Report to Shareholders Second Quarter 2023

National Bank reports its results for the Second Quarter of 2023 and raises its quarterly dividend by 5 cents to $1.02 per share

The financial information reported in this document is based on the unaudited interim condensed consolidated financial statements for the quarter and six-month period ended April 30, 2023 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, May 31, 2023 – For the second quarter of 2023, National Bank is reporting net income of $847 million, down 5% from $889 million in the second quarter of 2022. Second-quarter diluted earnings per share stood at $2.38 compared to $2.53 in the second quarter of 2022. Revenue growth across the business segments was offset by higher non-interest expenses and higher provisions for credit losses.

For the six month-period ended April 30, 2023, the Bank's net income totalled $1,728 million, down 5% from $1,819 million in the same period of 2022. First-half diluted earnings per share stood at $4.87 compared to $5.17 in the same period of 2022. Good performance across all of the business segments, driven by revenue growth, was offset by higher provisions for credit losses recorded to reflect a less favourable macroeconomic outlook as well as by an impact on tax expense arising from the Canadian government's 2022 tax measures.

For the six-month period ended April 30, 2023, adjusted net income(1) totalled $1,752 million (excluding a $24 million tax expense related to the Canadian government's 2022 tax measures), down 4% from $1,819 million in the same period of 2022, while first-half adjusted diluted earnings per share(1) stood at $4.94 versus $5.17 in the first half of 2022.

"The Bank delivered solid second-quarter results and an industry-leading ROE amidst a challenging environment, underscoring its core strength, discipline and resiliency," said Laurent Ferreira, President and Chief Executive Officer of National Bank of Canada. He added that "Our defensive posture with strong capital and liquidity positions and prudent levels of allowances for credit losses will continue to support profitable growth and help us navigate the uncertainty that may lie ahead."

Highlights

(millions of Canadian dollars)	Quarter ended April 30			Six months ended April 30		
	2023	2022(2)	% Change	**2023**	2022(2)	% Change
Net income	**847**	889	(5)	**1,728**	1,819	(5)
Diluted earnings per share *(dollars)*	**$ 2.38**	$ 2.53	(6)	**$ 4.87**	$ 5.17	(6)
Return on common shareholders' equity(3)	**17.5 %**	20.7 %		**17.7 %**	21.3 %	
Dividend payout ratio(3)	**40.2 %**	32.2 %		**40.2 %**	32.2 %	
Operating results – Adjusted(1)						
Net income – Adjusted	**847**	889	(5)	**1,752**	1,819	(4)
Diluted earnings per share – Adjusted *(dollars)*	**$ 2.38**	$ 2.53	(6)	**$ 4.94**	$ 5.17	(4)
Return on common shareholders' equity – Adjusted(4)	**17.5 %**	20.7 %		**17.9 %**	21.3 %	
Dividend payout ratio – Adjusted(4)	**39.9 %**	32.1 %		**39.9 %**	32.1 %	

	As at April 30, 2023	As at October 31, 2022
CET1 capital ratio under Basel III(5)	**13.3 %**	12.7 %
Leverage ratio under Basel III(5)	**4.2 %**	4.5 %

(1) See the Financial Reporting Method section on pages 4 to 9 for additional information on non-GAAP financial measures.
(2) For the quarter and six-month period ended April 30, 2022, certain amounts have been adjusted to reflect a change in accounting policy related to cloud computing arrangements. For additional information, see Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2022.
(3) See the Glossary section on pages 49 to 52 for details on the composition of these measures.
(4) See the Financial Reporting Method section on pages 4 to 9 for additional information on non-GAAP ratios.
(5) See the Financial Reporting Method section on pages 4 to 9 for additional information on capital management measures.

Personal and Commercial

- Net income totalled $335 million in the second quarter of 2023 versus $293 million in the second quarter of 2022, for an increase of 14% that was driven by growth in total revenues, tempered by higher non-interest expenses and higher provisions for credit losses.
- Income before provisions for credit losses and income taxes totalled $499 million in the second quarter of 2023, up 22% from $410 million in the second quarter of 2022.
- At $1,100 million, second-quarter total revenues rose $138 million or 14% 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 4% and commercial lending grew 13%.
- The net interest margin(1) stood at 2.34% in the second quarter of 2023, up from 2.10% in the second quarter of 2022.
- Second-quarter non-interest expenses stood at $601 million, up 9% from the second quarter of 2022.
- Second-quarter provisions for credit losses rose $26 million from second-quarter 2022, mainly due to higher allowances for credit losses on non-impaired loans and on impaired loans.
- At 54.6%, the second-quarter efficiency ratio(1) improved from 57.4% in the second quarter of 2022.

Wealth Management

- Net income totalled $178 million in the second quarter of 2023, a 9% increase from $163 million in the second quarter of 2022.
- Second-quarter total revenues amounted to $617 million compared to $579 million in second-quarter 2022, a $38 million or 7% increase driven by growth in net interest income.
- Second-quarter non-interest expenses stood at $372 million, up 4% from $357 million in second-quarter 2022.
- At 60.3%, the second-quarter efficiency ratio(1) improved from 61.7% in the second quarter of 2022.

Financial Markets

- Net income totalled $268 million in the second quarter of 2023, down 7% from $287 million in the second quarter of 2022.
- Second-quarter total revenues on a taxable equivalent basis amounted to $672 million, a $40 million or 6% year-over-year increase driven by growth in corporate and investment banking revenues.
- Second-quarter non-interest expenses stood at $283 million compared to $258 million in second-quarter 2022, an increase that was partly attributable to compensation and employee benefits as well as to operations support charges.
- Provisions for credit losses of $19 million were recorded in the second quarter of 2023 compared to credit loss recoveries of $16 million recorded in the second quarter of 2022.
- At 42.1%, the second-quarter efficiency ratio(1) on a taxable equivalent basis compares to 40.8% in the second quarter of 2022.

U.S. Specialty Finance and International

- Net income totalled $128 million in the second quarter of 2023 compared to $152 million in the second quarter of 2022, as a stable amount of total revenues was more than offset by higher non-interest expenses and higher provisions for credit losses.
- At $285 million, second-quarter total revenues remained stable compared to second-quarter 2022, as lower revenues at the Credigy subsidiary were offset by higher revenues at the ABA Bank subsidiary.
- Second-quarter non-interest expenses stood at $98 million, an 11% year-over-year increase attributable to business growth at ABA Bank.
- Second-quarter provisions for credit losses were up $17 million year over year, with the increase being attributable to Credigy.
- At 34.4%, the second-quarter efficiency ratio(1) compares to 30.9% in the second quarter of 2022.

Other

- There was a net loss of $62 million in the second quarter of 2023 versus a net loss of $6 million in the second quarter of 2022, a change arising mainly from a decrease in total revenues, as higher gains on investments had been recorded in the second quarter of 2022.

Capital Management

- As at April 30, 2023, the Common Equity Tier 1 (CET1) capital ratio under Basel III(2) stood at 13.3%, up from 12.7% as at October 31, 2022, notably due to the positive impact of implementing the Basel III reforms.
- As at April 30, 2023, the Basel III(2) leverage ratio was 4.2%, down from 4.5% as at October 31, 2022.

(1) See the Glossary section on pages 49 to 52 for details on the composition of these measures.
(2) See the Financial Reporting Method section on pages 4 to 9 for additional information on capital management measures.

Management's Discussion and Analysis

May 30, 2023

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 six-month period ended April 30, 2023 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 six-month period ended April 30, 2023 and with the *2022 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. The information found in the various documents and reports published by the Bank or the information available on the Bank's website and 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, unless expressly stated otherwise.

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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 2023 and beyond, the strategies or actions that will be taken to achieve them, expectations for 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 2023 and how that performance will affect the Bank's business are among the main factors considered in setting the Bank's strategic priorities and objectives, including provisions 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 2023 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; the impact of upheavals in the U.S. banking industry; exchange rate and interest rate fluctuations; inflation; disruptions in global supply chains; 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, the evolution of which is difficult to predict and could continue to have repercussions on the Bank.

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 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 risk, operational risk, regulatory compliance risk, reputation risk, strategic risk, environmental and social risk, and certain emerging risks or risks deemed significant, all of which are described in greater detail in the Risk Management section beginning on page 65 of the *2022 Annual Report.*

The foregoing list of risk factors is not exhaustive. Additional information about these risk factors is provided in the Risk Management section of the *2022 Annual Report* and the Risk Management section of this *Report to Shareholders* for the Second Quarter of 2023. 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, 2022. This presentation reflects a revision to the method used for the sectoral allocation of technology investment expenses, which are now immediately allocated to the various business segments, whereas certain expenses, notably costs incurred during the research phase of projects, had previously been recorded in the *Other* heading of segment results. This revision is consistent with the accounting policy change applied in fiscal 2022 related to cloud computing arrangements. For the quarter and six-month period ended April 30, 2023, certain amounts have been adjusted to reflect this accounting policy change. For additional information, see Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2022.

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 better 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 revenues taxed at lower rates (notably dividends) by the income tax to a level that would make it comparable to revenues from taxable sources in Canada. 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 key non-GAAP financial measures used by the Bank to analyze its results are described below, and a quantitative reconciliation of these measures is presented in the tables in the Reconciliation of Non-GAAP Financial Measures section on pages 8 and 9 and in the Consolidated Results table on page 12. It should be noted that, for the six-month period ended April 30, 2023, a $24 million tax expense related to the Canadian government's 2022 tax measures has been excluded from results. This amount consists of a $32 million tax expense with respect to the Canada Recovery Dividend, i.e., a one-time, 15% tax on the fiscal 2021 and 2020 average taxable income above $1 billion as well as an $8 million tax recovery related to a 1.5% increase in the statutory tax rate, which includes the impact related to current and deferred taxes for fiscal 2022. No specified items had been excluded from results for the quarter and six-month period ended April 30, 2022.

Adjusted Net Interest Income

This item represents net interest income on a taxable equivalent basis and excluding specified items, if any. A taxable equivalent is added to net interest income so that the performance of the various assets can be compared irrespective of their tax treatment, and specified items, if any, are excluded so that net interest income can be better evaluated by excluding items that management believes do not reflect the underlying financial performance of the Bank's operations.

Adjusted Non-Interest Income

This item represents non-interest income on a taxable equivalent basis and excluding specified items, if any. A taxable equivalent is added to non-interest income so that the performance of the various assets can be compared irrespective of their tax treatment, and specified items, if any, are excluded so that non-interest income can be better evaluated by excluding items that management believes do not reflect the underlying financial performance of the Bank's operations.

Adjusted Total Revenues

This item represents total revenues on a taxable equivalent basis and excluding specified items, if any. It consists of adjusted net interest income and adjusted non-interest income. A taxable equivalent is added to total revenues so that the performance of the various assets can be compared irrespective of their tax treatment, and specified items, if any, are excluded so that total revenues can be better evaluated by excluding items that management believes do not reflect the underlying financial performance of the Bank's operations.

Adjusted Non-Interest Expenses
This item represents non-interest expenses excluding specified items, if any. Specified items, if any, are excluded so that non-interest expenses can be better evaluated by excluding items that management believes do not reflect the underlying financial performance of the Bank's operations.

Adjusted Income Before Provisions for Credit Losses and Income Taxes
This item represents income before provisions for credit losses and income taxes on a taxable equivalent basis and excluding specified items, if any. It also represents the difference between adjusted total revenues and adjusted non-interest expenses. A taxable equivalent is added to income before provisions for credit losses and income taxes so that the performance of the various assets can be compared irrespective of their tax treatment, and specified items, if any, are excluded so that income before provisions for credit losses and income taxes can be better evaluated by excluding items that management believes do not reflect the underlying financial performance of the Bank's operations.

Adjusted Income Taxes
This item represents income taxes on a taxable equivalent basis and excluding income taxes on specified items, if any.

Adjusted Net Income
This item represents net income excluding specified items, if any. Specified items, if any, are excluded so that net income can be better evaluated by excluding items that management believes do not reflect the underlying financial performance of the Bank's operations.

Adjusted Net income Attributable to Common Shareholders
This item represents net income attributable to common shareholders excluding specified items, if any. Specified items, if any, are excluded so that net income attributable to common shareholders can be better evaluated by excluding items that management believes do not reflect the underlying financial performance of the Bank's operations.

Adjusted Basic Earnings Per Share
This item represents basic earnings per share excluding specified items, if any. Specified items, if any, are excluded so that basic earnings per share can be better evaluated by excluding items that management believes do not reflect the underlying financial performance of the Bank's operations.

Adjusted Diluted Earnings Per Share
This item represents diluted earnings per share excluding specified items, if any. Specified items, if any, are excluded so that diluted earnings per share can be better evaluated by excluding items that management believes do not reflect the underlying financial performance of the Bank's operations.

The Bank also uses the below-described measures to assess its results. A quantitative reconciliation of these non-GAAP financial measures is presented in the Reconciliation of Non-GAAP Financial Measures section on pages 8 and 9.

Adjusted Non-Trading Net Interest Income
This item represents non-trading net interest income on a taxable equivalent basis. It includes revenues related to financial assets and financial liabilities associated with non-trading activities, net of interest expenses and interest income related to the financing of these financial assets and liabilities, and is used to calculate adjusted non-trading net interest margin. A taxable equivalent is added to non-trading net interest income so that the performance of the various assets can be compared irrespective of their tax treatment.

Net Interest Income From Trading Activities on a Taxable Equivalent Basis
This item represents net interest income from trading activities plus a taxable equivalent. It 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. A taxable equivalent is added to net interest income from trading activities so that the performance of the various assets can be compared irrespective of their tax treatment.

Non-Interest Income Related to Trading Activities on a Taxable Equivalent Basis
This item represents non-interest income related to trading activities to which a taxable equivalent amount is added. It 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. A taxable equivalent amount is added to the non-interest income related to trading activities such that the returns of different assets can be compared regardless of their tax treatment.

Trading Activity Revenues on a Taxable Equivalent Basis
This item represents trading activity revenues plus a taxable equivalent. They comprise 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, realized and unrealized gains and losses, and 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. A taxable equivalent is added to trading activity revenues so that the performance of the various assets can be compared irrespective of their tax treatment.

Non-GAAP Ratios

The Bank uses non-GAAP ratios that do not have standardized meanings under GAAP and that may therefore 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.

The key non-GAAP ratios used by the Bank are described below.

Adjusted Return on Common Shareholders' Equity (ROE)
This item represents ROE excluding specified items, if any. It is adjusted net income attributable to common shareholders expressed as a percentage of average equity attributable to common shareholders. It is a general measure of the Bank's efficiency in using equity. Specified items, if any, are excluded so that ROE can be better evaluated by excluding items that management believes do not reflect the underlying financial performance of the Bank's operations.

Adjusted Dividend Payout Ratio
This item represents the dividend payout ratio excluding specified items, if any. It is dividends on common shares (per share amount) expressed as a percentage of adjusted basic earnings per share. This ratio is a measure of the proportion of earnings that is paid out to shareholders in the form of dividends. Specified items, if any, are excluded so that the dividend payout ratio can be better evaluated by excluding items that management believes do not reflect the underlying financial performance of the Bank's operations.

Adjusted Operating Leverage
This item represents operating leverage on a taxable equivalent basis and excluding specified items, if any. It is the difference between the growth rate of adjusted total revenues and the growth rate of adjusted non-interest expenses, and it measures the sensitivity of the Bank's results to changes in its revenues. Adjusted operating leverage is presented on a taxable equivalent basis so that the performance of the various assets can be compared irrespective of their tax treatment, and specified items, if any, are excluded so that the efficiency ratio can be better evaluated by excluding items that management believes do not reflect the underlying financial performance of the Bank's operations.

Adjusted Efficiency Ratio
This item represents the efficiency ratio on a taxable equivalent basis and excluding specified items, if any. The ratio represents adjusted non-interest expenses expressed as a percentage of adjusted total revenues. It measures the efficiency of the Bank's operations. The adjusted efficiency ratio is presented on a taxable equivalent basis so that the performance of the various assets can be compared irrespective of their tax treatment, and specified items, if any, are excluded so that the efficiency ratio can be better evaluated by excluding items that management believes do not reflect the underlying financial performance of the Bank's operations.

Adjusted Net Interest Margin, Non-Trading
This item represents the non-trading net interest margin on a taxable equivalent basis. It is calculated by dividing net interest income related to adjusted non-trading activities by average non-trading interest-bearing assets. This ratio is a measure of the profitability of non-trading activities. The adjusted non-trading net interest margin includes adjusted non-trading net interest income, which includes a taxable equivalent amount so that the performance of the various assets can be compared irrespective of their tax treatment.

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 49 to 52 of this MD&A.

Capital Management Measures

The financial reporting framework used to prepare the financial statements requires disclosure that helps 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
Total Loss Absorbing Capacity (TLAC)	Key indicators – TLAC requirements Available TLAC TLAC ratio TLAC leverage ratio
Liquidity Adequacy Requirements	Liquid asset portfolio Encumbered assets 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
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 April 30

						2023	2022[1]
	Personal and Commercial	Wealth Management	Financial Markets	USSF&I	Other	Total	Total
Net interest income	802	190	(286)	269	(93)	882	1,313
Taxable equivalent	–	–	74	–	2	76	49
Net interest income – Adjusted	802	190	(212)	269	(91)	958	1,362
Non-interest income	298	427	828	16	28	1,597	1,126
Taxable equivalent	–	–	56	–	–	56	3
Non-interest income – Adjusted	298	427	884	16	28	1,653	1,129
Total revenues – Adjusted	1,100	617	672	285	(63)	2,611	2,491
Non-interest expenses	601	372	283	98	20	1,374	1,299
Income before provisions for credit losses and income taxes – Adjusted	499	245	389	187	(83)	1,237	1,192
Provisions for credit losses	37	–	19	26	3	85	3
Income before income taxes – Adjusted	462	245	370	161	(86)	1,152	1,189
Income taxes	127	67	(28)	33	(26)	173	248
Taxable equivalent	–	–	130	–	2	132	52
Income taxes – Adjusted	127	67	102	33	(24)	305	300
Net income	335	178	268	128	(62)	847	889
Non-controlling interests	–	–	–	–	(1)	(1)	(1)
Net income attributable to the Bank's shareholders and holders of other equity instruments – Adjusted	335	178	268	128	(61)	848	890
Dividends on preferred shares and distributions on limited recourse capital notes						35	25
Net income attributable to common shareholders						813	865

(1) For the quarter ended April 30, 2022, certain amounts have been adjusted to reflect a change in accounting policy related to cloud computing arrangements. For additional information, see Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2022.

