the modelled expected credit loss 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 July 31, 2022 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 July 31, 2022	826
Simulations	
100% upside scenario	603
100% base scenario	656
100% downside scenario	1,169

Note 6 – 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. For additional information on the nature of those transactions, see Note 8 to the audited annual consolidated financial statements for the year ended October 31, 2021.

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 July 31, 2022	As at October 31, 2021
Carrying value of financial assets transferred but not derecognized		
Securities ⁽¹⁾	77,005	68,296
Residential mortgages	22,928	22,413
	99,933	90,709
Carrying value of associated liabilities⁽²⁾	51,721	40,779
Fair value of financial assets transferred but not derecognized		
Securities ⁽¹⁾	77,005	68,296
Residential mortgages	22,202	22,249
	99,207	90,545
Fair value of associated liabilities⁽²⁾	51,221	40,731

(1) The amount related to securities loaned is the maximum amount of Bank securities that can be lent. For 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 \$2,815 million as at July 31, 2022 (\$3,367 million as at October 31, 2021), excluding repurchase 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 stood at \$10,826 million before the offsetting impact of \$4,484 million as at July 31, 2022 (\$7,993 million before the offsetting impact of \$4,333 million as at October 31, 2021).

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

	As at July 31, 2022	As at October 31, 2021
Carrying value of financial assets transferred but not derecognized		
Securities backed by insured residential mortgage loans and other securities sold to Canada Housing Trust	24,339	24,034
Securities sold under repurchase agreements	29,873	17,553
Securities loaned	45,721	49,122
	99,933	90,709

Note 7 – Other Assets

	As at July 31, 2022	As at October 31, 2021
Receivables, prepaid expenses and other items	2,323	1,228
Interest and dividends receivable	967	696
Due from clients, dealers and brokers	1,700	988
Defined benefit asset	855	691
Deferred tax assets	203	354
Current tax assets	452	445
Reinsurance assets	5	28
Insurance assets	106	38
	6,611	4,468

Note 8 – Deposits

	On demand ⁽¹⁾	After notice ⁽²⁾	Fixed term ⁽³⁾	Total	As at July 31, 2022	As at October 31, 2021
Personal	5,878	36,877	32,079	74,834	70,076	
Business and government	60,217	32,415	85,636	178,268	167,870	
Deposit-taking institutions	1,481	548	2,059	4,088	2,992	
	67,576	69,840	119,774	257,190	240,938	

(1) Demand deposits are deposits for which the Bank does not have the right to require a 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 for which the balance was \$10.2 billion as at July 31, 2022 (\$8.8 billion as at October 31, 2021). During the nine-month period ended July 31, 2022, an amount of 1.0 billion euros and US\$1.0 billion in covered bonds reached maturity, and the Bank issued 1.3 billion euros, US\$1.5 billion, and 750 million pounds sterling in covered bonds (US\$270 million and 1.0 billion euros in covered bonds reached maturity, and the Bank issued 500 million euros in covered bonds during the nine-month period ended July 31, 2021). For additional information on covered bonds, see Note 27 to the audited annual consolidated financial statements for the year ended October 31, 2021.

In addition, as at July 31, 2022, the *Deposits – Business and government* item also includes deposits of \$15.0 billion (\$11.9 billion as at October 31, 2021) 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.

Note 9 – Other Liabilities

	As at July 31, 2022	As at October 31, 2021
Accounts payable and accrued expenses	2,147	2,469
Subsidiaries' debts to third parties	230	437
Interest and dividends payable	773	552
Lease liabilities	562	575
Due to clients, dealers and brokers	1,233	735
Defined benefit liability	119	143
Allowances for credit losses – Off-balance-sheet commitments (Note 5)	130	162
Deferred tax liabilities	13	10
Current tax liabilities	164	478
Insurance liabilities	8	11
<u>Other items⁽¹⁾⁽²⁾⁽³⁾</u>	<u>965</u>	<u>729</u>
	6,344	6,301

(1) As at July 31, 2022, *Other items* included a \$10 million litigation provision (\$12 million as at October 31, 2021).