(millions of Canadian dollars)						Six months ended April 30	
						2023	2022[(1)]
	Personal and Commercial	Wealth Management	Financial Markets	USSF&I	Other	Total	Total
Net interest income	1,627	398	(454)	568	(158)	1,981	2,645
Taxable equivalent	–	–	151	–	3	154	109
Net interest income – Adjusted	1,627	398	(303)	568	(155)	2,135	2,754
Non-interest income	597	856	1,556	36	35	3,080	2,260
Taxable equivalent	–	–	108	–	–	108	7
Non-interest income – Adjusted	597	856	1,664	36	35	3,188	2,267
Total revenues – Adjusted	2,224	1,254	1,361	604	(120)	5,323	5,021
Non-interest expenses	1,207	736	570	196	68	2,777	2,579
Income before provisions for credit losses and income taxes – Adjusted	1,017	518	791	408	(188)	2,546	2,442
Provisions for credit losses	98	–	10	61	2	171	1
Income before income taxes – Adjusted	919	518	781	347	(190)	2,375	2,441
Income taxes	253	142	(44)	72	(38)	385	506
Taxable equivalent	–	–	259	–	3	262	116
Income taxes related to the Canadian government's 2022 tax measures[(2)]	–	–	–	–	(24)	(24)	–
Income taxes – Adjusted	253	142	215	72	(59)	623	622
Net income – Adjusted	666	376	566	275	(131)	1,752	1,819
Specified items after income taxes	–	–	–	–	(24)	(24)	–
Net income	666	376	566	275	(155)	1,728	1,819
Non-controlling interests	–	–	–	–	(1)	(1)	(1)
Net income attributable to the Bank's shareholders and holders of other equity instruments	666	376	566	275	(154)	1,729	1,820
Net income attributable to the Bank's shareholders and holders of other equity instruments – Adjusted	666	376	566	275	(130)	1,753	1,820
Dividends on preferred shares and distributions on limited recourse capital notes						70	51
Net income attributable to common shareholders – Adjusted						1,683	1,769

(1) For the six-month period ended April 30, 2022, certain amounts have been adjusted to reflect a change in accounting policy related to cloud computing arrangements. For additional information, see Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2022.
(2) During the six-month period ended April 30, 2023, the Bank recorded a $32 million tax expense with respect to the Canada Recovery Dividend, i.e., a one-time, 15% tax on the fiscal 2021 and 2020 average taxable income above $1 billion, as well as an $8 million tax recovery related to the 1.5% increase in the statutory tax rate, which includes the impact related to current and deferred taxes for fiscal 2022. For additional information on these tax measures, see the Income Taxes section on page 22.

Presentation of Basic and Diluted Earnings Per Share – Adjusted

(Canadian dollars)	Quarter ended April 30		Six months ended April 30	
	2023	2022[(1)]	2023	2022[(1)]
Basic earnings per share	$ 2.41	$ 2.56	$ 4.92	$ 5.24
Income taxes related to the Canadian government's 2022 tax measures[(2)]	–	–	0.07	–
Basic earnings per share – Adjusted	$ 2.41	$ 2.56	$ 4.99	$ 5.24
Diluted earnings per share	$ 2.38	$ 2.53	$ 4.87	$ 5.17
Income taxes related to the Canadian government's 2022 tax measures[(2)]	–	–	0.07	–
Diluted earnings per share – Adjusted	$ 2.38	$ 2.53	$ 4.94	$ 5.17

(1) For the quarter and six-month period ended April 30, 2022, certain amounts have been adjusted to reflect a change in accounting policy related to cloud computing arrangements. For additional information, see Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2022.
(2) During the six-month period ended April 30, 2023, the Bank recorded a $32 million tax expense with respect to the Canada Recovery Dividend, i.e., a one-time, 15% tax on the fiscal 2021 and 2020 average taxable income above $1 billion, as well as an $8 million tax recovery related to the 1.5% increase in the statutory tax rate, which includes the impact related to current and deferred taxes for fiscal 2022. For additional information on these tax measures, see the Income Taxes section on page 22.

Presentation of Non-Trading Net Interest Income – Adjusted

(millions of Canadian dollars)	Quarter ended April 30		Six months ended April 30	
	2023	2022	2023	2022
Net interest income – Adjusted	958	1,362	2,135	2,754
Less: Net interest income (loss) related to trading activities on a taxable equivalent basis	(322)	278	(518)	602
Net interest income, non-trading – Adjusted	1,280	1,084	2,653	2,152

Economic Review and Outlook

Global Economy

Once China had abandoned its zero-COVID policy, many thought that its economy would revitalize global growth in 2023. First-quarter data supported this notion, as Chinese GDP grew faster than expected. However, there are a few flaws in the strong recovery scenario: the figures were inflated by a positive base effect related to confinements in 2022, imports have not rallied, inflation has remained low, the manufacturing sector appears to be losing momentum, and the financial positions of provincial governments have deteriorated even further. And it is unlikely that the eurozone will save the day. While a drop in gas prices has allowed the single-currency zone to narrowly escape a recession during the winter months, the outlook remains sobering. Household spending appears to be losing momentum, most certainly due to the fact that growth in household credit has slowed considerably in recent months. Given such a reversal in credit conditions, the European Central Bank (ECB) would normally have exercised extreme caution, but the eurozone's unemployment rate is still at a record low and core inflation has remained near its all-time high, effectively forcing the ECB to maintain an aggressive response. It appears increasingly likely that returning inflation to its target rate will mean a recession in the eurozone in the second half of 2023. This fragility, combined with the expected weakness in the U.S. and a slow rebound in China, supports our view that the global economy will remain sluggish over the next few quarters. We expect growth of 2.6%(1) this year, followed by 2.3%(1) in 2024.

In the United States, domestic demand was strong in the first quarter, but such good performance does not alter our view that growth will slow considerably by year-end. Several economic indicators are already pointing in that direction, including real consumer spending and business investment in machinery and equipment. Moreover, there continues to be uncertainty around the U.S. banking system, given significantly higher funding costs for regional banks. Adding to these concerns, Janet Yellen, U.S. Secretary of the Treasury, has warned that the U.S. could run out of cash by June 1 if Congress fails to raise or suspend the debt ceiling. To be clear, we still believe that the parties will reach a last-minute agreement, but we are concerned this may come too late to prevent some unwanted market turmoil. In addition, it is unlikely that the U.S. Federal Reserve will lower interest rates before the last quarter of the year. While the job market has slowed somewhat, wage gains remain inconsistent with the central bank's inflation target. According to our scenario, if monetary policy remains this tight for so long, gross domestic product (GDP) will fall short of the consensus among economists. Following a relatively buoyant first half of the year, we expect the U.S. economy to slip into a technical recession starting in the fourth quarter of 2023 (we expect three quarters of negative growth). Given this scenario, real GDP should grow by 1.4%(1) in 2023 before contracting 0.4%(1) next year.

Canadian Economy

Although Canada's labour market has been generating jobs at an unprecedented rate since the beginning of the year and the fight against inflation is stalling, this does not mean that the Bank of Canada should immediately begin raising interest rates again. This spectacular job creation is occurring against a backdrop of equally striking population growth and has not led to a tighter labour market. The unemployment rate, while very low in historical terms, has been stable for several months, and other indicators suggest that the labour shortage is less acute, since job vacancy rates and wage inflation have been declining thanks in part to immigration. But immigration appears to be contributing to the recovery in the real estate sector, in an environment where some buyers have likely been comforted by the Bank of Canada's announcement that it was pausing interest rate hikes. However, the central bank would only be tempting fate if it concludes that it has not done enough. The strength we have seen in the real estate market may be only temporary in an environment where interest rates are still high, and the labour market is not immune to a downturn. The rate hikes have been extremely aggressive, and they will continue to weigh on the economy, with a certain lag. We still expect the Canadian economy to be lethargic over the next year, leading to anemic economic growth rates of 0.9%(1) in 2023 and 0.5%(1) in 2024. In contrast to our neighbours to the south, Canada's stronger banking system, greater excess savings and favourable terms of trade lead us to believe that the country can still avoid an economic contraction in 2024.

Quebec Economy

In the fourth quarter of 2022, Quebec household consumption remained extremely strong (+7.3% quarter-over-quarter on an annualized basis), reflecting the province's strong labour market. The year began on a high note, with 41,000 jobs created, almost all of which were in the private sector. At the time of this writing, Quebec's unemployment rate of 4.1% was still the lowest of all Canada's provinces. However, as in the rest of the country, growth is expected to slow in the coming months, since some economic sectors will be more affected by rising interest rates. Some factors will nevertheless serve to mitigate this weakness. First, the financial position of Quebec consumers compares favourably to the country as a whole, due to a higher savings rate and lower debt, both of which represent assets given the current challenges. Moreover, the widespread use of hydroelectricity in Quebec means that its households are less exposed to soaring electricity costs than their counterparts in the rest of the country. In addition, housing is more affordable in Quebec than in the rest of the country, making the market less vulnerable to sharp drops in prices. It is interesting to note that, since housing prices peaked in 2022, all of Quebec's major cities have recorded corrections that were milder than the average for Canadian urban centres. The province also benefits from a highly diversified economy and the Quebec government's fiscal support. However, economic growth will be limited by more modest demographic growth than the rest of Canada and an already tight labour market. Considering all of these factors, we forecast 0.5%(1) growth in Quebec in both 2023 and 2024.

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

Highlights

(millions of Canadian dollars, except per share amounts)	Quarter ended April 30			Six months ended April 30		
	2023	2022[1]	% Change	2023	2022[1]	% Change
Operating results						
Total revenues	**2,479**	2,439	2	**5,061**	4,905	3
Income before provisions for credit losses and income taxes	**1,105**	1,140	(3)	**2,284**	2,326	(2)
Net income	**847**	889	(5)	**1,728**	1,819	(5)
Return on common shareholders' equity[2]	**17.5 %**	20.7 %		**17.7 %**	21.3 %	
Earnings per share						
Basic	**$ 2.41**	$ 2.56	(6)	**$ 4.92**	$ 5.24	(6)
Diluted	**$ 2.38**	$ 2.53	(6)	**$ 4.87**	$ 5.17	(6)
Operating results – Adjusted[3]						
Total revenues – Adjusted[3]	**2,611**	2,491	5	**5,323**	5,021	6
Income before provisions for credit losses and income taxes – Adjusted[3]	**1,237**	1,192	4	**2,546**	2,442	4
Net income – Adjusted[3]	**847**	889	(5)	**1,752**	1,819	(4)
Return on common shareholders' equity – Adjusted[4]	**17.5 %**	20.7 %		**17.9 %**	21.3 %	
Operating leverage – Adjusted[4]	**(1.0) %**	2.5 %		**(1.7) %**	3.0 %	
Efficiency ratio – Adjusted[4]	**52.6 %**	52.1 %		**52.2 %**	51.4 %	
Earnings per share – Adjusted[3]						
Basic	**$ 2.41**	$ 2.56	(6)	**$ 4.99**	$ 5.24	(5)
Diluted	**$ 2.38**	$ 2.53	(6)	**$ 4.94**	$ 5.17	(4)
Common share information						
Dividends declared	**$ 0.97**	$ 0.87	11	**$ 1.94**	$ 1.74	11
Book value[2]	**$ 57.65**	$ 52.28		**$ 57.65**	$ 52.28	
Share price						
High	**$ 103.45**	$ 104.59		**$ 103.45**	$ 105.44	
Low	**$ 92.67**	$ 89.33		**$ 91.02**	$ 89.33	
Close	**$ 101.03**	$ 89.72		**$ 101.03**	$ 89.72	
Number of common shares *(thousands)*	**337,720**	336,513		**337,720**	336,513	
Market capitalization	**34,120**	30,192		**34,120**	30,192	

(millions of Canadian dollars)	As at April 30, 2023	As at October 31, 2022	% Change
Balance sheet and off-balance-sheet			
Total assets	**417,684**	403,740	3
Loans and acceptances, net of allowances	**215,764**	206,744	4
Deposits	**281,514**	266,394	6
Equity attributable to common shareholders	**19,470**	18,594	5
Assets under administration[2]	**673,483**	616,165	9
Assets under management[2]	**123,029**	112,346	10
Regulatory ratios under Basel III[5]			
Capital ratios			
Common Equity Tier 1 (CET1)	**13.3 %**	12.7 %	
Tier 1	**16.0 %**	15.4 %	
Total	**16.9 %**	16.9 %	
Leverage ratio	**4.2 %**	4.5 %	
TLAC ratio[5]	**29.3 %**	27.7 %	
TLAC leverage ratio[5]	**7.8 %**	8.1 %	
Liquidity coverage ratio (LCR)[5]	**155 %**	140 %	
Net stable funding ratio (NSFR)[5]	**118 %**	117 %	
Other information			
Number of employees – Worldwide (full-time equivalent)	**28,170**	27,103	4
Number of branches in Canada	**374**	378	(1)
Number of banking machines in Canada	**940**	939	–

(1) For the quarter and six-month period ended April 30, 2022, certain amounts have been adjusted to reflect a change in accounting policy related to cloud computing arrangements. For additional information, see Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2022.
(2) See the Glossary section on pages 49 to 52 for details on the composition of these measures.
(3) See the Financial Reporting Method section on pages 4 to 9 for additional information on non-GAAP financial measures.
(4) See the Financial Reporting Method section on pages 4 to 9 for additional information on non-GAAP ratios.
(5) See the Financial Reporting Method section on pages 4 to 9 for additional information on capital management measures.

Financial Analysis

Consolidated Results

(millions of Canadian dollars)	Quarter ended April 30			Six months ended April 30		
	2023	2022[1]	% Change	2023	2022 [1]	% Change
Operating results						
Net interest income	**882**	1,313	(33)	**1,981**	2,645	(25)
Non-interest income	**1,597**	1,126	42	**3,080**	2,260	36
Total revenues	**2,479**	2,439	2	**5,061**	4,905	3
Non-interest expenses	**1,374**	1,299	6	**2,777**	2,579	8
Income before provisions for credit losses and income taxes	**1,105**	1,140	(3)	**2,284**	2,326	(2)
Provisions for credit losses	**85**	3		**171**	1	
Income before income taxes	**1,020**	1,137	(10)	**2,113**	2,325	(9)
Income taxes	**173**	248	(30)	**385**	506	(24)
Net income	**847**	889	(5)	**1,728**	1,819	(5)
Diluted earnings per share *(dollars)*	**2.38**	2.53	(6)	**4.87**	5.17	(6)
Taxable equivalent basis[2]						
Net interest income	**76**	49		**154**	109	
Non-interest income	**56**	3		**108**	7	
Income taxes	**132**	52		**262**	116	
Impact of taxable equivalent basis on net income	**–**	–		**–**	–	
Specified items[2]						
Income taxes related to the Canadian government's 2022 tax measures	**–**	–		**(24)**	–	
Specified items after income taxes	**–**	–		**24**	–	
Operating results – Adjusted[2]						
Net interest income – Adjusted	**958**	1,362	(30)	**2,135**	2,754	(22)
Non-interest income – Adjusted	**1,653**	1,129	46	**3,188**	2,267	41
Total revenues – Adjusted	**2,611**	2,491	5	**5,323**	5,021	6
Non-interest expenses – Adjusted	**1,374**	1,299	6	**2,777**	2,579	8
Income before provisions for credit losses and income taxes – Adjusted	**1,237**	1,192	4	**2,546**	2,442	4
Provisions for credit losses	**85**	3		**171**	1	
Income before income taxes – Adjusted	**1,152**	1,189	(3)	**2,375**	2,441	(3)
Income taxes – Adjusted	**305**	300	2	**623**	622	–
Net income – Adjusted	**847**	889	(5)	**1,752**	1,819	(4)
Diluted earnings per share – Adjusted *(dollars)*	**2.38**	2.53	(6)	**4.94**	5.17	(4)
Average assets[3]	**421,215**	384,626	10	**423,111**	386,683	9
Average loans and acceptances[3]	**213,650**	189,831	13	**211,642**	187,760	13
Average deposits[3]	**282,133**	251,260	12	**281,845**	253,069	11
Operating leverage[4]	**(4.2) %**	2.3 %		**(4.5) %**	2.9 %	
Operating leverage – Adjusted[5]	**(1.0) %**	2.5 %		**(1.7) %**	3.0 %	
Efficiency ratio[4]	**55.4 %**	53.3 %		**54.9 %**	52.6 %	
Efficiency ratio – Adjusted[5]	**52.6 %**	52.1 %		**52.2 %**	51.4 %	
Net interest margin, non-trading – Adjusted[5]	**2.09 %**	1.93 %		**2.14 %**	1.89 %	

(1) For the quarter and six-month period ended April 30, 2022, certain amounts have been adjusted to reflect a change in accounting policy related to cloud computing arrangements. For additional information, see Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2022.
(2) See the Financial Reporting Method section on pages 4 to 9 for additional information on non-GAAP financial measures.
(3) Represents an average of the daily balances for the period.
(4) See the Glossary section on pages 49 to 52 for details on the composition of these measures.
(5) See the Financial Reporting Method section on pages 4 to 9 for additional information on non-GAAP ratios.

Financial Results

For the second quarter of 2023, National Bank reported net income of $847 million, down 5% from $889 million in the second quarter of 2022. Second-quarter diluted earnings per share stood at $2.38 compared to $2.53 in the second quarter of 2022. Revenue growth across the business segments was offset by higher non-interest expenses and higher provisions for credit losses.

For the six month-period ended April 30, 2023, the Bank's net income totalled $1,728 million, down 5% from $1,819 million in the same period of 2022. First-half diluted earnings per share stood at $4.87 compared to $5.17 in the same period of 2022. Good performance across all of the business segments, driven by revenue growth, was offset by higher provisions for credit losses recorded to reflect a less favourable macroeconomic outlook as well as by an impact on tax expense arising from the Canadian government's 2022 tax measures.

Also for the six-month period ended April 30, 2023, adjusted net income totalled $1,752 million (excluding a $24 million tax expense related to the Canadian government's 2022 tax measures), down 4% from $1,819 million in the same period of 2022, while the first-half adjusted diluted earnings per share stood at $4.94 versus $5.17 in the first half of 2022. These decreases were mainly due to higher provisions for credit losses on non-impaired loans recorded in the first half of 2023, whereas the macroeconomic conditions had been more favourable in the same period of 2022. The Bank's first-half adjusted income before provisions for credit losses and income taxes totalled $2,546 million, a 4% year-over-year increase driven by revenue growth across all of the business segments.

Return on common shareholders' equity was 17.7% for the six-month period ended April 30, 2023 compared to 21.3% in the same six-month period of 2022.

Total Revenues

For the second quarter of 2023, the Bank's total revenues amounted to $2,479 million, rising $40 million or 2% year over year. In the Personal and Commercial segment, second-quarter total revenues rose 14% year over year owing to growth in loans and deposits, to a higher net interest margin resulting from interest rate hikes, and to increases in credit card revenues, insurance revenues, revenues from bankers' acceptances, and revenues from derivative financial instruments, partly offset by a decrease in revenues from foreign exchange activities. In the Wealth Management segment, second-quarter total revenues grew 7% year over year, mainly due to higher net interest income resulting from higher interest rates; this growth was partly offset by a decrease in fee-based revenues, notably revenues from mutual funds and from investment management and trust service fees. In addition, securities brokerage commissions decreased year over year given fewer commission-generating transactions. In the Financial Markets segment, second-quarter total revenues on a taxable equivalent basis increased by 6% year over year due to an increase in corporate and investment banking revenues, partly offset by a decrease in global markets revenues. In the USSF&I segment, second-quarter total revenues amounted to $285 million, stable compared to the second quarter of 2022, as sustained revenue growth at ABA Bank was offset by a decrease in Credigy's revenues. In the *Other* heading of segment results, second-quarter total revenues were down year over year, mainly due to a decrease in gains on investments.