(2) As at July 31, 2022, *Other items* included \$33 million in provisions for onerous contracts (\$33 million as at October 31, 2021).

(3) As at July 31, 2022, *Other items* included the financial liability resulting from put options written to non-controlling interests of Flinks Technology Inc. (Flinks) for an amount of \$32 million (\$25 million as at October 31, 2021).

Note 10 – Subordinated Debt

On July 25, 2022, the Bank issued medium-term notes for an amount of \$750 million, bearing interest at 5.426% and maturing on August 16, 2032. The interest on these notes will be payable semi-annually at 5.426% per annum until August 16, 2027 and, thereafter, at a floating rate equal to the Canadian Overnight Repo Rate (CORRA) rate compounded daily plus 2.32% and payable quarterly. With the prior approval of OSFI, the Bank may, at its option, redeem these notes as of August 16, 2027, in whole or in part, at their nominal value plus accrued and unpaid interest. Since the medium-term notes satisfy the non-viability contingent capital requirements, they qualify for the purposes of calculating regulatory capital under Basel III.

Note 11 – Share Capital and Other Equity Instruments

Repurchase of Common Shares

On December 10, 2021, the Bank began a normal course issuer bid to repurchase for cancellation up to 7,000,000 common shares (representing approximately 2% of its outstanding common shares) over the 12-month period ending no later than December 9, 2022. 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 nine-month period ended July 31, 2022, the Bank repurchased 2,500,000 common shares for \$245 million, which reduced *Common share capital* by \$24 million and *Retained earnings* by \$221 million.

Shares and Other Equity Instruments Outstanding

	As at July 31, 2022		As at October 31, 2021	
	Number of shares or LRCN ⁽¹⁾	Shares or LRCN \$	Number of shares or LRCN	Shares or LRCN \$
First Preferred Shares				
Series 30	14,000,000	350	14,000,000	350
Series 32	12,000,000	300	12,000,000	300
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
	66,000,000	1,650	66,000,000	1,650
Other equity instruments				
LRCN – Series 1	500,000	500	500,000	500
LRCN – Series 2	500,000	500	500,000	500
	1,000,000	1,000	1,000,000	1,000
Preferred shares and other equity instruments	67,000,000	2,650	67,000,000	2,650
Common shares at beginning of fiscal year	337,912,283	3,160	335,997,660	3,057
Issued pursuant to the Stock Option Plan	1,062,220	54	1,930,033	104
Repurchases of common shares for cancellation	(2,500,000)	(24)	–	–
Impact of shares purchased or sold for trading ⁽²⁾	(13,408)	(1)	(14,432)	(1)
Other	(5,527)	–	(978)	–
Common shares at end of period	336,455,568	3,189	337,912,283	3,160

(1) Limited Recourse Capital Notes (LRCN).

(2) As at July 31, 2022, a total of 363 shares were held for trading, representing a negligible amount (13,045 shares were sold short for trading, representing \$1 million as at October 31, 2021).

Dividends Declared and Distributions on Other Equity Instruments

	2022		Nine months ended July 31 2021	
	Dividends or interest \$	Dividends per share	Dividends or interest \$	Dividends per share
First Preferred Shares				
Series 30	10	0.7547	10	0.7547
Series 32	9	0.7198	9	0.7198
Series 34	—	—	11	0.7000
Series 36	—	—	16	1.0125
Series 38	13	0.8344	13	0.8344
Series 40	11	0.8625	11	0.8625
Series 42	11	0.9281	11	0.9281
	54		81	
Other equity instruments				
LCRN – Series 1 ⁽¹⁾	16		16	
LCRN – Series 2 ⁽²⁾	15		6	
	31		22	
Preferred shares and other equity instruments	85		103	
Common shares	897	2.6600	718	2.1300
	982		821	

(1) The LRCN – Series 1 bear interest at a fixed rate of 4.30% per annum.

(2) The LRCN – Series 2 bear interest at a fixed rate of 4.05% per annum.

Note 12 – Capital Disclosure

The Bank and all other major Canadian banks have to maintain minimum capital ratios established by OSFI: a CET1 capital ratio of at least 10.5%, a Tier 1 capital ratio of at least 12.0%, and a Total capital ratio of at least 14.0%. All of these ratios include a capital conservation buffer of 2.5% established by the Basel Committee on Banking Supervision and OSFI as well as a 1.0% surcharge applicable solely to Domestic Systemically Important Banks (D-SIBs) and a 2.5% domestic stability buffer. 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. On June 22, 2022, OSFI confirmed that the domestic stability buffer was being maintained at 2.5%. 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 requirements calculated under Basel II, the difference is added to risk-weighted assets. Lastly, OSFI requires Canadian banks to meet a Basel III leverage ratio of at least 3.0%.

Since November 1, 2021, OSFI has also been requiring D-SIBs to maintain a risk-based total loss-absorbing capacity (TLAC) ratio of at least 24.0% (including the domestic stability buffer) of risk-weighted assets and a TLAC leverage ratio of at least 6.75%. The purpose of TLAC is to ensure that a D-SIB has sufficient loss-absorbing capacity to support its recapitalization in the unlikely event it becomes non-viable.

During the quarter and nine-month period ended July 31, 2022, the Bank was in compliance with all of OSFI's regulatory capital, leverage, and TLAC requirements.

Regulatory Capital⁽¹⁾ and TLAC⁽²⁾

	Adjusted ⁽³⁾	As at July 31, 2022	Adjusted ⁽³⁾	As at October 31, 2021
Capital				
CET1	14,221	14,270	12,866	12,973
Tier 1	16,869	16,918	15,515	15,622
Total	18,734	18,734	16,643	16,643
Risk-weighted assets	111,377	111,377	104,358	104,358
Total exposure	383,360	383,360	351,160	351,160
Capital ratios				
CET1	12.8 %	12.8 %	12.3 %	12.4 %
Tier 1	15.1 %	15.2 %	14.9 %	15.0 %
Total	16.8 %	16.8 %	15.9 %	15.9 %
Leverage ratio	4.4 %	4.4 %	4.4 %	4.4 %
Available TLAC⁽²⁾	31,549	31,549	27,492	27,492
TLAC ratio⁽²⁾	28.3 %	28.3 %	26.3 %	26.3 %
TLAC leverage ratio⁽²⁾	8.2 %	8.2 %	7.8 %	7.8 %

(1) Capital, risk-weighted assets, total exposure, the capital ratios, and the leverage ratio are calculated in accordance with the Basel III rules, as set out in OSFI's *Capital Adequacy Requirements* and *Leverage Requirements* guidelines.

(2) Available TLAC, the TLAC ratio, and the TLAC leverage ratio are calculated in accordance with OSFI's *Total Loss Absorbing Capacity* guideline.

(3) Adjusted amounts are calculated in accordance with the Basel III rules, as set out in OSFI's *Capital Adequacy Requirements* guideline, and exclude the transitional measure for provisioning expected credit losses. For additional information, see the section entitled COVID-19 Pandemic – Key Measures Introduced by the Regulatory Authorities on page 17 of the *2021 Annual Report*.

Note 13 – Share-Based Payments

Stock Option Plan

During the quarters ended July 31, 2022 and 2021, the Bank did not award any stock options. During the nine months ended July 31, 2022, the Bank awarded 1,771,588 stock options (2,043,196 stock options during the nine months ended July 31, 2021) with an average fair value of \$13.24 per option (\$8.24 in 2021).

As at July 31, 2022, there were 11,992,580 stock options outstanding (11,348,680 stock options as at October 31, 2021).

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

	Nine months ended July 31	
	2022	2021
Risk-free interest rate	1.79%	1.02%
Expected life of options	7 years	7 years
Expected volatility	22.68%	22.59%
Expected dividend yield	3.88%	4.24%

During the quarter ended July 31, 2022, a \$4 million compensation expense was recorded for this plan (\$3 million for the quarter ended July 31, 2021). During the nine-month period ended July 31, 2022, a \$12 million compensation expense was recorded for this plan (\$8 million for the nine-month period ended July 31, 2021).