For the six-month period ended April 30, 2023, total revenues amounted to $5,061 million, up $156 million or 3% from $4,905 million in the same six-month period of 2022. In the Personal and Commercial segment, first-half total revenues rose $304 million or 16% year over year owing to an increase in net interest income (as both loans and deposits grew), a higher net interest margin (resulting from higher interest rates) as well as to increases in credit card revenues, revenues from bankers' acceptances, revenues from derivative financial instruments, and revenues from foreign exchange activities. In the Wealth Management segment, first-half total revenues grew 7%, mainly due to an increase in net interest income, partly offset by a decrease in fee-based revenues and transaction-based and other revenues given weak market performance compared to the first half of 2022. In the Financial Markets segment, first-half total revenues on a taxable equivalent basis were up $67 million or 5% year over year given growth in corporate and investment banking revenues, partly offset by a decrease in global markets revenues. In the USSF&I segment, first-half total revenues were up 6% year over year owing to revenue growth at ABA Bank, which was driven by higher loans and deposits. Lastly, for the *Other* heading of segment results, first-half total revenues reflect a lower contribution from Treasury activities and lower gains on investment than those of first-half 2022.

Non-Interest Expenses

For the second quarter of 2023, non-interest expenses stood at $1,374 million, up 6% from the second quarter of 2022. The increase was essentially attributable to higher compensation and employee benefits, notably due to wage growth and a greater number of employees, partly offset by a decrease in variable compensation. Occupancy expense was also up, partly related to expansion of the ABA Bank network and to expenses arising from the Bank's new head office building. An increase in technology expenses, including amortization, was attributable to significant investments made to support the Bank's technological evolution and business development plan. Other expenses were also up, notably given an increase in travel and business development expenses, as activities with clients resumed, and also given an increase in advertising expenses.

First-half non-interest expenses stood at $2,777 million, an 8% year-over-year increase that was due to the same reasons provided above for the second quarter. Also explaining the increase in other expenses was the reversal of the provision for the compensatory tax on salaries paid in Quebec of $20 million that had been recorded during the first quarter of 2022.

Provisions for Credit Losses

For the second quarter of 2023, the Bank recorded $85 million in provisions for credit losses compared to $3 million in the same quarter of 2022. This increase stems mainly from higher provisions for credit losses on non-impaired loans recorded to reflect new loan origination as well as a less favourable macroeconomic outlook compared to the second quarter of 2022 (notably rising inflation and geopolitical instability). Also, in the second quarter of 2022, the Bank had recorded reversals of allowances for credit losses on non-impaired loans given a more favourable macroeconomic environment and more favourable credit conditions at that time. Second-quarter provisions for credit losses on impaired loans, excluding purchased or originated credit-impaired (POCI) loans(1) rose $24 million year over year. This increase stems from Personal Banking (including credit card receivables), reflecting a normalization of credit performance, from the Financial Markets segment, and from Credigy (excluding POCI loans). These increases were tempered by a decrease in provisions for credit losses on impaired loans at ABA Bank. The second-quarter provisions for credit losses on Credigy's POCI loans increased $4 million year over year given remeasurements of certain portfolios.

For the six-month period ended April 30, 2023, the Bank recorded $171 million in provisions for credit losses compared to $1 million in the same period of 2022. This increase stems mainly from higher provisions for credit losses on non-impaired loans recorded to reflect a less favourable macroeconomic outlook compared to the first half of 2022 caused by the same reasons provided for the quarter. As for provisions for credit losses on impaired loans excluding POCI loans(1), they were also up, mainly due to Personal Banking (including credit card receivables), Commercial Banking, and the Credigy subsidiary. First-half provisions for credit losses on Credigy's POCI loans were also up given a favourable remeasurement of certain portfolios in the same period of 2022. These increases were tempered by higher recoveries for credit losses recorded by the Financial Markets segment in the first half of 2023 as well as by a decrease in provisions for credit losses on impaired loans at ABA Bank.

Income Taxes

For the second quarter of 2023, income taxes stood at $173 million compared to $248 million in the same quarter of 2022. The 2023 second-quarter effective income tax rate was 17% compared to 22% in the same quarter of 2022. The year-over-year change in effective income tax rate stems mainly from a higher level and proportion of tax-exempt dividend income and from higher income in lower tax-rate jurisdictions, factors that were partly offset by the additional 1.5% tax on banks and life insurers.

For the six-month period ended April 30, 2023, the effective income tax rate stood at 18% compared to 22% in the same six-month period of 2022. The year-over-year change in effective income tax rate stems from the same reasons as those mentioned for the quarter, partly offset by the impact of the Canadian government's 2022 tax measures recorded in the first quarter of 2023, namely, the Canada Recovery Dividend and the additional 1.5% tax on banks and life insurers.

(1) See the Glossary section on pages 49 to 52 for details on the composition of these measures.

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, which comprises the activities of the Credigy Ltd. (Credigy) and Advanced Bank of Asia Limited (ABA Bank) subsidiaries. Other operating activities, certain specified items, Treasury activities, and the operations of the Flinks Technology Inc. (Flinks) subsidiary are grouped in the *Other* heading of segment results. Each reportable segment is distinguished by services offered, type of clientele, and marketing strategy.

Personal and Commercial

(millions of Canadian dollars)	Quarter ended April 30			Six months ended April 30		
	2023	2022(1)	% Change	**2023**	2022(1)	% Change
Operating results						
Net interest income	**802**	670	20	**1,627**	1,339	22
Non-interest income	**298**	292	2	**597**	581	3
Total revenues	**1,100**	962	14	**2,224**	1,920	16
Non-interest expenses	**601**	552	9	**1,207**	1,107	9
Income before provisions for credit losses and income taxes	**499**	410	22	**1,017**	813	25
Provisions for credit losses	**37**	11		**98**	6	
Income before income taxes	**462**	399	16	**919**	807	14
Income taxes	**127**	106	20	**253**	214	18
Net income	**335**	293	14	**666**	593	12
Net interest margin(2)	**2.34 %**	2.10 %		**2.35 %**	2.07 %	
Average interest-bearing assets(2)	**140,319**	131,153	7	**139,758**	130,301	7
Average assets(3)	**147,316**	137,636	7	**146,714**	136,852	7
Average loans and acceptances(3)	**146,489**	137,079	7	**145,909**	136,113	7
Net impaired loans(2)	**217**	191	14	**217**	191	14
Net impaired loans as a % of total loans and acceptances(2)	**0.1 %**	0.1 %		**0.1 %**	0.1 %	
Average deposits(3)	**83,983**	78,912	6	**84,526**	79,494	6
Efficiency ratio(2)	**54.6 %**	57.4 %		**54.3 %**	57.7 %	

(1) For the quarter and six-month period ended April 30, 2022, certain amounts have been reclassified, notably due to a revised method for the sectoral allocation of technology investment expenses. In addition, certain amounts have been adjusted to reflect a change in accounting policy related to cloud computing arrangements (for additional information, see Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2022).
(2) See the Glossary section on pages 49 to 52 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 in the second quarter of 2023, up 14% from $293 million in the second quarter of 2022. The segment's second-quarter income before provisions for credit losses and income taxes grew 22% year over year. Second-quarter net interest income rose 20% year over year owing to growth in personal and commercial loans and deposits as well as to a higher net interest margin, which was 2.34% in second-quarter 2023 compared to 2.10% in second-quarter 2022. This growth reflects the interest rate hikes and was mainly attributable to the deposit margin. As for second-quarter non-interest income, it grew $6 million or 2% year over year.

Personal Banking's second-quarter total revenues increased by $53 million year over year. This increase came from an increase in net interest income driven by loan and deposit growth, from an improved margin on deposits, and from higher insurance and card revenues. Commercial Banking's second-quarter total revenues grew $85 million year over year, mainly due to an increase in net interest income that was driven by loan and deposit growth and an improved deposit margin as well as to increases in revenues from bankers' acceptances and from derivative financial instruments, partly offset by a decrease in revenues from foreign exchange activities.

For the second quarter of 2023, the Personal and Commercial segment's non-interest expenses stood at $601 million, a 9% year-over-year increase that was mainly due to higher compensation and employee benefits (given wage growth and a greater number of employees), to investments made as part of the segment's technological evolution, and to operations support charges. At 54.6%, the segment's second-quarter efficiency ratio improved by 2.8 percentage points year over year as a result of strong revenue growth. The segment recorded $37 million in provisions for credit losses in the second quarter of 2023 compared to $11 million in the same quarter of 2022. This increase came mainly from higher provisions for credit losses on non-impaired loans recorded to reflect a less favourable macroeconomic outlook. Furthermore, provisions for credit losses on impaired loans were also up year over year, reflecting a normalization of credit performance.

For the six-month period ended April 30, 2023, Personal and Commercial's net income totalled $666 million versus $593 million in the same period of 2022, an increase that was mainly due to 16% growth in the segment's total revenues. First-half income before provisions for credit losses and income taxes totalled $1,017 million, a 25% year-over-year increase. Personal Banking's first-half total revenues were up, mainly due to growth in loans and deposits and to a higher deposit margin (partly offset by a lower margin on loans) as well as to increases in credit card revenues. In addition, Commercial Banking's first-half total revenues rose 28% owing to growth in loans and deposits, to a higher net interest margin, as well as to increases in revenues from bankers' acceptances, from derivative financial instruments, and from foreign exchange activities.

First-half non-interest expenses stood at $1,207 million, a 9% year-over-year increase that was due to the same reasons provided above for the second quarter. At 54.3%, the first-half efficiency ratio improved by 3.4 percentage points from the same period in 2022. The segment recorded $98 million in provisions for credit losses in the first half of 2023 compared to $6 million in the same period of 2022. This increase came mainly from higher provisions for credit losses on non-impaired loans recorded to reflect new loan origination and a less favourable macroeconomic outlook. In addition, first-half provisions for credit losses on impaired loans were also up year over year.

Wealth Management

(millions of Canadian dollars)	Quarter ended April 30			Six months ended April 30		
	2023	2022[1]	% Change	**2023**	2022[1]	% Change
Operating results						
Net interest income	**190**	127	50	**398**	246	62
Fee-based revenues	**350**	359	(3)	**697**	731	(5)
Transaction-based and other revenues	**77**	93	(17)	**159**	194	(18)
Total revenues	**617**	579	7	**1,254**	1,171	7
Non-interest expenses	**372**	357	4	**736**	717	3
Income before provisions for credit losses and income taxes	**245**	222	10	**518**	454	14
Provisions for credit losses	**–**	–		**–**	–	
Income before income taxes	**245**	222	10	**518**	454	14
Income taxes	**67**	59	14	**142**	121	17
Net income	**178**	163	9	**376**	333	13
Average assets[2]	**8,518**	8,327	2	**8,521**	8,329	2
Average loans and acceptances[2]	**7,542**	7,256	4	**7,546**	7,201	5
Net impaired loans[3]	**5**	19	(74)	**5**	19	(74)
Average deposits[2]	**40,344**	34,810	16	**40,278**	34,412	17
Assets under administration[3]	**673,483**	627,739	7	**673,483**	627,739	7
Assets under management[3]	**123,029**	114,932	7	**123,029**	114,932	7
Efficiency ratio[3]	**60.3 %**	61.7 %		**58.7 %**	61.2 %	

(1) For the quarter and six-month period ended April 30, 2022, certain amounts have been reclassified, notably due to a revised method for the sectoral allocation of technology investment expenses. In addition, certain amounts have been adjusted to reflect a change in accounting policy related to cloud computing arrangements (for additional information, see Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2022).
(2) Represents an average of the daily balances for the period.
(3) See the Glossary section on pages 49 to 52 for details on the composition of these measures.

In the Wealth Management segment, net income totalled $178 million in the second quarter of 2023, a 9% increase from $163 million in the second quarter of 2022. The segment's second-quarter total revenues amounted to $617 million, up $38 million or 7% from $579 million in the second quarter of 2022. This increase in revenues was driven by a $63 million or 50% increase in net interest income resulting from the interest rate hikes that occurred over the past year. Second-quarter fee-based revenues decreased by 3%, as there was weaker stock market performance year over year, partly offset by positive net inflows into various solutions. As for transaction-based and other revenues, they were down 17% year over year as a result of lower commission-generating trading volume.

For the second quarter of 2023, the Wealth Management segment's non-interest expenses stood at $372 million, a $15 million or 4% year-over-year increase that was due to higher compensation and employee benefits and higher technology expenses related to the segment's initiatives, partly offset by a decrease in variable compensation and external management fees. At 60.3%, the segment's second-quarter efficiency ratio improved by 1.4 percentage points from 61.7% in the second quarter of 2022. The provisions for credit losses were negligible in the second quarters of fiscal 2023 and 2022.

For the first half of 2023, Wealth Management's net income totalled $376 million, up 13% from $333 million in the same period of 2022. The segment's first-half total revenues amounted to $1,254 million, up 7% from $1,171 million in the same period of 2022. Its first-half net interest income grew $152 million or 62% year over year owing to higher interest rates. First-half fee-based revenues decreased by 5%, as there was weaker stock market performance year over year, partly offset by positive net inflows into various solutions. As for transaction and other revenues, they decreased 18% year over year as a result of lower commission-generating trading volume. First-half non-interest expenses stood at $736 million compared to $717 million in the first half of 2022; this increase was due to higher compensation and employee benefits and to an increase in technology expenses related to the segment's initiatives, partly offset by a decrease in variable compensation and external management fees. At 58.7%, the first-half efficiency ratio improved by 2.5 percentage points compared to 61.2% in the same period of 2022. The segment's provisions for credit losses were negligible in the first-half periods of fiscal 2023 and 2022.

Financial Markets

(taxable equivalent basis)[1]
(millions of Canadian dollars)

	Quarter ended April 30			Six months ended April 30		
	2023	2022[2]	% Change	**2023**	2022[2]	% Change
Operating results						
Global markets						
Equities	**222**	287	(23)	**414**	570	(27)
Fixed-income	**97**	69	41	**248**	179	39
Commodities and foreign exchange	**66**	40	65	**120**	80	50
	385	396	(3)	**782**	829	(6)
Corporate and investment banking	**287**	236	22	**579**	465	25
Total revenues[1]	**672**	632	6	**1,361**	1,294	5
Non-interest expenses	**283**	258	10	**570**	521	9
Income before provisions for credit losses and income taxes	**389**	374	4	**791**	773	2
Provisions for credit losses	**19**	(16)		**10**	(32)	
Income before income taxes	**370**	390	(5)	**781**	805	(3)
Income taxes[1]	**102**	103	(1)	**215**	213	1
Net income	**268**	287	(7)	**566**	592	(4)
Average assets[3]	**172,361**	149,029	16	**172,819**	153,467	13
Average loans and acceptances[3] (Corporate Banking only)	**28,804**	21,431	34	**27,921**	20,815	34
Net impaired loans[4]	**76**	3		**76**	3	
Net impaired loans as a % of total loans and acceptances[4]	**0.3 %**	– %		**0.3 %**	– %	
Average deposits[3]	**58,339**	45,203	29	**55,540**	46,346	20
Efficiency ratio[4]	**42.1 %**	40.8 %		**41.9 %**	40.3 %	

(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 revenues taxed at lower rates by the income tax to a level that would make it comparable to revenues from taxable sources in Canada. For the quarter ended April 30, 2023, *Total revenues* were grossed up by $130 million ($50 million in 2022) and an equivalent amount was recognized in *Income taxes*. For the six-month period ended April 30, 2023, *Total revenues* were grossed up by $259 million ($113 million in 2022) and an equivalent amount was recognized in *Income taxes*. The effect of these adjustments is reversed under the *Other* heading in the segment results.
(2) For the quarter and six-month period ended April 30, 2022, certain amounts have been reclassified, notably due to a revised method for the sectoral allocation of technology investment expenses. In addition, certain amounts have been adjusted to reflect a change in accounting policy related to cloud computing arrangements (for additional information, see Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2022).
(3) Represents an average of the daily balances for the period.
(4) See the Glossary section on pages 49 to 52 for details on the composition of these measures.

In the Financial Markets segment, net income totalled $268 million in the second quarter of 2023, down 7% from $287 million in the second quarter of 2022. Income before provisions for credit losses and income taxes totalled $389 million in the second quarter of 2023, up 4% from the second quarter of 2022. Second-quarter total revenues amounted to $672 million, up $40 million or 6% from $632 million in the second quarter of 2022. Global markets revenues were down 3% given a 23% decrease in revenues from equity securities, tempered by a 41% increase in revenues from fixed-income securities and a 65% increase in revenues from commodities and foreign exchange activities. Second-quarter corporate and investment banking revenues grew 22% year over year given an increase in revenues from merger and acquisition activity and in banking services revenues, reflecting growth in loan volumes and a higher margin on deposits, with these increases being partly offset by lower revenues from capital markets activity.

Second-quarter non-interest expenses stood at $283 million, a 10% year-over-year increase that was due to higher compensation and employee benefits (notably wage growth and the variable compensation associated with the segment's revenue growth), as well as to higher technology investment expenses, higher operations support charges, and expenses related to the segment's business growth. At 42.1%, the second-quarter efficiency ratio deteriorated when compared to 40.8% in the second quarter of 2022. The segment recorded $19 million in provisions for credit losses in the second quarter of 2023 compared to $16 million in recoveries of credit losses in the second quarter of 2022. This increase came from higher provisions for credit losses on impaired loans of $9 million and on non-impaired loans of $26 million recorded to reflect new loan origination and less favourable macroeconomic conditions in the second quarter of 2023.

For the six months ended April 30, 2023, the segment's net income totalled $566 million, down 4% from the same six-month period in 2022. First-half income before provisions for credit losses and income taxes totalled $791 million, up 2% from the first half of 2022. As for first-half total revenues, they amounted to $1,361 million, up $67 million or 5% from $1,294 million in the same period of 2022. Global markets revenues were down $47 million given a 27% decrease in revenues from equity securities, whereas revenues from fixed-income securities rose 39% and revenues from commodities and foreign exchange activities rose 50%. First-half corporate and investment banking revenues grew 25% year over year due to the same reasons provided above for the quarter.

First-half non-interest expenses rose 9% year over year, mainly due to the same reasons provided above for the second quarter. At 41.9%, the first-half efficiency ratio compares to 40.3% in the same period of 2022. The segment recorded $10 million in provisions for credit losses during the first half of 2023 compared to $32 million in recoveries of credit losses in the same first-half period of 2022. The increase in credit losses on non-impaired loans was partly offset by higher recoveries of credit losses on impaired loans recorded in the first half of 2023.