Note 14 – 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 cost associated with these plans, including the remeasurements recognized in *Other comprehensive income*, is presented in the following table.

Cost for Pension Plans and Other Post-Employment Benefit Plans

	Quarter ended July 31			
	Pension plans		Other post-employment benefit plans	
	2022	2021	2022	2021
Current service cost	31	36	–	–
Interest expense (income), net	(5)	–	2	1
Administrative costs	1	1		
Expense recognized in <i>Net income</i>	27	37	2	1
Remeasurements⁽¹⁾				
Actuarial (gains) losses on defined benefit obligation	84	194	2	6
Return on plan assets ⁽²⁾	(30)	(435)		
Remeasurements recognized in <i>Other comprehensive income</i>	54	(241)	2	6
	81	(204)	4	7
	Nine months ended July 31			
	Pension plans		Other post-employment benefit plans	
	2022	2021	2022	2021
Current service cost	93	109	–	–
Interest expense (income), net	(15)	–	4	3
Administrative costs	3	3		
Expense recognized in <i>Net income</i>	81	112	4	3
Remeasurements⁽¹⁾				
Actuarial (gains) losses on defined benefit obligation	(826)	(288)	(21)	(8)
Return on plan assets ⁽²⁾	669	(311)		
Remeasurements recognized in <i>Other comprehensive income</i>	(157)	(599)	(21)	(8)
	(76)	(487)	(17)	(5)

(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) Excludes interest income.

Note 15 – Income Taxes

On August 9, 2022, the Government of Canada released for public comment draft legislative proposals to implement tax measures applicable to certain entities of banking and life insurer groups, as presented in its budget of April 7, 2022. These measures include the Canada Recovery Dividend (a one-time, 15% tax on the fiscal 2021 and 2020 average taxable income) and a 1.5% increase in the statutory tax rate. Since these proposed tax measures were not substantively enacted at the reporting date, no amount has been recognized in the Bank's consolidated financial statements as at July 31, 2022.

Note 16 – 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.

	Quarter ended July 31		Nine months ended July 31	
	2022	2021	2022	2021
Basic earnings per share				
Net income attributable to the Bank's shareholders and holders of other equity instruments	826	839	2,652	2,401
Dividends on preferred shares and distributions on other equity instruments	26	31	77	97
Net income attributable to common shareholders	800	808	2,575	2,304
Weighted average basic number of common shares outstanding (<i>thousands</i>)	336,437	337,517	337,290	337,021
Basic earnings per share (dollars)	2.38	2.39	7.63	6.84
Diluted earnings per share				
Net income attributable to common shareholders	800	808	2,575	2,304
Weighted average basic number of common shares outstanding (<i>thousands</i>)	336,437	337,517	337,290	337,021
Adjustment to average number of common shares (<i>thousands</i>)				
Stock options ⁽¹⁾	3,438	4,301	3,904	3,345
Weighted average diluted number of common shares outstanding (<i>thousands</i>)	339,875	341,818	341,194	340,366
Diluted earnings per share (dollars)	2.35	2.36	7.55	6.77

(1) For the quarter ended July 31, 2022, the calculation of diluted earnings per share excluded an average number of 1,754,559 options outstanding with a weighted average exercise price of \$96.35, given that the exercise price of these options was greater than the average price of the Bank's common shares. For the nine-month period ended July 31, 2022, the calculation of diluted earnings per share excluded an average number of 1,514,677 options outstanding with a weighted average exercise price of \$96.35. For the quarter and nine-month period ended July 31, 2021, given that the exercise price of the options was lower than the average price of the Bank's common shares, no options were excluded from the diluted earnings per share calculation.

Note 17 – 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. The presentation of segment disclosures is consistent with the presentation adopted by the Bank for the fiscal year beginning November 1, 2021. This presentation reflects the fact that the loan portfolio of borrowers in the "Oil and gas" and "Pipelines" sectors as well as related activities, which had previously been reported in the Personal and Commercial segment, is now reported in the Financial Markets segment. The Bank made this change to better align the monitoring of its activities with its management structure.