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

(millions of Canadian dollars)	Quarter ended April 30			Six months ended April 30		
	2023	2022	% Change	**2023**	2022	% Change
Total revenues						
Credigy	**108**	120	(10)	**245**	246	–
ABA Bank	**178**	164	9	**358**	322	11
International	**(1)**	1		**1**	2	
	285	285	–	**604**	570	6
Non-interest expenses						
Credigy	**33**	35	(6)	**69**	68	1
ABA Bank	**65**	52	25	**126**	99	27
International	**–**	1		**1**	1	
	98	88	11	**196**	168	17
Income before provisions for credit losses and income taxes	**187**	197	(5)	**408**	402	1
Provisions for credit losses						
Credigy	**20**	4		**51**	18	
ABA Bank	**6**	5	20	**10**	9	11
	26	9		**61**	27	
Income before income taxes	**161**	188	(14)	**347**	375	(7)
Income taxes						
Credigy	**11**	17	(35)	**26**	34	(24)
ABA Bank	**22**	19	16	**46**	41	12
	33	36	(8)	**72**	75	(4)
Net income						
Credigy	**44**	64	(31)	**99**	126	(21)
ABA Bank	**85**	88	(3)	**176**	173	2
International	**(1)**	–		**–**	1	
	128	152	(16)	**275**	300	(8)
Average assets[(1)]	**22,562**	18,230	24	**22,076**	18,100	22
Average loans and receivables[(1)]	**18,369**	14,647	25	**18,151**	14,515	25
Purchased or originated credit-impaired (POCI) loans	**390**	376	4	**390**	376	4
Net impaired loans excluding POCI loans[(2)]	**179**	80		**179**	80	
Average deposits[(1)]	**10,586**	8,342	27	**10,193**	8,115	26
Efficiency ratio[(2)]	**34.4 %**	30.9 %		**32.5 %**	29.5 %	

(1) Represents an average of the daily balances for the period.
(2) See the Glossary section on pages 49 to 52 for details on the composition of these measures.

In the USSF&I segment, net income totalled $128 million in the second quarter of 2023 compared to $152 million in the same quarter of 2022, as stability in total revenues was offset by higher non-interest expenses and higher provisions for credit losses. The segment's second-quarter total revenues amounted to $285 million, stable compared to the second quarter of 2022. For the six-month period ended April 30, 2023, the segment recorded net income of $275 million compared to $300 million in the same six-month period of 2022, an 8% decrease that was attributable to Credigy's business activities.

Credigy

For the second quarter of 2023, the Credigy subsidiary's net income totalled $44 million, a $20 million or 31% year-over-year decrease that was due to lower revenues and higher provisions for credit losses. Total revenues, which amounted to $108 million in the second quarter of 2023 compared to $120 million in the same quarter of 2022, were down, mainly due to a lower margin related to the portfolio mix as well as to greater performance in certain portfolios in the second quarter of 2022, partly offset by the impact of exchange rate changes. Credigy's second-quarter non-interest expenses stood at $33 million, a $2 million year-over-year decrease that was mainly due to compensation and employee benefits. Provisions for credit losses increased by $16 million compared to the same quarter of 2022, due to an increase in provisions for credit losses on non-impaired loans associated with growth in the loan portfolio and a deterioration in risk parameters as well as to an increase in provisions for credit losses on impaired loans and POCI loans.

For the six-month period ended April 30, 2023, the Credigy subsidiary's net income totalled $99 million, a 21% year-over-year decrease that was due to higher provisions for credit losses. The subsidiary's first-half income before provisions for credit losses and income taxes totalled $176 million, down 1%. Its first-half total revenues amounted to $245 million compared to $246 million in the same period of 2022. A decrease in net interest income was partly offset by revenue recorded upon the prepayment of a credit facility recognized in the first quarter of 2023 as well as by growth in non-interest income to reflect an unfavourable impact of remeasuring the fair value of certain portfolios during the first half of 2022. Credigy's first-half non-interest expenses stood at $69 million, relatively stable compared to the first half of 2022. First-half provisions for credit losses rose $33 million year over year, mainly due to the same reasons provided above for the second quarter.

ABA Bank

For the second quarter of 2023, the ABA Bank subsidiary's net income totalled $85 million, down $3 million or 3% from the same quarter in 2022. The subsidiary's second-quarter total revenues were up 9% due to sustained loan and deposit growth as well as by the impact of exchange rate changes, partly offset by an increase in interest rates on deposits and by lower interest rates on loans in a competitive environment in Cambodia. Non-interest expenses for the second quarter of 2023 stood at $65 million, a $13 million or 25% year-over-year increase attributable to higher compensation and employee benefits (notably due to wage growth given a greater number of employees) and to higher occupancy expenses resulting from the subsidiary's business growth and opening of new branches. Provisions for credit losses, which stood at $6 million in the second quarter of 2023, rose $1 million year over year.

For the six-month period ended April 30, 2023, the ABA Bank subsidiary's net income totalled $176 million, up 2% year over year. Growth in the subsidiary's business activities, mainly sustained growth in loans and deposits, explains an 11% year-over-year increase in its first-half total revenues. This increase was, however, partly offset by higher interest rates on deposits and lower interest rates on loans given a competitive environment in Cambodia. First-half non-interest expenses stood at $126 million, a 27% year-over-year increase that was due to the same reasons provided above for the second quarter. The subsidiary's first-half provisions for credit losses stood at $10 million, a $1 million year-over-year increase that stems from higher provisions for credit losses on non-impaired loans, partly offset by lower provisions for credit losses on impaired loans.

Other

(millions of Canadian dollars)	Quarter ended April 30		Six months ended April 30	
	2023	2022(1)	**2023**	2022(1)
Operating results				
Net interest income(2)	**(167)**	(116)	**(309)**	(240)
Non-interest income(2)	**(28)**	97	**(73)**	190
Total revenues	**(195)**	(19)	**(382)**	(50)
Non-interest expenses	**20**	44	**68**	66
Income before provisions for credit losses and income taxes	**(215)**	(63)	**(450)**	(116)
Provisions for credit losses	**3**	(1)	**2**	–
Income before income taxes	**(218)**	(62)	**(452)**	(116)
Income taxes (recovery)(2)	**(156)**	(56)	**(297)**	(117)
Net income (loss)	**(62)**	(6)	**(155)**	1
Non-controlling interests	**(1)**	(1)	**(1)**	(1)
Net income (loss) attributable to the Bank's shareholders and holders of other equity instruments	**(61)**	(5)	**(154)**	2
Specified items after income taxes(3)	**–**	–	**24**	–
Net income (loss) – Adjusted(3)	**(62)**	(6)	**(131)**	1
Average assets(4)	**70,458**	71,404	**72,981**	69,935

(1) For the quarter and six-month period ended April 30, 2022, certain amounts have been reclassified, notably due to a revised method for the sectoral allocation of technology investment expenses. In addition, certain amounts have been adjusted to reflect a change in accounting policy related to cloud computing arrangements (for additional information, see Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2022).

(2) For the quarter ended April 30, 2023, an amount of $76 million ($49 million in 2022) was deducted from *Net interest income*, an amount of $56 million ($3 million in 2022) was deducted from *Non-interest income*, and an equivalent amount was recorded in *Income taxes (recovery)*. For the six-month period ended April 30, 2023, *Net interest income* was reduced by $154 million ($109 million in 2022), *Non-interest income* was reduced by $108 million ($7 million in 2022), and an equivalent amount was recognized in *Income taxes (recovery)*. 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 of grossing up certain revenues taxed at lower rates by the income tax to a level that would make it comparable to revenues from taxable sources in Canada.

(3) See the Financial Reporting Method section on pages 4 to 9 for additional information on non-GAAP financial measures.

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

For the *Other* heading of segment results, there was a net loss of $62 million in the second quarter of 2023 compared to a net loss of $6 million in the second quarter of 2022. This change stems essentially from a decrease in total revenues arising from higher gains on investments recorded in the second quarter of 2022. Second-quarter non-interest expenses were down year over year, notably due to a decrease in variable compensation.

For the six-month period ended April 30, 2023, net loss stood at $155 million compared to $1 million in net income for the six-month period ended April 30, 2022. This change was due to a decrease in total revenues arising mainly from a lower contribution from Treasury activities and from lower gains on investments in the first half of 2023. In addition, the specified items recorded for the first half of 2023 and related to the Canadian government's 2022 tax measures contributed to a higher net loss. These specified items include a $32 million tax expense for the Canada Recovery Dividend (i.e., a one-time, 15% tax on the fiscal 2021 and 2020 average taxable income above $1 billion) as well as an $8 million tax recovery related to a 1.5% increase in the statutory tax rate, which includes the impact related to current and deferred taxes for fiscal 2022. For the six-month period ended April 30, 2023, adjusted net loss stood at $131 million compared to $1 million in net income for the six-month period ended April 30, 2022.

Consolidated Balance Sheet

Consolidated Balance Sheet Summary

(millions of Canadian dollars)	As at April 30, 2023	As at October 31, 2022	% Change
Assets			
Cash and deposits with financial institutions	42,501	31,870	33
Securities	116,922	109,719	7
Securities purchased under reverse repurchase agreements and securities borrowed	16,827	26,486	(36)
Loans and acceptances, net of allowances	215,764	206,744	4
Other	25,670	28,921	(11)
	417,684	403,740	3
Liabilities and equity			
Deposits	281,514	266,394	6
Other	112,801	114,101	(1)
Subordinated debt	748	1,499	(50)
Equity attributable to the Bank's shareholders and holders of other equity instruments	22,620	21,744	4
Non-controlling interests	1	2	(50)
	417,684	403,740	3

Assets

As at April 30, 2023, the Bank had total assets of $417.7 billion, a $14.0 billion or 3% increase from $403.7 billion as at October 31, 2022. At $42.5 billion as at April 30, 2023, cash and deposits with financial institutions were up $10.6 billion, mainly due to an increase in deposits with the Bank of Canada and the U.S. Federal Reserve. The high level of cash and deposits with financial institutions was partly due to the excess liquidity related to the accommodative monetary policies that have been applied by central banks since 2020.

As at April 30, 2023, securities totalled $116.9 billion, increasing $7.2 billion since October 31, 2022. Securities at fair value through profit or loss increased by $5.7 billion or 7%, essentially due to equity securities and securities issued or guaranteed by the Canadian government, partly offset by a decrease in securities issued or guaranteed by the U.S. Treasury, other U.S. agencies and other foreign governments. Securities other than those measured at fair value through profit or loss were also up, rising $1.5 billion. Securities purchased under reverse repurchase agreements and securities borrowed decreased by $9.7 billion since October 31, 2022, mainly due to the activities of the Financial Markets segment and Treasury.

Totalling $215.8 billion as at April 30, 2023, loans and acceptances, net of allowances for credit losses, rose $9.1 billion or 4% since October 31, 2022. The following table provides a breakdown of the main loan and acceptance portfolios.

(millions of Canadian dollars)	As at April 30, 2023	As at October 31, 2022	As at April 30, 2022
Loans and acceptances			
Residential mortgage and home equity lines of credit	113,069	109,648	103,987
Personal	15,627	15,804	15,463
Credit card	2,433	2,389	2,252
Business and government	85,705	79,858	73,242
	216,834	207,699	194,944
Allowances for credit losses	(1,070)	(955)	(915)
	215,764	206,744	194,029

Since October 31, 2022, residential mortgages (including home equity lines of credit) rose $3.5 billion or 3% given the activities of the Financial Markets segment and the Credigy subsidiary. Compared to October 31, 2022, personal loans were down while credit card receivables increased. Loans and acceptances to business and government rose $5.8 billion or 7% compared to October 31, 2022, mainly due to business growth at Commercial Banking, corporate banking financial services, Treasury activities, and the ABA Bank subsidiary, partly offset by Credigy's repayment of loan portfolios.

Since April 30, 2022, loans and acceptances, net of allowances for credit losses, grew $21.8 billion or 11%. Residential mortgages (including home equity lines of credit) were up $9.1 billion or 9% due to sustained demand for mortgage credit in the Personal and Commercial segment and to business growth in the Financial Markets segment and at the ABA Bank and Credigy subsidiaries. Also compared to a year ago, personal loans and credit card receivables were up slightly and loans and acceptances to business and government rose $12.5 billion or 17%, owing essentially to the activities of Commercial Banking, corporate financial services, Treasury, and ABA Bank.

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 April 30, 2023, gross impaired loans stood at $1,204 million compared to $1,271 million as at October 31, 2022. As for net impaired loans, they totalled $944 million as at April 30, 2023 compared to $1,030 million as at October 31, 2022. Net impaired loans excluding POCI loans amounted to $477 million, decreasing $2 million from $479 million as at October 31, 2022. This decrease was due to decreases in the net impaired loans of the Wealth Management, Financial Markets, and ABA Bank loan portfolios, partly offset by an increase in net impaired loans of the Personal and Commercial Banking and Credigy (excluding POCI loans) loan portfolios. Net POCI loans stood at $467 million as at April 30, 2023 compared to $551 million as at October 31, 2022, down as a result of repayments and maturities of certain loan portfolios.

As at April 30, 2023, other assets totalled $25.7 billion, a $3.2 billion decrease since October 31, 2022 that was mainly due to a decrease in derivative financial instruments, which were down $4.4 billion. This decrease was partly offset by increases in other assets, notably receivables, prepaid expenses and other items as well as interest and dividends receivable.

Liabilities
As at April 30, 2023, the Bank had total liabilities of $395.1 billion compared to $382.0 billion as at October 31, 2022.

The Bank's total deposit liability stood at $281.5 billion as at April 30, 2023, rising $15.1 billion or 6% from $266.4 billion as at October 31, 2022. As at April 30, 2023, personal deposits stood at $85.6 billion, rising $6.8 billion since October 31, 2022. This increase came mainly from business growth at Personal Banking, in the Wealth Management segment, in the Financial Markets segment, and at ABA Bank.

Business and government deposits stood at $191.8 billion as at April 30, 2023, rising $7.6 billion since October 31, 2022. This increase came from the Financial Markets segment and Treasury funding activities, including $2.6 billion in deposits subject to bank recapitalization (bail-in) conversion regulations, partly offset by a decrease in deposits from the activities of Commercial Banking and Wealth Management. Deposits from deposit-taking institutions stood at $4.2 billion as at April 30, 2023, rising $0.8 billion since October 31, 2022 due to Treasury funding activities.

Other liabilities, totalling $112.8 billion as at April 30, 2023, decreased $1.3 billion since October 31, 2022, resulting essentially from a $3.1 billion decrease in obligations related to securities sold short and a $2.7 billion decrease in derivative financial instruments, partly offset by a $4.6 billion increase in obligations related to securities sold under repurchase agreements and securities loaned.

Subordinated debt decreased since October 31, 2022 as a result of the Bank's redemption, on February 1, 2023, of $750 million in medium-term notes.

Equity
As at April 30, 2023, equity attributable to the Bank's shareholders and holders of other equity instruments was $22.6 billion, rising $0.9 billion since October 31, 2022. This increase was due to net income net of dividends and to the issuance of common shares under the Stock Option Plan. These increases were partly offset by remeasurements of pension plans and other post-employment benefit plans and by the net fair value change attributable to the credit risk on financial liabilities designated at fair value through profit or loss.

Event After the Consolidated Balance Sheet Date

On May 2, 2023, the Bank concluded that it had lost significant influence over TMX Group Limited (TMX) and therefore, as of this date, ceased using the equity method to account for this investment. The Bank designated its investment in TMX as a financial asset measured at fair value through other comprehensive income in an amount of $191 million. Following the fair value measurement, a $91 million gain will be recorded in the *Non-interest income – Other* item of the Consolidated Statement of Income and will be reported in the *Other* heading of segment results during the third quarter of 2023. As at April 30, 2023, the Bank's ownership interest in TMX was 2.5%.

Related Party Transactions

The Bank's policies and procedures regarding related party transactions have not significantly changed since October 31, 2022. For additional information, see Note 28 to the audited annual consolidated financial statements for the year ended October 31, 2022.

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 under 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 53 and 54 of the *2022 Annual Report*.

For additional information on financial assets transferred but not derecognized, guarantees, commitments, and structured entities, see Notes 8, 26, and 27 to the audited annual consolidated financial statements for the year ended October 31, 2022.

Income Taxes

Notice of Assessment
In March 2023, the Bank was reassessed by the Canada Revenue Agency (CRA) for additional income tax and interest of approximately $90 million (including estimated provincial tax and interest) in respect of certain Canadian dividends received by the Bank during the 2018 taxation year.

In prior fiscal years, the Bank had been reassessed for additional income tax and interest of approximately $875 million (including provincial tax and interest) in respect of certain Canadian dividends received by the Bank during the 2012-2017 taxation years.

In the reassessments, the CRA alleges that the dividends were received as part of a "dividend rental arrangement".

The CRA may issue reassessments to the Bank for taxation years subsequent to 2018 in regard to certain activities similar to those that were the subject of the above-mentioned reassessments. The Bank remains confident that its tax position was appropriate and intends to vigorously defend its position. As a result, no amount has been recognized in the consolidated financial statements as at April 30, 2023.

Canadian Government's 2022 Tax Measures
On November 4, 2022, the Government of Canada introduced Bill C-32 – *An Act to implement certain provisions of the fall economic statement tabled in Parliament on November 3, 2022 and certain provisions of the budget tabled in Parliament on April 7, 2022* to implement tax measures applicable to certain entities of banking and life insurer groups, as presented in its April 7, 2022 budget. These tax measures include the Canada Recovery Dividend (CRD), which is a one-time, 15% tax on the fiscal 2021 and 2020 average taxable income above $1 billion, as well as a 1.5% increase in the statutory tax rate. On December 15, 2022, Bill C-32 received royal assent. Given that these tax measures were in effect at the financial reporting date, a $32 million tax expense for the CRD and an $8 million tax recovery for the tax rate increase, including the impact related to current and deferred taxes for fiscal 2022, were recognized in the consolidated financial statements as at April 30, 2023.

Proposed Legislation

In its March 28, 2023 budget, the Government of Canada proposed to introduce certain tax measures applicable to the Bank. The measures include the denial of the deduction in respect of dividends received after 2023 on shares that are mark-to-market property for tax purposes, the application of a 2% tax on the net value of equity repurchases occurring as of January 1, 2024, as well as the government's intention to implement the Pillar Two rules (global minimum tax) published by the Organization for Economic Co-operation and Development (OECD) for fiscal years beginning as of December 31, 2023. The proposed measures have not yet been included in a bill at the reporting date.

The federal budget of March 28, 2023 also included another tax measure on amendments to the *Excise Tax Act*, indicating that payment card clearing services rendered by a payment card network operator are subject to the goods and services tax (GST) and the harmonized sales tax (HST). On April 20, 2023, the Government of Canada tabled Bill C-47 – *An Act to implement certain provisions of the budget tabled in Parliament on March 28, 2023* to implement, among other things, these amendments to the GST/HST for payment cards. Given that the amendment to the *Excise Tax Act* was not virtually certain at the reporting date, no amount was recognized in the consolidated financial statements as at April 30, 2023.

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 the risks inherent to the Bank's business activities, supports its business segments, and protects its clients. The Bank's capital management policy defines the guiding principles as well as the roles and responsibilities of its internal capital adequacy assessment process. This process aims to determine the capital that the Bank needs to maintain 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 55 to 64 of the Bank's *2022 Annual Report*.

Basel Accord

The Bank and all other major Canadian banks have to maintain the following minimum capital ratios established by OSFI: a CET1 capital ratio of at least 11.0%, a Tier 1 capital ratio of at least 12.5%, and a Total capital ratio of at least 14.5%. For additional information on the ratio calculations, see page 56 of the *2022 Annual Report*. All of these ratios include a capital conservation buffer of 2.5% established by the BCBS and OSFI, a 1.0% surcharge applicable solely to Domestic Systemically Important Banks (D-SIBs), and a 3.0% domestic stability buffer established by OSFI. On December 8, 2022, OSFI expanded the buffer range, setting it at 0% to 4.0% instead of the previous range of 0% to 2.5%, and it announced that the buffer would rise from 2.5% to 3.0% effective February 1, 2023. The domestic stability buffer consists exclusively of CET1 capital. A D-SIB that fails to meet this buffer requirement is not subject to automatic constraints to reduce capital distributions but must provide a remediation plan to OSFI. Lastly, OSFI requires D-SIBs to maintain a Basel III leverage ratio of at least 3.5%. Effective February 1, 2023, OSFI increased the leverage ratio minimum requirement by imposing a Tier 1 capital buffer of 0.5% applicable only to D-SIBs. For additional information on the leverage ratio calculation, see page 57 of the *2022 Annual Report*.

In the second quarter of 2023, the Bank implemented OSFI's guidance relating to the Basel III reforms, notably:

- a revised Standardized Approach and Internal Ratings-Based (IRB) Approach to credit risk;
- a revised Standardized Approach for operational risk;
- a revised capital output floor;
- a revised Leverage Ratio Framework; and
- revised Pillar 3 disclosure requirements.

The Basel III reforms also affected the market risk and credit valuation adjustment (CVA) risk frameworks, which will be implemented in the first quarter of 2024.

The Basel Accord proposes a range of approaches of varying complexity, the choice of which determines the sensitivity of capital to risks. A less complex approach, such as the Standardized Approach, uses regulatory weightings, while a more complex approach uses the Bank's internal estimates of risk components to establish risk-weighted assets (RWA) and calculate regulatory capital.

As required under Basel, RWA is calculated for each credit risk, market risk, and operational risk. The Bank uses the IRB Approaches for credit risk to determine minimum regulatory capital requirements for a majority of its portfolios. The Bank must use the Foundation Internal Ratings-Based (FIRB) Approach for certain specific exposure types such as large corporates and financial institutions. For all other exposure types treated under an IRB Approach, the Bank uses the Advanced Internal Ratings-Based (AIRB) Approach. Under the FIRB Approach, the Bank can use its own estimate of probability of default (PD) but must also rely on OSFI estimates for loss given default (LGD) and exposure at default (EAD) risk parameters. Under the AIRB Approach, the Bank can use its own estimates for all risk parameters: PD, LGD, EAD. Under both IRB Approaches, risk parameters are subject to specific input floors. The credit risk of certain portfolios considered to be less significant is weighted according to the revised Standardized Approach, which uses prescribed regulatory weightings. Exposure to banking book equity securities is also weighted according to the revised Standardized Approach. With respect to the capital requirements related to securitization operations, the risk weighting methodologies remain significantly unchanged.

For operational risk, the Bank is applying the revised Standardized Approach, which now incorporates the Bank's internal operational risk loss experience in the calculation of RWA.

Market risk and CVA capital requirement weighting methodologies will remain unchanged until the first quarter of 2024. Market risk-weighted assets are primarily determined using the Internal Model-Based Approach, while the Standardized Approach is used to assess interest-rate specific risk. CVA risk-weighted assets are determined under a prescribed Standardized Approach.

The Bank must also meet the requirements of an updated capital floor, which sets the regulatory capital level according to the Basel III Standardized Approach. If risk-weighted assets calculated according to Basel III are below the regulatory level, the difference is added to risk-weighted assets. OSFI is allowing a phase-in of the floor factor over three years, starting at 65.0% in the second quarter of 2023 and rising 2.5% per year to reach 72.5% in fiscal 2026. If the capital requirement is less than the capital output floor requirement after applying the floor factor, the difference is added to the total RWA.

The implementation of the Basel III reforms had a positive impact of 44 bps on the Bank's CET1 capital ratio. As at April 30, 2023, the Bank was not impacted by the implementation of the updated capital output floor. Lastly, the implementation of the revised leverage ratio framework did not have a significant impact on the Bank.

In addition, OSFI requires that regulatory capital instruments other than common equity must have a non-viability contingent capital (NVCC) clause to ensure that investors bear losses before taxpayers should the government determine that rescuing a non-viable financial institution is in the public interest. As at April 30, 2023, all of the Bank's regulatory capital instruments, other than common shares, have an NVCC clause.

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 internal 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. OSFI requires D-SIBs to maintain a risk-based TLAC ratio of at least 24.5% (including the domestic stability buffer) of risk-weighted assets and a TLAC leverage ratio of at least 7.25%. 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 April 30, 2023, outstanding liabilities of $15.4 billion ($12.8 billion as at October 31, 2022) were subject to conversion under the bail-in regulations.

Requirements – Regulatory Capital[1], Leverage[1], and TLAC[2] Ratios

	Requirements as at April 30, 2023							
	Minimum	Capital conservation buffer	Minimum set by BCBS	D-SIB surcharge	Minimum set by OSFI[3]	Domestic stability buffer[4]	Minimum set by OSFI[3], including the domestic stability buffer	Ratios as at April 30, 2023
Capital ratios								
CET1	4.5 %	2.5 %	7.0 %	1.0 %	8.0 %	3.0 %	11.0 %	13.3 %
Tier 1	6.0 %	2.5 %	8.5 %	1.0 %	9.5 %	3.0 %	12.5 %	16.0 %
Total	8.0 %	2.5 %	10.5 %	1.0 %	11.5 %	3.0 %	14.5 %	16.9 %
Leverage ratio	3.0 %	n.a.	3.0 %	0.5 %	3.5 %	n.a.	3.5 %	4.2 %
TLAC ratio	21.5 %	n.a.	21.5 %	n.a.	21.5 %	3.0 %	24.5 %	29.3 %
TLAC leverage ratio	6.75 %	n.a.	6.75 %	0.5 %	7.25 %	n.a.	7.25 %	7.8 %

n.a. Not applicable
(1) 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 Guideline* and *Leverage Requirements Guideline*.
(2) The TLAC ratio and the TLAC leverage ratio are calculated in accordance with OSFI's *Total Loss Absorbing Capacity Guideline*.
(3) The capital ratios and the TLAC ratio include the capital conservation buffer and the D-SIB surcharge. On February 1, 2023, OSFI raised the minimum leverage ratio and the TLAC leverage ratio by imposing a Tier 1 capital buffer of 0.5% (surcharge related to D-SIBs).
(4) On December 8, 2022, OSFI announced that the buffer would rise from 2.5% to 3.0%, effective February 1, 2023.

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. Furthermore, a complete list of capital instruments and their main features is also available on the Bank's website.

Regulatory Developments

The Bank closely monitors regulatory developments and participates actively in various consultative processes. In response to the impact of the COVID-19 pandemic, on March 27, 2020, OSFI announced a series of regulatory adjustments to support the financial and operational resilience of banks. For additional information about the regulatory context on October 31, 2022 and about COVID-19 relief measures still in effect as at October 31, 2022, see pages 58 and 59 of the Capital Management section in the *2022 Annual Report.* The OSFI capital, leverage, liquidity and disclosure revised rules related to Basel III reforms took effect in the second quarter of 2023 except for the new market risk framework and the revised credit valuation adjustment (CVA) risk framework, which will take effect in the first quarter of 2024, as previously described. Since November 1, 2022, there have been no other new significant regulatory developments to be considered.

Management Activities
On December 12, 2022, the Bank began a normal course issuer bid to repurchase for cancellation up to 7,000,000 common shares (representing approximately 2.1% of its outstanding common shares) over the 12-month period ending no later than December 11, 2023. During the six-month period ended April 30, 2023, the Bank did not repurchase any common shares.

On February 1, 2023, the Bank redeemed $750 million of medium-term notes maturing on February 1, 2028. These instruments were excluded from the capital ratio calculations as at January 31, 2023.

Dividends
On May 30, 2023, the Board of Directors declared regular dividends on the various series of first preferred shares and a dividend of $1.02 per common share, up 5 cents per common share or 5%, payable on August 1, 2023, to shareholders of record on June 26, 2023.

Shares, Other Equity Instruments, and Stock Options

	As at April 30, 2023	
	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
LRCN – Series 3	500,000	500
	1,500,000	1,500
	67,500,000	3,150
Common shares	337,719,583	3,261
Stock options	12,170,881	

(1) Limited Recourse Capital Notes (LRCN).

As at May 26, 2023, there were 337,869,397 common shares and 11,977,728 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 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 868 million Bank common shares, which would have a 72.0% dilutive effect based on the number of Bank common shares outstanding as at April 30, 2023.

Movement in Regulatory Capital[1]

(millions of Canadian dollars)	Six months ended April 30, 2023
Common Equity Tier 1 (CET1) capital	
Balance at beginning	14,818
Issuance of common shares (including Stock Option Plan)	54
Impact of shares purchased or sold for trading	5
Repurchase of common shares	–
Other contributed surplus	9
Dividends on preferred and common shares and distributions on other equity instruments	(735)
Net income attributable to the Bank's shareholders and holders of other equity instruments	1,729
Removal of own credit spread (net of income taxes)	239
Other	(191)
Movements in accumulated other comprehensive income	
Translation adjustments	(25)
Debt securities at fair value through other comprehensive income	24
Other	1
Change in goodwill and intangible assets (net of related tax liability)	5
Other, including regulatory adjustments	
Change in defined benefit pension plan asset (net of related tax liability)	27
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)	(7)
Other deductions or regulatory adjustments to CET1 implemented by OSFI	(61)
Change in other regulatory adjustments	–
Balance at end	15,892
Additional Tier 1 capital	
Balance at beginning	3,143
New Tier 1 eligible capital issuances	–
Redeemed capital	–
Other, including regulatory adjustments	2
Balance at end	3,145
Total Tier 1 capital	**19,037**
Tier 2 capital	
Balance at beginning	1,766
New Tier 2 eligible capital issuances	–
Redeemed capital	(750)
Tier 2 instruments issued by subsidiaries and held by third parties	–
Change in certain allowances for credit losses	(11)
Other, including regulatory adjustments	68
Balance at end	1,073
Total regulatory capital	**20,110**

(1) See the Financial Reporting Method section on pages 4 to 9 for additional information on capital management measures.

Risk-Weighted Assets by Key Risk Drivers

Risk-weighted assets (RWA) amounted to $119.1 billion as at April 30, 2023 compared to $116.8 billion as at October 31, 2022, a $2.3 billion increase resulting mainly from organic growth in RWA and a deterioration in the credit quality of the loan portfolio, offset by foreign exchange movements and by methodology changes related to the implementation of the Basel III reforms, notably for operational risk and credit risk. 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)					Quarter ended
			April 30, 2023	January 31, 2023	October 31, 2022
	Non-counterparty credit risk	Counterparty credit risk	Total	Total	Total
Credit risk – Risk-weighted assets at beginning	**94,261**	**6,559**	**100,820**	96,141	91,229
Book size	**959**	**(387)**	**572**	4,439	2,405
Book quality	**609**	**342**	**951**	697	93
Model updates	**116**	**–**	**116**	172	300
Methodology and policy	**(1,288)**	**237**	**(1,051)**	106	339
Acquisitions and disposals	**–**	**–**	**–**	–	–
Foreign exchange movements	**519**	**59**	**578**	(735)	1,775
Credit risk – Risk-weighted assets at end	**95,176**	**6,810**	**101,986**	100,820	96,141
Market risk – Risk-weighted assets at beginning			**5,960**	6,025	5,696
Movement in risk levels[2]			**(900)**	(65)	329
Model updates			**–**	–	–
Methodology and policy			**–**	–	–
Acquisitions and disposals			**–**	–	–
Market risk – Risk-weighted assets at end			**5,060**	5,960	6,025
Operational risk – Risk-weighted assets at beginning			**15,033**	14,674	14,452
Movement in risk levels			**93**	359	222
Methodology and policy			**(3,061)**	–	–
Acquisitions and disposals			**–**	–	–
Operational risk – Risk-weighted assets at end			**12,065**	15,033	14,674
Risk-weighted assets at end			**119,111**	121,813	116,840

(1) See the Financial Reporting Method section on pages 4 to 9 for additional information on capital management measures.
(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 six-month period ended April 30, 2023, the Bank updated the models used for certain retail exposures, mortgages and certain non-retail exposures.

The *Methodology and policy* item presents the impact of changes in calculation methods resulting from changes in regulatory policies or from new regulations. During the quarter ended April 30, 2023, the Bank finalized the implementation of the Basel III reforms requirements related to credit risk, operational risk, and capital output floor.

Regulatory Capital Ratios, Leverage Ratio, and TLAC Ratios

As at April 30, 2023, the Bank's CET1, Tier 1, and Total capital ratios were, respectively, 13.3%, 16.0% and 16.9% compared to ratios of, respectively, 12.7%, 15.4% and 16.9% as at October 31, 2022. The CET1 and Tier 1 capital ratios increased since October 31, 2022, essentially due to the contribution from net income, net of dividends, to common share issuances under the Stock Option Plan and to the positive impact from the implementation of the Basel III reforms related to credit and operational risks frameworks. These factors were partly offset by growth in RWA and by the end of the transitional measures applicable to ECL provisioning implemented by OSFI at the beginning of the COVID-19 pandemic. The Total capital ratio remained unchanged. The net positive contribution from factors impacting the CET1 and Tier 1 capital ratios was offset by the $750 million redemption of medium-term notes on February 1, 2023.

As at April 30, 2023, the leverage ratio was 4.2%, compared to 4.5% as at October 31, 2022. The decrease in the leverage ratio is essentially due to the growth in total exposure and to the end of the temporary measure permitted by OSFI with respect to the exclusion of central bank reserves from the leverage exposure calculation. These factors were partly offset by the growth in Tier 1 capital.

As at April 30, 2023, the Bank's TLAC ratio and TLAC leverage ratio were, respectively, 29.3% and 7.8%, compared to 27.7% and 8.1%, respectively, as at October 31, 2022. The increase in the TLAC ratio was due to the same factors described for the Total capital ratio as well as to the net TLAC instrument issuances that meet the eligibility criteria during the period. The decrease in the TLAC leverage ratio was due to the same factors as those provided for the leverage ratio, partly offset by the net TLAC instrument issuances.

During the quarter and six-month period ended April 30, 2023, the Bank was in compliance with all of OSFI's regulatory capital, leverage, and TLAC requirements.

Regulatory Capital(1), Leverage Ratio(1) and TLAC(2)

(millions of Canadian dollars)	As at April 30, 2023	As at October 31, 2022
Capital		
CET1	15,892	14,818
Tier 1	19,037	17,961
Total	20,110	19,727
Risk-weighted assets	119,111	116,840
Total exposure	448,584	401,780
Capital ratios		
CET1	13.3 %	12.7 %
Tier 1	16.0 %	15.4 %
Total	16.9 %	16.9 %
Leverage ratio	4.2 %	4.5 %
Available TLAC	34,886	32,351
TLAC ratio	29.3 %	27.7 %
TLAC leverage ratio	7.8 %	8.1 %

(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 Guideline* and *Leverage Requirements Guideline*. The calculation of the figures as at October 31, 2022 had included the transitional measure applicable to expected credit loss provisioning and the temporary measure regarding the exclusion of central bank reserves implemented by OSFI in response to the COVID-19 pandemic. These provisions ceased to apply on November 1, 2022 and April 1, 2023, respectively.

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

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 that is 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 also 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.

Despite the exercise of stringent risk management and existing mitigation measures, 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 65 to 105 of the *2022 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.

Since March 2, 2022, the Bank of Canada raised its policy rate eight times; the rate has thus risen from 0.25% to 4.50% in less than a year. This rapid increase in rates, undertaken primarily to counter inflation in Canada, is putting pressure on the ability of borrowers to make payments, notably borrowers who have variable-rate mortgages or for whom the mortgage term is up for renewal. Since March 8, 2023, the Bank of Canada has held its policy rate at 4.50% and announced that it would continue monitoring economic movements and the consequences of fast-rising interest rates.

Regulatory Developments

The Bank closely monitors regulatory developments and participates actively in various consultative processes. For additional information about the regulatory context on October 31, 2022, see pages 77 and 78 of the Risk Management section of the *2022 Annual Report*. In addition, since November 1, 2022, the below-described regulatory developments should also be considered.

On December 15, 2022, 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 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 January 1, 2023, the *Prohibition on the Purchase of Residential Property by Non-Canadians Act* came into effect. This purpose of this law, which will be in effect until January 1, 2025, is to help Canadians access the property market and to reduce speculative purchasing that risks raising the prices of properties in some already overheated markets. On March 27, 2023, the Act was amended to relax rules and conditions permitting non-Canadians who want to live in Canada to purchase a residential property.

In January 2023, OSFI launched a public consultation on Guideline B-20 entitled *Residential Mortgage Underwriting Practices and Procedures Guideline,* starting with an initial consultation on debt servicing measures in order to mitigate the risk arising from the high debt levels of consumers. In follow-up to the public consultation, an industry response coordinated by the Canadian Bankers Association was provided to OSFI in April 2023.

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

Maximum Credit Risk Exposure Under the Basel Asset Categories[1]

(millions of Canadian dollars)								As at April 30, 2023
	Drawn[2]	Undrawn commitments	Repo-style transactions[3]	Derivative financial instruments	Other off-balance-sheet items[4]	Total	Standardized Approach[5]	IRB Approach
Retail								
Residential mortgages	**73,973**	**8,984**	**–**	**–**	**–**	**82,957**	**12 %**	**88 %**
Qualifying revolving retail	**2,508**	**11,759**	**–**	**–**	**–**	**14,267**	**– %**	**100 %**
Other retail	**13,411**	**2,652**	**–**	**–**	**33**	**16,096**	**13 %**	**87 %**
	89,892	**23,395**	**–**	**–**	**33**	**113,320**		
Non-retail								
Corporate	**90,839**	**26,765**	**39,056**	**372**	**5,390**	**162,422**	**16 %**	**84 %**
Sovereign	**69,310**	**5,938**	**64,014**	**–**	**331**	**139,593**	**3 %**	**97 %**
Financial institutions	**6,789**	**957**	**90,381**	**1,228**	**1,525**	**100,880**	**16 %**	**84 %**
	166,938	**33,660**	**193,451**	**1,600**	**7,246**	**402,895**		
Trading portfolio	**–**	**–**	**–**	**12,063**	**–**	**12,063**	**2 %**	**98 %**
Securitization	**4,899**	**–**	**–**	**–**	**4,468**	**9,367**	**86 %**	**14 %**
Total – Gross credit risk	**261,729**	**57,055**	**193,451**	**13,663**	**11,747**	**537,645**	**12 %**	**88 %**
Standardized Approach[5]	**31,636**	**1,148**	**25,948**	**1,215**	**4,397**	**64,344**		
IRB Approach	**230,093**	**55,907**	**167,503**	**12,448**	**7,350**	**473,301**		
Total – Gross credit risk	**261,729**	**57,055**	**193,451**	**13,663**	**11,747**	**537,645**	**12 %**	**88 %**

(millions of Canadian dollars)								As at October 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	73,324	8,616	–	–	–	81,940	12 %	88 %
Qualifying revolving retail	2,483	6,920	–	–	–	9,403	– %	100 %
Other retail	17,526	2,688	–	–	35	20,249	25 %	75 %
	93,333	18,224	–	–	35	111,592		
Non-retail								
Corporate	81,763	29,811	36,194	322	5,538	153,628	13 %	87 %
Sovereign	56,253	5,821	68,906	–	326	131,306	2 %	98 %
Financial institutions	7,200	166	76,856	1,150	754	86,126	19 %	81 %
	145,216	35,798	181,956	1,472	6,618	371,060		
Trading portfolio	–	–	–	13,662	–	13,662	2 %	98 %
Securitization	4,409	–	–	–	4,373	8,782	80 %	20 %
Total – Gross credit risk	242,958	54,022	181,956	15,134	11,026	505,096	12 %	88 %
Standardized Approach[5]	30,704	311	24,783	1,308	4,610	61,716		
AIRB Approach	212,254	53,711	157,173	13,826	6,416	443,380		
Total – Gross credit risk	242,958	54,022	181,956	15,134	11,026	505,096	12 %	88 %

(1) See the Financial Reporting Method section on pages 4 to 9 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 an obligor 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 – Second Quarter 2023* and in *Supplementary Regulatory Capital and Pillar 3 Disclosure – Second Quarter 2023,* 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. In recent years, as a result of the COVID-19 pandemic and its impact on global and local economies, the Bank has been operating in a volatile environment. Adding to this uncertainty is the Russia-Ukraine war, which is affecting global financial and economic markets and exacerbating economic conditions as well as such issues as rising inflation, higher interest rates, and a disrupted global supply chain.