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 the Credigy Ltd. subsidiary; the activities of the Advanced Bank of Asia Limited subsidiary, 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; the activities of the Flinks subsidiary, which offers fintech services; certain specified items; and the unallocated portion of corporate units.

Quarter ended July 31⁽¹⁾

	Personal and Commercial		Wealth Management		Financial Markets		USSF&I		Other	Total	
	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Net interest income ⁽²⁾	741	647	161	112	392	337	266	232	(141)	(98)	1,419
Non-interest income ⁽²⁾	302	275	430	434	219	200	7	16	36	99	994
Total revenues	1,043	922	591	546	611	537	273	248	(105)	1	2,413
Non-interest expenses	538	493	344	323	253	224	86	79	85	97	1,306
Income before provisions for credit losses and income taxes	505	429	247	223	358	313	187	169	(190)	(96)	1,107
Provisions for credit losses	49	17	1	–	(23)	(25)	29	(35)	1	–	57
Income before income taxes (recovery)	456	412	246	223	381	338	158	204	(191)	(96)	1,050
Income taxes (recovery) ⁽²⁾	121	109	65	59	101	89	33	43	(96)	(58)	224
Net income	335	303	181	164	280	249	125	161	(95)	(38)	826
Non-controlling interests	–	–	–	–	–	–	–	–	–	–	–
Net income attributable to the Bank's shareholders and holders of other equity instruments	335	303	181	164	280	249	125	161	(95)	(38)	826
Average assets ⁽³⁾	142,462	128,691	8,297	7,367	149,653	152,275	18,941	16,011	72,830	59,402	392,183
Total assets	145,153	132,503	8,738	7,624	147,428	138,701	19,188	16,582	66,544	58,630	387,051
											354,040

Nine months ended July 31⁽¹⁾

	Personal and Commercial		Wealth Management		Financial Markets		USSF&I		Other	Total	
	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Net interest income ⁽⁴⁾	2,080	1,893	407	332	1,145	975	813	666	(381)	(273)	4,064
Non-interest income ⁽⁴⁾	883	792	1,355	1,273	760	747	30	93	226	218	3,254
Total revenues	2,963	2,685	1,762	1,605	1,905	1,722	843	759	(155)	(55)	7,318
Non-interest expenses	1,595	1,473	1,045	944	768	684	254	239	214	255	3,876
Income before provisions for credit losses and income taxes	1,368	1,212	717	661	1,137	1,038	589	520	(369)	(310)	3,442
Provisions for credit losses	55	45	1	–	(55)	16	56	(18)	1	–	58
Income before income taxes (recovery)	1,313	1,167	716	661	1,192	1,022	533	538	(370)	(310)	3,384
Income taxes (recovery) ⁽⁴⁾	348	309	190	175	316	270	108	112	(229)	(189)	733
Net income	965	858	526	486	876	752	425	426	(141)	(121)	2,651
Non-controlling interests	–	–	–	–	–	–	–	–	(1)	–	(1)
Net income attributable to the Bank's shareholders and holders of other equity instruments	965	858	526	486	876	752	425	426	(140)	(121)	2,652
Average assets ⁽³⁾	138,874	124,359	8,187	6,960	152,183	150,983	18,383	15,816	71,041	62,817	388,668
Total assets	145,153	132,503	8,738	7,624	147,428	138,701	19,188	16,582	66,544	58,630	387,051
											354,040

- (1) For the quarter and nine-month period ended July 31, 2021, certain amounts have been reclassified, in particular amounts of the loan portfolio of borrowers in the "Oil and gas" and "Pipelines" sectors as well as related activities, which were transferred from the Personal and Commercial segment to the Financial Markets segment.
- (2) The *Net interest income*, *Non-interest income*, and *Income taxes (recovery)* items of the business segments 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. For the business segments as a whole, *Net interest income* was grossed up by \$60 million (\$46 million in 2021), *Non-interest income* was grossed up by \$11 million (\$1 million in 2021), and an equivalent amount was recognized in *Income taxes (recovery)*. The effect of these adjustments is reversed under the *Other* heading.
- (3) Represents an average of the daily balances for the period.
- (4) For the nine-month period ended July 31, 2022, *Net interest income* was grossed up by \$169 million (\$142 million in 2021), *Non-interest income* was grossed up by \$18 million (\$6 million in 2021), and an equivalent amount was recognized in *Income taxes (recovery)*. The effect of these adjustments has been reversed under the *Other* heading.