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 April 30, 2023
		Market risk measures			
	Balance sheet	Trading(1)	Non-trading(2)	Not subject to market risk	Non-traded risk primary risk sensitivity
Assets					
Cash and deposits with financial institutions	42,501	651	22,976	18,874	Interest rate(3)
Securities					
At fair value through profit or loss	93,111	91,666	1,445	–	Interest rate(3) and equity
At fair value through other comprehensive income	9,712	–	9,712	–	Interest rate(3) and equity(4)
At amortized cost	14,099	–	14,099	–	Interest rate(3)
Securities purchased under reverse repurchase agreements and securities borrowed	16,827	–	16,827	–	Interest rate(3)(5)
Loans and acceptances, net of allowances	215,764	11,167	204,597	–	Interest rate(3)
Derivative financial instruments	14,058	12,718	1,340	–	Interest rate and exchange rate
Defined benefit asset	470	–	470	–	Other
Other	11,142	427	–	10,715	
	417,684	116,629	271,466	29,589	
Liabilities					
Deposits	281,514	18,617	262,897	–	Interest rate(3)
Acceptances	6,567	–	6,567	–	Interest rate(3)
Obligations related to securities sold short	18,721	18,721	–	–	
Obligations related to securities sold under repurchase agreements and securities loaned	38,057	–	38,057	–	Interest rate(3)(5)
Derivative financial instruments	16,865	16,540	325	–	Interest rate and exchange rate
Liabilities related to transferred receivables	25,982	9,958	16,024	–	Interest rate(3)
Defined benefit liability	116	–	116	–	Other
Other	6,493	–	77	6,416	Interest rate(3)
Subordinated debt	748	–	748	–	Interest rate(3)
	395,063	63,836	324,811	6,416	

(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 *2022 Annual Report* that shows the VaR distribution of the trading portfolios by risk category and their diversification effect as well as total trading 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 *2022 Annual Report* that shows the VaR distribution of the trading portfolios by risk category and their diversification effect as well as total trading 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, 2022

		Market risk measures			
	Balance sheet	Trading[1]	Non-trading[2]	Not subject to market risk	Non-traded risk primary risk sensitivity
Assets					
Cash and deposits with financial institutions	31,870	837	20,269	10,764	Interest rate[3]
Securities					
At fair value through profit or loss	87,375	85,805	1,570	–	Interest rate[3] and equity[4]
At fair value through other comprehensive income	8,828	–	8,828	–	Interest rate[3] and equity[5]
Amortized cost	13,516	–	13,516	–	Interest rate[3]
Securities purchased under reverse repurchase agreements and securities borrowed	26,486	–	26,486	–	Interest rate[3][6]
Loans and acceptances, net of allowances	206,744	9,914	196,830	–	Interest rate[3]
Derivative financial instruments	18,547	16,968	1,579	–	Interest rate[7] and exchange rate[7]
Defined benefit asset	498	–	498	–	Other[8]
Other	9,876	405	–	9,471	
	403,740	113,929	269,576	20,235	
Liabilities					
Deposits	266,394	15,422	250,972	–	Interest rate[3]
Acceptances	6,541	–	6,541	–	Interest rate[3]
Obligations related to securities sold short	21,817	21,817	–	–	
Obligations related to securities sold under repurchase agreements and securities loaned	33,473	–	33,473	–	Interest rate[3][6]
Derivative financial instruments	19,632	18,909	723	–	Interest rate[7] and exchange rate[7]
Liabilities related to transferred receivables	26,277	9,927	16,350	–	Interest rate[3]
Defined benefit liability	111	–	111	–	Other[8]
Other	6,250	–	77	6,173	Interest rate[3]
Subordinated debt	1,499	–	1,499	–	Interest rate[3]
	381,994	66,075	309,746	6,173	

(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 *2022 Annual Report* that shows the VaR distribution of the trading portfolios by risk category and their diversification effect as well as total trading 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 *2022 Annual Report* that shows the VaR distribution of the trading portfolios by risk category and their diversification effect as well as total trading 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, 2022.
(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, 2022.
(8) For additional information, see Note 23 to the audited annual consolidated financial statements for the year ended October 31, 2022.

Trading Activities

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

VaR and SVaR of Trading Portfolios[1][2]

(millions of Canadian dollars)							Quarter ended		Six months ended	
				April 30, 2023		January 31, 2023		April 30, 2022	**April 30, 2023**	April 30, 2022
	Low	**High**	**Average**	**Period end**	Average	Period end	Average	Period end	**Average**	Average
Interest rate	**(5.4)**	**(8.6)**	**(6.5)**	**(6.3)**	(6.7)	(6.3)	(4.8)	(4.6)	**(6.6)**	(6.0)
Exchange rate	**(0.9)**	**(4.1)**	**(2.2)**	**(3.3)**	(2.3)	(2.0)	(1.5)	(1.5)	**(2.2)**	(1.5)
Equity	**(5.1)**	**(10.0)**	**(7.7)**	**(6.5)**	(7.1)	(5.8)	(6.9)	(8.5)	**(7.4)**	(6.5)
Commodity	**(0.8)**	**(1.5)**	**(1.1)**	**(1.4)**	(1.0)	(0.9)	(0.9)	(0.8)	**(1.1)**	(0.8)
Diversification effect[3]	**n.m.**	**n.m.**	**8.8**	**9.1**	8.5	7.4	6.6	6.7	**8.6**	7.7
Total trading VaR	**(6.7)**	**(12.3)**	**(8.7)**	**(8.4)**	(8.6)	(7.6)	(7.5)	(8.7)	**(8.7)**	(7.1)
Total trading SVaR	**(10.3)**	**(20.5)**	**(14.2)**	**(11.3)**	(18.3)	(11.6)	(12.7)	(18.5)	**(16.2)**	(10.9)

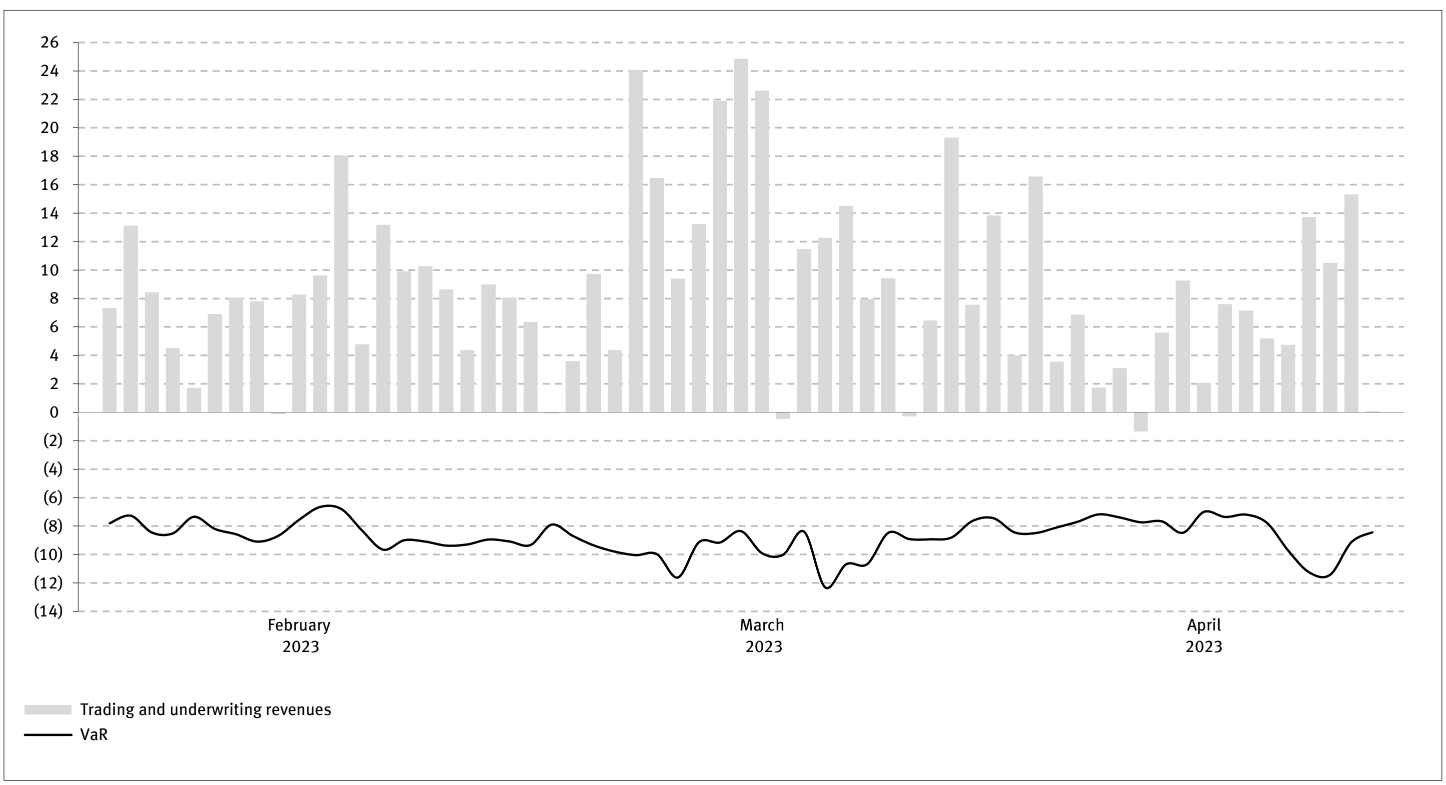
n.m. Computation of a diversification effect for the high and low is not meaningful, as highs and lows may occur on different days and be attributable to different types of risk.
(1) See the Glossary section on pages 49 to 52 for details on the composition of these measures.
(2) Amounts are presented 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.

The average total trading VaR remained stable at $8.7 million for the second quarter of 2023 compared to $8.6 million for the first quarter of 2023. The average total trading SVaR decreased from $18.3 million in the first quarter of 2023 to $14.2 million in the second quarter of 2023. This was driven by a decrease in interest rate and equity risk.

Daily Trading and Underwriting Revenues

The following chart shows daily trading and underwriting revenues and VaR. During the quarter ended April 30, 2023, daily trading and underwriting revenues were positive 92% of the days. In addition, one trading day was marked by daily trading and underwriting net losses of more than $1 million. None of these losses exceeded the VaR.

Quarter Ended April 30, 2023
(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 April 30, 2023			As at October 31, 2022		
	Canadian dollar	Other currencies	Total	Canadian dollar	Other currencies	Total
Impact on equity						
100-basis-point increase in the interest rate	(278)	7	(271)	(191)	(24)	(215)
100-basis-point decrease in the interest rate	232	4	236	179	27	206
Impact on net interest income						
100-basis-point increase in the interest rate	95	–	95	128	2	130
100-basis-point decrease in the interest rate	(123)	–	(123)	(141)	(2)	(143)

Liquidity and Funding Risk

Liquidity and funding risk is the risk that the Bank will be unable to honour daily cash and financial obligations without resorting to costly and untimely measures. Liquidity and funding risk arises 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. This brings optimal stability to the funding and reduces vulnerability to unpredictable events.

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, 2022, refer to page 91 of the Risk Management section in the *2022 Annual Report*. Since November 1, 2022, the below-described regulatory developments should also be considered.

On November 7, 2022, OSFI published a new 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 April 1, 2023, revisions to OSFI's *Liquidity Adequacy Requirements Guideline* came into effect. OSFI made changes that will improve the sensitivity to risk and that will ensure that financial institutions hold sufficient cash or other liquid investments to meet potential liquidity needs and to support the continued lending of credit, in particular during periods of financial stress.

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. The majority 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 April 30, 2023	As at October 31, 2022
	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	42,501	–	42,501	7,285	35,216	24,180
Securities						
Issued or guaranteed by the Canadian government, U.S. Treasury, other U.S. agencies and other foreign governments	33,200	33,258	66,458	48,242	18,216	25,894
Issued or guaranteed by Canadian provincial and municipal governments	13,078	6,563	19,641	13,442	6,199	8,421
Other debt securities	11,602	3,731	15,333	3,093	12,240	9,809
Equity securities	59,042	49,222	108,264	76,965	31,299	27,291
Loans						
Securities backed by insured residential mortgages	12,815	–	12,815	8,054	4,761	5,582
As at April 30, 2023	172,238	92,774	265,012	157,081	107,931	
As at October 31, 2022	153,384	92,257	245,641	144,464		101,177

(millions of Canadian dollars)	As at April 30, 2023	As at October 31, 2022
Unencumbered liquid assets by entity		
National Bank (parent)	59,418	52,544
Domestic subsidiaries	11,049	14,576
Foreign subsidiaries and branches	37,464	34,057
	107,931	101,177

(millions of Canadian dollars)	As at April 30, 2023	As at October 31, 2022
Unencumbered liquid assets by currency		
Canadian dollar	54,503	49,466
U.S. dollar	31,981	24,871
Other currencies	21,447	26,840
	107,931	101,177

Liquid Asset Portfolio(1) **– Average**(5)

(millions of Canadian dollars)						Quarter ended
					April 30, 2023	October 31, 2022
	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	42,428	–	42,428	7,717	34,711	29,994
Securities						
Issued or guaranteed by the Canadian government, U.S. Treasury, other U.S. agencies and other foreign governments	35,732	33,913	69,645	47,257	22,388	25,487
Issued or guaranteed by Canadian provincial and municipal governments	14,266	6,826	21,092	14,559	6,533	7,749
Other debt securities	11,601	3,746	15,347	3,202	12,145	10,316
Equity securities	56,637	48,739	105,376	77,491	27,885	24,386
Loans						
Securities backed by insured residential mortgages	12,369	–	12,369	7,589	4,780	4,639
	173,033	93,224	266,257	157,815	108,442	102,571

(1) See the Financial Reporting Method section on pages 4 to 9 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 April 30, 2023
		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	**416**	**6,869**	**35,216**	**–**	**42,501**	**1.8**
Securities	**48,968**	**–**	**67,954**	**–**	**116,922**	**11.7**
Securities purchased under reverse repurchase agreements and securities borrowed	**–**	**16,827**	**–**	**–**	**16,827**	**4.0**
Loans and acceptances, net of allowances	**40,279**	**–**	**4,761**	**170,724**	**215,764**	**9.6**
Derivative financial instruments	**–**	**–**	**–**	**14,058**	**14,058**	**–**
Investments in associates and joint ventures	**–**	**–**	**–**	**146**	**146**	**–**
Premises and equipment	**–**	**–**	**–**	**1,508**	**1,508**	**–**
Goodwill	**–**	**–**	**–**	**1,518**	**1,518**	**–**
Intangible assets	**–**	**–**	**–**	**1,333**	**1,333**	**–**
Other assets	**–**	**–**	**–**	**7,107**	**7,107**	**–**
	89,663	**23,696**	**107,931**	**196,394**	**417,684**	**27.1**

(millions of Canadian dollars)						As at October 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	295	7,395	24,180	–	31,870	1.9
Securities	42,972	–	66,747	–	109,719	10.6
Securities purchased under reverse repurchase agreements and securities borrowed	–	21,818	4,668	–	26,486	5.4
Loans and acceptances, net of allowances	37,426	–	5,582	163,736	206,744	9.3
Derivative financial instruments	–	–	–	18,547	18,547	–
Investments in associates and joint ventures	–	–	–	140	140	–
Premises and equipment	–	–	–	1,397	1,397	–
Goodwill	–	–	–	1,519	1,519	–
Intangible assets	–	–	–	1,360	1,360	–
Other assets	–	–	–	5,958	5,958	–
	80,693	29,213	101,177	192,657	403,740	27.2

(1) See the Financial Reporting Method section on pages 4 to 9 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 requires 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 are established by the BCBS and OSFI's *Liquidity Adequacy Requirements Guideline*.

The table on the following page provides average LCR data calculated using the daily figures in the quarter. For the quarter ended April 30, 2023, the Bank's average LCR was 155%, 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)			Quarter ended
		April 30, 2023	January 31, 2023
	Total unweighted value[3] (average)	Total weighted value[4] (average)	Total weighted value[4] (average)
High-quality liquid assets (HQLA)			
Total HQLA	n.a.	77,354	80,159
Cash outflows			
Retail deposits and deposits from small business customers, of which:	73,355	10,080	8,829
Stable deposits	27,822	835	850
Less stable deposits	45,533	9,245	7,979
Unsecured wholesale funding, of which:	99,230	54,145	55,111
Operational deposits (all counterparties) and deposits in networks of cooperative banks	29,578	7,202	7,387
Non-operational deposits (all counterparties)	58,272	35,563	35,961
Unsecured debt	11,380	11,380	11,763
Secured wholesale funding	n.a.	20,652	24,610
Additional requirements, of which:	58,769	14,784	14,746
Outflows related to derivative exposures and other collateral requirements	17,132	7,577	7,514
Outflows related to loss of funding on secured debt securities	1,289	1,289	1,662
Backstop liquidity and credit enhancement facilities and commitments to extend credit	40,348	5,918	5,570
Other contractual commitments to extend credit	1,809	763	790
Other contingent commitments to extend credit	122,635	1,848	1,809
Total cash outflows	n.a.	102,272	105,895
Cash inflows			
Secured lending (e.g., reverse repos)	107,759	27,060	27,683
Inflows from fully performing exposures	10,120	6,598	6,148
Other cash inflows	18,229	18,229	18,504
Total cash inflows	136,108	51,887	52,335
		Total adjusted value[5]	Total adjusted value[5]
Total HQLA		77,354	80,159
Total net cash outflows		50,385	53,560
Liquidity coverage ratio (%)[6]		155 %	151 %

n.a. Not applicable
(1) See the Financial Reporting Method section on pages 4 to 9 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 April 30, 2023, 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 April 30, 2023 and the preceding quarter was 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 would 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 April 30, 2023, the Bank's NSFR was 118%, 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 April 30, 2023	As at January 31, 2023
	Unweighted value by residual maturity					
	No maturity	6 months or less	Over 6 months to 1 year	Over 1 year	Weighted value(3)	Weighted value(3)
Available Stable Funding (ASF) Items						
Capital:	22,621	–	–	748	23,369	22,762
Regulatory capital	22,621	–	–	748	23,369	22,762
Other capital instruments	–	–	–	–	–	–
Retail deposits and deposits from small business customers:	66,680	17,273	8,080	20,334	100,027	97,081
Stable deposits	26,139	5,619	3,568	6,056	39,615	38,887
Less stable deposits	40,541	11,654	4,512	14,278	60,412	58,194
Wholesale funding:	60,269	87,235	11,845	44,679	100,371	98,104
Operational deposits	29,328	–	–	–	14,664	14,778
Other wholesale funding	30,941	87,235	11,845	44,679	85,707	83,326
Liabilities with matching interdependent assets(4)	–	4,027	2,091	19,864	–	–
Other liabilities(5):	22,046		8,624		650	674
NSFR derivative liabilities(5)	n.a.		5,430		n.a.	n.a.
All other liabilities and equity not included in the above categories	22,046	2,477	134	583	650	674
Total ASF	n.a.	n.a.	n.a.	n.a.	224,417	218,621
Required Stable Funding (RSF) Items						
Total NSFR high-quality liquid assets (HQLA)	n.a.	n.a.	n.a.	n.a.	9,407	8,610
Deposits held at other financial institutions for operational purposes	–	–	–	–	–	–
Performing loans and securities:	60,946	59,735	22,001	104,187	155,439	148,482
Performing loans to financial institutions secured by Level 1 HQLA	77	241	–	–	100	474
Performing loans to financial institutions secured by non-Level-1 HQLA and unsecured performing loans to financial institutions	7,109	27,822	1,806	200	5,975	5,828
Performing loans to non-financial corporate clients, loans to retail and small business customers, and loans to sovereigns, central banks and PSEs, of which:	28,093	23,765	14,088	40,380	76,138	71,676
With a risk weight of less than or equal to 35% under the Basel II Standardized Approach for credit risk	204	2,631	696	688	2,243	2,070
Performing residential mortgages, of which:	9,414	5,967	4,976	57,903	53,027	52,327
With a risk weight of less than or equal to 35% under the Basel II Standardized Approach for credit risk	9,414	5,967	4,976	57,903	53,027	52,327
Securities that are not in default and do not qualify as HQLA, including exchange-traded equities	16,253	1,940	1,131	5,704	20,199	18,177
Assets with matching interdependent liabilities(4)	–	4,027	2,091	19,864	–	–
Other assets(5):	3,616		31,670		21,160	19,847
Physical traded commodities, including gold	416	n.a.	n.a.	n.a.	416	416
Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs(5)	n.a.		10,628		9,034	8,168
NSFR derivative assets(5)	n.a.		1,660		–	–
NSFR derivative liabilities before deduction of the variation margin posted(5)	n.a.		10,780		539	551
All other assets not included in the above categories	3,200	6,731	933	938	11,171	10,712
Off-balance-sheet items(5)	n.a.		109,137		4,098	3,937
Total RSF	n.a.	n.a.	n.a.	n.a.	190,104	180,876
Net Stable Funding Ratio (%)	n.a.	n.a.	n.a.	n.a.	118 %	121 %

n.a. Not applicable
(1) See the Financial Reporting Method section on pages 4 to 9 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 ASF and RSF 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 market trends as well as possibilities for accessing less expensive and more flexible funding, considering both the risks and opportunities observed. The deposit strategy remains a priority for the Bank, which continues to prefer deposits to institutional funding.

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 April 30, 2023
	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]	426	–	–	8	434	–	–	434
Certificates of deposit and commercial paper[3]	3,441	4,627	3,455	1,745	13,268	–	–	13,268
Senior unsecured medium-term notes[4][5]	807	1,096	893	2,027	4,823	6,454	5,681	16,958
Senior unsecured structured notes	70	–	–	–	70	39	2,769	2,878
Covered bonds and asset-backed securities								
Mortgage securitization	–	1,521	2,497	2,105	6,123	4,965	14,894	25,982
Covered bonds	–	1,119	1,119	1,119	3,357	1,818	8,053	13,228
Securitization of credit card receivables	29	–	–	–	29	48	–	77
Subordinated liabilities[6]	–	–	–	–	–	–	748	748
	4,773	8,363	7,964	7,004	28,104	13,324	32,145	73,573
Secured funding	29	2,640	3,616	3,224	9,509	6,831	22,947	39,287
Unsecured funding	4,744	5,723	4,348	3,780	18,595	6,493	9,198	34,286
	4,773	8,363	7,964	7,004	28,104	13,324	32,145	73,573
As at October 31, 2022	6,122	8,390	8,393	7,113	30,018	9,338	32,752	72,108

(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-, two-, or three-notch credit rating downgrade.

(millions of Canadian dollars)			As at April 30, 2023
	One-notch downgrade	Two-notch downgrade	Three-notch downgrade
Derivatives[1]	21	61	65

(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 April 30, 2023 with comparative figures as at October 31, 2022. 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 April 30, 2023	
	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	15,625	80	793	409	255	–	–	–	25,339	42,501
Securities										
At fair value through profit or loss	1,213	2,982	1,558	1,172	1,900	3,569	11,201	11,042	58,474	93,111
At fair value through other comprehensive income	6	12	48	32	194	1,235	4,153	3,464	568	9,712
At amortized cost	1,044	587	762	223	261	5,102	4,764	1,356	–	14,099
	2,263	3,581	2,368	1,427	2,355	9,906	20,118	15,862	59,042	116,922
Securities purchased under reverse repurchase agreements and securities borrowed	4,822	1,937	502	410	337	996	–	–	7,823	16,827
Loans(1)										
Residential mortgage	1,431	1,783	2,387	1,997	1,883	11,845	52,923	8,640	552	83,441
Personal	677	752	1,046	877	873	4,884	16,793	5,113	14,240	45,255
Credit card									2,433	2,433
Business and government	20,150	4,369	3,393	3,813	2,814	6,414	13,125	2,483	22,577	79,138
Customers' liability under acceptances	5,861	706	–	–	–	–	–	–	–	6,567
Allowances for credit losses									(1,070)	(1,070)
	28,119	7,610	6,826	6,687	5,570	23,143	82,841	16,236	38,732	215,764
Other										
Derivative financial instruments	1,557	1,521	1,036	1,179	442	1,309	4,199	2,815	–	14,058
Investments in associates and joint ventures									146	146
Premises and equipment									1,508	1,508
Goodwill									1,518	1,518
Intangible assets									1,333	1,333
Other assets(1)	2,786	647	118	807	238	596	118	546	1,251	7,107
	4,343	2,168	1,154	1,986	680	1,905	4,317	3,361	5,756	25,670
	55,172	15,376	11,643	10,919	9,197	35,950	107,276	35,459	136,692	417,684

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

(millions of Canadian dollars)										As at April 30, 2023
	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	2,820	4,185	6,285	6,336	4,016	6,830	9,808	4,749	40,577	85,606
Business and government	36,531	13,747	9,534	4,469	4,700	8,894	14,641	4,593	94,646	191,755
Deposit-taking institutions	1,458	543	579	29	29	5	14	35	1,461	4,153
	40,809	18,475	16,398	10,834	8,745	15,729	24,463	9,377	136,684	281,514
Other										
Acceptances	5,861	706	–	–	–	–	–	–	–	6,567
Obligations related to securities sold short[3]	20	69	468	107	865	1,337	2,940	5,778	7,137	18,721
Obligations related to securities sold under repurchase agreements and securities loaned	22,010	2,870	1,016	3,387	–	–	–	–	8,774	38,057
Derivative financial instruments	1,955	2,311	777	1,282	537	2,209	4,478	3,316	–	16,865
Liabilities related to transferred receivables[4]	–	1,521	2,497	1,387	718	4,965	9,021	5,873	–	25,982
Securitization – Credit card[5]	29	–	–	–	–	48	–	–	–	77
Lease liabilities[5]	8	15	24	23	23	87	221	135	–	536
Other liabilities – Other items[1][5]	1,412	78	148	43	84	30	41	89	4,071	5,996
	31,295	7,570	4,930	6,229	2,227	8,676	16,701	15,191	19,982	112,801
Subordinated debt	–	–	–	–	–	–	–	748	–	748
Equity									22,621	22,621
	72,104	26,045	21,328	17,063	10,972	24,405	41,164	25,316	179,287	417,684
Off-balance-sheet commitments										
Letters of guarantee and documentary letters of credit	50	701	1,352	3,206	1,578	818	248	42	–	7,995
Credit card receivables[6]									9,556	9,556
Backstop liquidity and credit enhancement facilities[7]	15	–	–	15	5,552	–	–	–	3,400	8,982
Commitments to extend credit[8]	2,735	12,771	6,680	5,172	5,110	3,657	3,656	413	47,219	87,413
Obligations related to:										
Lease commitments[9]	1	1	1	1	2	6	9	5	–	26
Other contracts[10]	32	30	34	35	37	22	65	14	111	380

(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 $46.1 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 $0.1 billion in contractual commitments related to the head office building under construction.

(millions of Canadian dollars) As at October 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	13,084	142	311	18	685	–	–	–	17,630	31,870
Securities										
At fair value through profit or loss	1,527	6,450	5,405	2,267	2,337	3,369	8,634	10,661	46,725	87,375
At fair value through other comprehensive income	5	30	13	20	46	952	4,910	2,296	556	8,828
At amortized cost	602	196	1,876	1,032	95	2,840	5,802	1,073	–	13,516
	2,134	6,676	7,294	3,319	2,478	7,161	19,346	14,030	47,281	109,719
Securities purchased under reverse repurchase agreements and securities borrowed	12,489	1,231	890	–	409	1,044	–	–	10,423	26,486
Loans(1)										
Residential mortgage	1,155	1,124	1,899	2,716	2,364	8,910	53,335	8,059	567	80,129
Personal	423	449	878	1,208	1,036	3,701	17,792	5,085	14,751	45,323
Credit card									2,389	2,389
Business and government	19,980	3,491	3,971	3,586	2,604	6,167	11,452	2,985	19,081	73,317
Customers' liability under acceptances	5,967	554	20	–	–	–	–	–	–	6,541
Allowances for credit losses									(955)	(955)
	27,525	5,618	6,768	7,510	6,004	18,778	82,579	16,129	35,833	206,744
Other										
Derivative financial instruments	2,046	2,804	1,853	1,190	698	1,742	5,182	3,032	–	18,547
Investments in associates and joint ventures									140	140
Premises and equipment									1,397	1,397
Goodwill									1,519	1,519
Intangible assets									1,360	1,360
Other assets(1)	2,228	527	472	161	94	502	107	491	1,376	5,958
	4,274	3,331	2,325	1,351	792	2,244	5,289	3,523	5,792	28,921
	59,506	16,998	17,588	12,198	10,368	29,227	107,214	33,682	116,959	403,740

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

(millions of Canadian dollars)									As at October 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	1,482	1,493	2,955	6,013	6,141	6,418	7,942	4,252	42,115	78,811
Business and government	36,864	11,605	10,644	4,875	3,728	5,988	13,659	4,227	92,640	184,230
Deposit-taking institutions	724	624	54	122	30	–	7	36	1,756	3,353
	39,070	13,722	13,653	11,010	9,899	12,406	21,608	8,515	136,511	266,394
Other										
Acceptances	5,967	554	20	–	–	–	–	–	–	6,541
Obligations related to securities sold short(3)	428	394	634	74	920	1,493	3,948	6,386	7,540	21,817
Obligations related to securities sold under repurchase agreements and securities loaned	16,233	5,445	1,567	3,406	–	22	–	–	6,800	33,473
Derivative financial instruments	2,584	2,302	1,640	1,009	595	2,047	3,570	5,885	–	19,632
Liabilities related to transferred receivables(4)	–	2,672	422	1,329	2,288	4,558	9,612	5,396	–	26,277
Securitization – Credit card(5)	–	–	–	29	–	–	49	–	–	78
Lease liabilities(5)	8	16	23	23	24	87	219	152	–	552
Other liabilities – Other items(1)(5)	1,076	46	99	23	39	27	42	92	4,287	5,731
	26,296	11,429	4,405	5,893	3,866	8,234	17,440	17,911	18,627	114,101
Subordinated debt	–	–	–	–	–	–	–	1,499	–	1,499
Equity									21,746	21,746
	65,366	25,151	18,058	16,903	13,765	20,640	39,048	27,925	176,884	403,740
Off-balance-sheet commitments										
Letters of guarantee and documentary letters of credit	180	1,451	1,338	982	1,398	1,292	138	–	–	6,779
Credit card receivables(6)									9,337	9,337
Backstop liquidity and credit enhancement facilities(7)	–	15	5,552	15	–	–	–	–	3,125	8,707
Commitments to extend credit(8)	3,126	9,205	6,179	6,678	3,270	4,066	3,186	39	46,368	82,117
Obligations related to:										
Lease commitments(9)	1	1	2	2	2	6	9	8	–	31
Other contracts(10)	38	42	47	46	47	21	34	–	102	377

(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 $44.8 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.

Regulatory Compliance Risk

The transition related to the interest rate benchmark reform continues in many countries, including in Canada. On December 31, 2021, all LIBOR (London Interbank Offered Rates) rates in European, British, Swiss, and Japanese currency as well as the one-week and two-month USD LIBOR rates were discontinued, whereas the other USD LIBOR rates will be discontinued after June 30, 2023. In Canada, publication of the CDOR (Canadian Dollar Offered Rate) will be discontinued on June 28, 2024 and will be replaced by the risk-free rate CORRA (Canadian Overnight Repo Rate Average) and a term CORRA rate, which should be available by September 30, 2023. As at April 30, 2023, the transition project was progressing according to schedule. For additional information, see Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2022.

Social and Environmental Risk

Regulatory Developments
On March 7, 2023, OSFI published guideline B-15 *Climate Risk Management*, which sets out OSFI's expectations regarding climate risk. The guideline is OSFI's first supervisory framework dedicated to climate change and that addresses the impacts of climate change on managing the risks existing in the country's financial system. It covers two main topics: Governance and financial disclosures. The guideline will take effect for D-SIBs at the end of fiscal 2024. OSFI plans on revising this guideline to incorporate changes in practices and standards, in particular, when the International Sustainability Standards Board publishes IFRS S2 – *Climate-related Disclosures*.

Risk Disclosures

One of the purposes of the *2022 Annual Report,* the *Report to Shareholders – Second Quarter 2023,* 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.

				Pages
		2022 Annual Report	Report to Shareholders(1)	Supplementary Regulatory Capital and Pillar 3 Disclosure(1)
General				
1	Location of risk disclosures	13	46	
	Management's Discussion and Analysis	55 to 105, 117 and 119 to 121	23 to 45	
	Consolidated Financial Statements	Notes 1, 7, 16, 20, 23 and 29	Notes 5 and 11	
	Supplementary Financial Information			20 to 34(2)
	Supplementary Regulatory Capital and Pillar 3 Disclosure			5 to 54
2	Risk terminology and risk measures	65 to 105		
3	Top and emerging risks	26 and 70 to 75	10, 30 and 45	
4	New key regulatory ratios	56 to 59, 91 and 95 to 98	23 to 25, 35 and 37 to 40	
Risk governance and risk management				
5	Risk management organization, processes and key functions	65 to 85, 91 to 93 and 98		
6	Risk management culture	65 and 66		
7	Key risks by business segment, risk management and risk appetite	64 to 66 and 70		
8	Stress testing	55, 66, 79, 89, 90 and 93		
Capital adequacy and risk-weighted assets (RWA)				
9	Minimum Pillar 1 capital requirements	56 to 59	23 to 25	
10	Reconciliation of the accounting balance sheet to the regulatory balance sheet			8 to 14, 17 and 18
11	Movements in regulatory capital	62	27	
12	Capital planning	55 to 64		
13	RWA by business segment and by risk type	64		6 and 7
14	Capital requirements by risk and the RWA calculation method	75 to 79		6 and 7
15	Banking book credit risk			6 and 7
16	Movements in RWA by risk type	63	28	6 and 7
17	Assessment of credit risk model performance	69, 76 to 79 and 84		36
Liquidity				
18	Liquidity management and components of the liquidity buffer	91 to 99	35 to 40	
Funding				
19	Summary of encumbered and unencumbered assets	94 and 95	37	
20	Residual contractual maturities of balance sheet items and off-balance-sheet commitments	222 to 226	41 to 44	
21	Funding strategy and funding sources	98 to 100	40	
Market risk				
22	Linkage of market risk measures to balance sheet	86 and 87	32 and 33	
23	Market risk factors	84 to 90, 210 and 211	32 to 35	
24	VaR: Assumptions, limitations and validation procedures	88		
25	Stress tests, stressed VaR and backtesting	84 to 90		
Credit risk				
26	Credit risk exposures	83 and 171 to 182	31 and 68 to 79	19 to 46 and 20 to 34(2)
27	Policies for identifying impaired loans	80, 81, 145 and 146		
28	Movements in impaired loans and allowances for credit losses	117, 120, 121 and 171 to 182	68 to 79	25 to 34(2)
29	Counterparty credit risk relating to derivative transactions	80 to 82 and 190 to 193		37 to 46, 30 to 34(2)
30	Credit risk mitigation	78 to 81 and 168		21, 25 to 26 and 44 to 54
Other risks				
31	Other risks: Governance, measurement and management	73 to 75, 78 and 100 to 105		
32	Publicly known risk events	26, 100 and 101	10, 30 and 45	

(1) Second quarter 2023.
(2) These pages are included in the document entitled *Supplementary Financial Information – Second Quarter 2023*.

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 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 six-month period ended April 30, 2023 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, 2022.

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 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 106 to 111 of the *2022 Annual Report*.

The geopolitical landscape, rising inflation, higher interest rates, and the Russia-Ukraine war continue to create uncertainty. As a result, establishing reliable estimates and applying judgment continue to be substantially complex. Some of the Bank's accounting policies, such as measurement of expected credit losses (ECLs), require particularly complex judgments and estimates. See Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2022 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.

Financial Disclosure

During the second quarter of 2023, 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)	2023		2022(1)				2021(1)		2022	2021(1)
	Q2	Q1	Q4	Q3	Q2	Q1	Q4	Q3	Total	Total
Total revenues	**2,479**	2,582	2,334	2,413	2,439	2,466	2,211	2,254	9,652	8,927
Net income	**847**	881	738	826	889	930	769	833	3,383	3,140
Earnings per share ($)										
Basic	**2.41**	2.51	2.10	2.38	2.56	2.67	2.20	2.38	9.72	8.95
Diluted	**2.38**	2.49	2.08	2.35	2.53	2.64	2.17	2.35	9.61	8.85
Dividends per common share ($)	**0.97**	0.97	0.92	0.92	0.87	0.87	0.71	0.71	3.58	2.84
Return on common shareholders' equity (%)(2)	**17.5**	17.9	15.3	17.9	20.7	21.9	18.7	21.4	18.8	20.7
Total assets	**417,684**	418,342	403,740	386,833	369,570	366,680	355,621	353,873		
Net impaired loans excluding POCI loans(2)	**477**	476	479	301	293	287	283	312		
Per common share ($)										
Book value(2)	**57.65**	55.92	55.24	54.29	52.28	49.71	47.44	45.51		
Share price										
High	**103.45**	99.95	94.37	97.87	104.59	105.44	104.32	96.97		
Low	**92.67**	91.02	83.12	83.33	89.33	94.37	95.00	89.47		

(1) For the fiscal 2022 and 2021 comparatives figures, certain amounts have been adjusted to reflect a change in accounting policy related to cloud computing arrangements. For additional information, see Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2022.
(2) See the Glossary section on pages 49 to 52 for details on the composition of these measures.