Information for Shareholders and Investors

Investor Relations

Financial analysts and investors who want to obtain financial information on the Bank may contact the Investor Relations Department.

600 De La Gauchetière Street West, 7th Floor
Montreal, Quebec H3B 4L2

Toll-free: 1-866-517-5455

Email: investorrelations@nbc.ca

Website: nbc.ca/investorrelations

Communications and Corporate Social Responsibility

600 De La Gauchetière Street West, 18th Floor
Montreal, Quebec H3B 4L2
Telephone: 514-394-8644
Email: pa@nbc.ca

Quarterly Report Publication Dates for Fiscal 2022

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

First quarter	February 25
Second quarter	May 27
Third quarter	August 24
Fourth quarter	November 30

Transfer Agent and Registrar

For information about stock transfers, address changes, dividends, lost certificates, tax forms, and estate transfers, shareholders of record may contact the transfer agent, Computershare Trust Company of Canada, at the address or telephone number below.

Computershare Trust Company of Canada

Share Ownership Management

100 University Avenue, 8th Floor

Toronto, Ontario M5J 2Y1

Telephone: 1-888-838-1407

Fax: 1-888-453-0330

Email: service@computershare.com

Website: computershare.com

Shareholders whose shares are held by a market intermediary are asked to contact the market intermediary concerned.

Direct Deposit Service for Dividends

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.

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.

Dividends

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

Disclosure of Third Quarter 2022 Results

Conference Call

- A conference call for analysts and institutional investors will be held on Wednesday, August 24, 2022 at 1:00 p.m. EDT.
- Access by telephone in listen-only mode: 1-800-806-5484 or 416-340-2217. The access code is 4004812#.
- A recording of the conference call can be heard until September 24, 2022 by dialing 1-800-408-3053 or 905-694-9451. The access code is 5744394#.

Webcast

- The conference call will be webcast live at nbc.ca/investorrelations.
- A recording of the webcast will also be available on National Bank's website after the call.

Financial Documents

- The *Report to Shareholders* (which includes the quarterly consolidated financial statements) is available at all times on National Bank's website at nbc.ca/investorrelations.
- The *Report to Shareholders*, the *Supplementary Financial Information*, the *Supplementary Regulatory Capital and Pillar 3 Disclosure*, and a slide presentation will be available on the Investor Relations page of National Bank's website on the morning of the day of the conference call.





FORM 52-109F2
CERTIFICATION OF INTERIM FILINGS
FULL CERTIFICATE

I, Marie Chantal Gingras, Chief Financial Officer and Executive Vice-President, Finance of National Bank of Canada, certify the following:

1. **Review:** I have reviewed the interim financial report and interim MD&A (together, the "interim filings") of National Bank of Canada (the "issuer") for the interim period ended July 31, 2022.
2. **No misrepresentations:** Based on my knowledge, having exercised reasonable diligence, the interim filings do not contain any untrue statement of a material fact or omit to state a material fact required to be stated or that is necessary to make a statement not misleading in light of the circumstances under which it was made, with respect to the period covered by the interim filings.
3. **Fair presentation:** Based on my knowledge, having exercised reasonable diligence, the interim financial report together with the other financial information included in the interim filings fairly present in all material respects the financial condition, financial performance and cash flows of the issuer, as of the date of and for the periods presented in the interim filings.
4. **Responsibility:** The issuer's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (DC&P) and internal control over financial reporting (ICFR), as those terms are defined in *Regulation 52-109 respecting Certification of Disclosure in Issuers' Annual and Interim Filings* (c. V-1.1, r. 27), for the issuer.
5. **Design:** Subject to the limitations, if any, described in paragraphs 5.2 and 5.3, the issuer's other certifying officer(s) and I have, as at the end of the period covered by the interim filings
 - (a) designed DC&P, or caused it to be designed under our supervision, to provide reasonable assurance that
 - (i) material information relating to the issuer is made known to us by others, particularly during the period in which the interim filings are being prepared; and
 - (ii) information required to be disclosed by the issuer in its annual filings, interim filings or other reports filed or submitted by it under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation; and
 - (b) designed ICFR, or caused it to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the issuer's GAAP.

5.1 **Control framework:** The control framework the issuer's other certifying officer(s) and I used to design the issuer's ICFR is that of the Committee of Sponsoring Organizations of the Treadway Commission (COSO-2013) (for the financial processes) and the Control Objectives for Information and Related Technology (COBIT) (for the information technologies processes).

5.2 N/A

5.3 N/A

6. **Reporting changes in ICFR:** The issuer has disclosed in its interim MD&A any change in the issuer's ICFR that occurred during the period beginning on May 1, 2022 and ended on July 31, 2022 that has materially affected, or is reasonably likely to materially affect, the issuer's ICFR.

Date: August 24, 2022

(s) *Marie Chantal Gingras*

Signature: Marie Chantal Gingras
Title: Chief Financial Officer and
Executive Vice-President, Finance



FORM 52-109F2
CERTIFICATION OF INTERIM FILINGS
FULL CERTIFICATE

I, Laurent Ferreira, President and Chief Executive Officer of National Bank of Canada, certify the following:

1. **Review:** I have reviewed the interim financial report and interim MD&A (together, the "interim filings") of National Bank of Canada (the "issuer") for the interim period ended July 31, 2022.
2. **No misrepresentations:** Based on my knowledge, having exercised reasonable diligence, the interim filings do not contain any untrue statement of a material fact or omit to state a material fact required to be stated or that is necessary to make a statement not misleading in light of the circumstances under which it was made, with respect to the period covered by the interim filings.
3. **Fair presentation:** Based on my knowledge, having exercised reasonable diligence, the interim financial report together with the other financial information included in the interim filings fairly present in all material respects the financial condition, financial performance and cash flows of the issuer, as of the date of and for the periods presented in the interim filings.
4. **Responsibility:** The issuer's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (DC&P) and internal control over financial reporting (ICFR), as those terms are defined in *Regulation 52-109 respecting Certification of Disclosure in Issuers' Annual and Interim Filings* (c. V-1.1, r. 27), for the issuer.
5. **Design:** Subject to the limitations, if any, described in paragraphs 5.2 and 5.3, the issuer's other certifying officer(s) and I have, as at the end of the period covered by the interim filings
 - (a) designed DC&P, or caused it to be designed under our supervision, to provide reasonable assurance that
 - (i) material information relating to the issuer is made known to us by others, particularly during the period in which the interim filings are being prepared; and
 - (ii) information required to be disclosed by the issuer in its annual filings, interim filings or other reports filed or submitted by it under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation; and
 - (b) designed ICFR, or caused it to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the issuer's GAAP.

5.1 **Control framework:** The control framework the issuer's other certifying officer(s) and I used to design the issuer's ICFR is that of the Committee of Sponsoring Organizations of the Treadway Commission (COSO-2013) (for the financial processes) and the Control Objectives for Information and Related Technologies (COBIT) (for the information technologies processes).

5.2 N/A

5.3 N/A

6. **Reporting changes in ICFR:** The issuer has disclosed in its interim MD&A any change in the issuer's ICFR that occurred during the period beginning on May 1, 2022 and ended on July 31, 2022 that has materially affected, or is reasonably likely to materially affect, the issuer's ICFR.

Date: August 24, 2022

(s) *Laurent Ferreira*

Signature: Laurent Ferreira
Title: President and Chief Executive Officer