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 administered by the financial institution, 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 is calculated by dividing net income attributable to common shareholders by the weighted average basic number of common shares outstanding.

Basis point (bps)
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 total CET1 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 or equity, commodity price 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 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.

Dividend payout ratio
The dividend payout ratio represents the dividends of common shares (per share amount) expressed as a percentage of 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
The efficiency ratio represents non-interest expenses expressed as a percentage of total revenues. It measures the efficiency of the Bank's operations.

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

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.

Gross impaired loans excluding POCI loans
Gross impaired loans excluding POCI loans are all loans classified in Stage 3 of the expected credit loss model excluding POCI loans.

Gross impaired loans excluding POCI loans as a percentage of total loans and acceptances
This measure represents gross impaired loans excluding POCI 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 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 as a percentage of the balance of loans and acceptances.

Net impaired loans excluding 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 from trading activities
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.

Net interest income, non-trading
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.

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

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.

Non-interest income related to trading activities
Non-interest income related to trading activities 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.

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 minimize undue losses to depositors and policyholders and, thereby, to contribute to public confidence in the Canadian financial system.

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

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

Provisioning rate excluding POCI loans
This measure represents the allowances for credit losses on impaired loans excluding POCI loans expressed as a percentage of gross impaired loans excluding POCI 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 is 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.

Provisions for credit losses on impaired loans excluding POCI loans as a percentage of average loans and acceptances or provisions for credit losses on impaired loans excluding POCI loans ratio
This measure represents the provisions for credit losses on impaired loans excluding POCI 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)
ROE represents net income attributable to common shareholders expressed as a percentage of average equity attributable to common shareholders. It is a general measure of the Bank's efficiency in using equity.

Risk-weighted assets
Assets are risk weighted according to the guidelines established by OSFI. In the Standardized calculation approach, risk factors are applied directly to the face value of certain assets in order to reflect comparable risk levels. In 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 incurs. In the Foundation Internal Ratings-Based (FIRB) Approach the Bank can use its own estimate of probability of default but must rely on OSFI estimates for loss given default and exposure at default risk parameters. 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 any voting rights relate solely to administrative tasks and the relevant activities are directed by means of contractual arrangements.

Taxable equivalent
Taxable equivalent basis is a calculation method that consists of grossing up certain revenues taxed at lower rates (notably dividends) by the income tax to a level that would make it comparable to revenues from taxable sources in Canada. 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 ratio 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. 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 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.

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

Interim Condensed Consolidated Financial Statements

(unaudited)

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Consolidated Balance Sheets

(unaudited) (millions of Canadian dollars)

	As at April 30, 2023	As at October 31, 2022
Assets		
Cash and deposits with financial institutions	**42,501**	31,870
Securities (Notes 2, 3 and 4)		
At fair value through profit or loss	**93,111**	87,375
At fair value through other comprehensive income	**9,712**	8,828
At amortized cost	**14,099**	13,516
	116,922	109,719
Securities purchased under reverse repurchase agreements and securities borrowed	**16,827**	26,486
Loans (Note 5)		
Residential mortgage	**83,441**	80,129
Personal	**45,255**	45,323
Credit card	**2,433**	2,389
Business and government	**79,138**	73,317
	210,267	201,158
Customers' liability under acceptances	**6,567**	6,541
Allowances for credit losses	**(1,070)**	(955)
	215,764	206,744
Other		
Derivative financial instruments	**14,058**	18,547
Investments in associates and joint ventures (Note 17)	**146**	140
Premises and equipment	**1,508**	1,397
Goodwill	**1,518**	1,519
Intangible assets	**1,333**	1,360
Other assets (Note 6)	**7,107**	5,958
	25,670	28,921
	417,684	403,740
Liabilities and equity		
Deposits (Notes 3 and 7)	**281,514**	266,394
Other		
Acceptances	**6,567**	6,541
Obligations related to securities sold short	**18,721**	21,817
Obligations related to securities sold under repurchase agreements and securities loaned	**38,057**	33,473
Derivative financial instruments	**16,865**	19,632
Liabilities related to transferred receivables (Note 3)	**25,982**	26,277
Other liabilities (Note 8)	**6,609**	6,361
	112,801	114,101
Subordinated debt (Note 9)	**748**	1,499
Equity		
Equity attributable to the Bank's shareholders and holders of other equity instruments (Notes 10 and 12)		
Preferred shares and other equity instruments	**3,150**	3,150
Common shares	**3,261**	3,196
Contributed surplus	**59**	56
Retained earnings	**15,943**	15,140
Accumulated other comprehensive income	**207**	202
	22,620	21,744
Non-controlling interests	**1**	2
	22,621	21,746
	417,684	403,740

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

Consolidated Statements of Income

(unaudited) (millions of Canadian dollars)

	Quarter ended April 30		Six months ended April 30	
	2023	2022[1]	**2023**	2022[1]
Interest income				
Loans	**3,026**	1,469	**5,929**	2,891
Securities at fair value through profit or loss	**358**	319	**783**	685
Securities at fair value through other comprehensive income	**68**	31	**127**	62
Securities at amortized cost	**119**	52	**231**	98
Deposits with financial institutions	**408**	40	**780**	63
	3,979	1,911	**7,850**	3,799
Interest expense				
Deposits	**2,365**	435	**4,461**	835
Liabilities related to transferred receivables	**157**	105	**299**	206
Subordinated debt	**10**	4	**25**	8
Other	**565**	54	**1,084**	105
	3,097	598	**5,869**	1,154
Net interest income[2]	**882**	1,313	**1,981**	2,645
Non-interest income				
Underwriting and advisory fees	**93**	84	**200**	162
Securities brokerage commissions	**47**	59	**94**	116
Mutual fund revenues	**141**	147	**284**	303
Investment management and trust service fees	**247**	253	**489**	509
Credit fees	**133**	119	**270**	244
Card revenues	**51**	44	**97**	91
Deposit and payment service charges	**73**	73	**146**	144
Trading revenues (losses)	**650**	121	**1,181**	243
Gains (losses) on non-trading securities, net	**30**	53	**41**	107
Insurance revenues, net	**45**	37	**83**	84
Foreign exchange revenues, other than trading	**38**	56	**94**	108
Share in the net income of associates and joint ventures	**4**	15	**7**	20
Other	**45**	65	**94**	129
	1,597	1,126	**3,080**	2,260
Total revenues	**2,479**	2,439	**5,061**	4,905
Non-interest expenses				
Compensation and employee benefits	**833**	808	**1,708**	1,625
Occupancy	**83**	76	**166**	152
Technology	**255**	232	**507**	463
Communications	**15**	16	**29**	30
Professional fees	**62**	57	**125**	120
Other	**126**	110	**242**	189
	1,374	1,299	**2,777**	2,579
Income before provisions for credit losses and income taxes	**1,105**	1,140	**2,284**	2,326
Provisions for credit losses (Note 5)	**85**	3	**171**	1
Income before income taxes	**1,020**	1,137	**2,113**	2,325
Income taxes	**173**	248	**385**	506
Net income	**847**	889	**1,728**	1,819
Net income attributable to				
Preferred shareholders and holders of other equity instruments	**35**	25	**70**	51
Common shareholders	**813**	865	**1,659**	1,769
Bank shareholders and holders of other equity instruments	**848**	890	**1,729**	1,820
Non-controlling interests	**(1)**	(1)	**(1)**	(1)
	847	889	**1,728**	1,819
Earnings per share *(dollars)* (Note 15)				
Basic	**2.41**	2.56	**4.92**	5.24
Diluted	**2.38**	2.53	**4.87**	5.17
Dividends per common share *(dollars)* (Note 10)	**0.97**	0.87	**1.94**	1.74

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

(1) For the quarter and six-month period ended April 30, 2022, certain amounts have been adjusted to reflect a change in accounting policy related to cloud computing arrangements. For additional information, see Note 1.
(2) *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, 2022.

Consolidated Statements of Comprehensive Income

(unaudited) (millions of Canadian dollars)

	Quarter ended April 30		Six months ended April 30	
	2023	2022[1]	**2023**	2022[1]
Net income	**847**	889	**1,728**	1,819
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	**109**	48	**(31)**	164
Impact of hedging net foreign currency translation gains (losses)	**(34)**	(17)	**6**	(51)
	75	31	**(25)**	113
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	**(40)**	(56)	**(28)**	(120)
Net (gains) losses on debt securities at fair value through other comprehensive income reclassified to net income	**48**	23	**52**	44
Change in allowances for credit losses on debt securities at fair value through other comprehensive income reclassified to net income	**1**	–	**–**	–
	9	(33)	**24**	(76)
Net change in cash flow hedges				
Net gains (losses) on derivative financial instruments designated as cash flow hedges	**5**	28	**(20)**	34
Net (gains) losses on designated derivative financial instruments reclassified to net income	**16**	6	**25**	16
	21	34	**5**	50
Share in the other comprehensive income of associates and joint ventures	**–**	(1)	**1**	(1)
Items that will not be subsequently reclassified to net income				
Remeasurements of pension plans and other post-employment benefit plans	**3**	76	**(56)**	172
Net gains (losses) on equity securities designated at fair value through other comprehensive income	**(4)**	(23)	**6**	(17)
Net fair value change attributable to the credit risk on financial liabilities designated at fair value through profit or loss	**(19)**	304	**(158)**	325
	(20)	357	**(208)**	480
Total other comprehensive income, net of income taxes	**85**	388	**(203)**	566
Comprehensive income	**932**	1,277	**1,525**	2,385
Comprehensive income attributable to				
Bank shareholders and holders of other equity instruments	**933**	1,278	**1,526**	2,386
Non-controlling interests	**(1)**	(1)	**(1)**	(1)
	932	1,277	**1,525**	2,385

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

(1) For the quarter and six-month period ended April 30, 2022, certain amounts have been adjusted to reflect a change in accounting policy related to cloud computing arrangements. For additional information, see Note 1.

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 April 30		Six months ended April 30	
	2023	2022	**2023**	2022
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	**(3)**	–	**2**	(5)
Impact of hedging net foreign currency translation gains (losses)	**(8)**	2	**–**	(5)
	(11)	2	**2**	(10)
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	**(15)**	(20)	**(11)**	(43)
Net (gains) losses on debt securities at fair value through other comprehensive income reclassified to net income	**18**	8	**20**	16
Change in allowances for credit losses on debt securities at fair value through other comprehensive income reclassified to net income	**–**	–	**–**	–
	3	(12)	**9**	(27)
Net change in cash flow hedges				
Net gains (losses) on derivative financial instruments designated as cash flow hedges	**2**	10	**(8)**	12
Net (gains) losses on designated derivative financial instruments reclassified to net income	**6**	2	**10**	5
	8	12	**2**	17
Share in the other comprehensive income of associates and joint ventures	**–**	(1)	**–**	(1)
Items that will not be subsequently reclassified to net income				
Remeasurements of pension plans and other post-employment benefit plans	**1**	27	**(12)**	62
Net gains (losses) on equity securities designated at fair value through other comprehensive income	**(1)**	(8)	**2**	(6)
Net fair value change attributable to the credit risk on financial liabilities designated at fair value through profit or loss	**(8)**	108	**(61)**	116
	(8)	127	**(71)**	172
	(8)	128	**(58)**	151

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

Consolidated Statements of Changes in Equity

(unaudited) (millions of Canadian dollars)

	Six months ended April 30	
	2023	2022[1]
Preferred shares and other equity instruments at beginning and at end (Note 10)	**3,150**	2,650
Common shares at beginning (Note 10)	**3,196**	3,160
Issuances of common shares pursuant to the Stock Option Plan	**60**	52
Repurchases of common shares for cancellation	**–**	(24)
Impact of shares purchased or sold for trading	**5**	8
Common shares at end	**3,261**	3,196
Contributed surplus at beginning	**56**	47
Stock option expense (Note 12)	**9**	8
Stock options exercised	**(6)**	(6)
Contributed surplus at end	**59**	49
Retained earnings at beginning	**15,140**	12,854
Net income attributable to the Bank's shareholders and holders of other equity instruments	**1,729**	1,820
Dividends on preferred shares and distributions on other equity instruments (Note 10)	**(80)**	(56)
Dividends on common shares (Note 10)	**(655)**	(587)
Premium paid on common shares repurchased for cancellation (Note 10)	**–**	(221)
Remeasurements of pension plans and other post-employment benefit plans	**(56)**	172
Net gains (losses) on equity securities designated at fair value through other comprehensive income	**6**	(17)
Net fair value change attributable to the credit risk on financial liabilities designated at fair value through profit or loss	**(158)**	325
Impact of a financial liability resulting from put options written to non-controlling interests	**7**	(2)
Other	**10**	5
Retained earnings at end	**15,943**	14,293
Accumulated other comprehensive income at beginning	**202**	(32)
Net foreign currency translation adjustments	**(25)**	113
Net change in unrealized gains (losses) on debt securities at fair value through other comprehensive income	**24**	(76)
Net change in gains (losses) on cash flow hedges	**5**	50
Share in the other comprehensive income of associates and joint ventures	**1**	(1)
Accumulated other comprehensive income at end	**207**	54
Equity attributable to the Bank's shareholders and holders of other equity instruments	**22,620**	20,242
Non-controlling interests at beginning	**2**	3
Net income attributable to non-controlling interests	**(1)**	(1)
Non-controlling interests at end	**1**	2
Equity	**22,621**	20,244

Accumulated Other Comprehensive Income

	As at April 30, 2023	As at April 30, 2022
Accumulated other comprehensive income		
Net foreign currency translation adjustments	**179**	(16)
Net unrealized gains (losses) on debt securities at fair value through other comprehensive income	**(10)**	(5)
Net gains (losses) on instruments designated as cash flow hedges	**36**	73
Share in the other comprehensive income of associates and joint ventures	**2**	2
	207	54

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

(1) For the six-month period ended April 30, 2022, certain amounts have been adjusted to reflect a change in accounting policy related to cloud computing arrangements. For additional information, see Note 1.

Consolidated Statements of Cash Flows

(unaudited) (millions of Canadian dollars)

	Six months ended April 30	
	2023	2022[1]
Cash flows from operating activities		
Net income	1,728	1,819
Adjustments for		
Provisions for credit losses	171	1
Amortization of premises and equipment, including right-of-use assets	105	101
Amortization of intangible assets	157	141
Deferred taxes	(58)	94
Losses (gains) on sales of non-trading securities, net	(41)	(107)
Share in the net income of associates and joint ventures	(7)	(20)
Stock option expense	9	8
Change in operating assets and liabilities		
Securities at fair value through profit or loss	(5,736)	6,723
Securities purchased under reverse repurchase agreements and securities borrowed	9,659	(4,225)
Loans and acceptances, net of securitization	(9,444)	(12,125)
Deposits	15,120	5,746
Obligations related to securities sold short	(3,096)	1,095
Obligations related to securities sold under repurchase agreements and securities loaned	4,584	6,999
Derivative financial instruments, net	1,722	(5,848)
Interest and dividends receivable and interest payable	170	25
Current tax assets and liabilities	(271)	(415)
Other items	(1,448)	(1,998)
	13,324	(1,986)
Cash flows from financing activities		
Issuances of common shares (including the impact of shares purchased for trading)	59	54
Repurchases of common shares for cancellation	–	(245)
Redemption of subordinated debt	(750)	–
Repayments of lease liabilities	(50)	(50)
Dividends paid on shares and distributions on other equity instruments	(732)	(643)
	(1,473)	(884)
Cash flows from investing activities		
Net change in investments in associates and joint ventures	–	119
Purchases of non-trading securities	(5,149)	(5,882)
Maturities of non-trading securities	1,473	912
Sales of non-trading securities	2,443	3,878
Net change in premises and equipment, excluding right-of-use assets	(181)	(156)
Net change in intangible assets	(130)	(178)
	(1,544)	(1,307)
Impact of currency rate movements on cash and cash equivalents	324	721
Increase (decrease) in cash and cash equivalents	10,631	(3,456)
Cash and cash equivalents at beginning	31,870	33,879
Cash and cash equivalents at end[2]	42,501	30,423
Supplementary information about cash flows from operating activities		
Interest paid	5,166	1,127
Interest and dividends received	7,317	3,798
Income taxes paid	428	786

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

(1) For the six-month period ended April 30, 2022, certain amounts have been adjusted to reflect a change in accounting policy related to cloud computing arrangements. For additional information, see Note 1.

(2) This item is the equivalent of Consolidated Balance Sheet item *Cash and deposits with financial institutions*. It includes an amount of $7.3 billion as at April 30, 2023 ($7.7 billion as at October 31, 2022) for which there are restrictions and of which $4.4 billion ($5.3 billion as at October 31, 2022) 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 May 30, 2023, 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 six-month period ended April 30, 2023.

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 as those described in Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2022. Since these interim consolidated financial statements do not include all of the annual financial statement disclosures required under IFRS, they should be read in conjunction with the audited annual consolidated financial statements and accompanying notes for the year ended October 31, 2022. 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, 2022.

Certain comparative amounts have been adjusted to reflect an accounting policy change related to cloud computing arrangements, as described in Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2022.

Judgment, Estimates and Assumptions

In preparing consolidated financial statements in accordance with IFRS, management must exercise judgment and make estimates and assumptions that affect the reporting date carrying amounts of assets and liabilities, net income, and related information. Some of the Bank's accounting policies, such as measurement of expected credit losses (ECLs), require particularly complex judgments and estimates. See Note 1 to the audited annual consolidated financial statements for the year ended October 31, 2022 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 geopolitical landscape, rising inflation, higher interest rates, and the Russia-Ukraine war continue to create uncertainty. As a result, establishing reliable estimates and applying judgment continue to be substantially complex. The uncertainty regarding certain key inputs used in measuring ECLs is described in Note 5 to these unaudited interim condensed consolidated financial statements.

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

(unaudited) (millions of Canadian dollars)

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 April 30, 2023
	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	–	–	–	–	42,501	42,501	42,501	42,501
Securities	92,256	855	9,144	568	14,099	13,741	116,922	116,564
Securities purchased under reverse repurchase agreements and securities borrowed	–	39	–	–	16,788	16,788	16,827	16,827
Loans and acceptances, net of allowances	11,567	–	–	–	204,197	202,275	215,764	213,842
Other								
Derivative financial instruments	14,058	–	–	–	–	–	14,058	14,058
Other assets	80	–	–	–	3,758	3,758	3,838	3,838
Financial liabilities								
Deposits(1)	–	18,625			262,889	262,273	281,514	280,898
Other								
Acceptances	–	–			6,567	6,567	6,567	6,567
Obligations related to securities sold short	18,721	–			–	–	18,721	18,721
Obligations related to securities sold under repurchase agreements and securities loaned	–	–			38,057	38,057	38,057	38,057
Derivative financial instruments	16,865	–			–	–	16,865	16,865
Liabilities related to transferred receivables	–	10,419			15,563	15,033	25,982	25,452
Other liabilities	–	–			3,109	3,106	3,109	3,106
Subordinated debt	–	–			748	757	748	757

(1) Includes embedded derivative financial instruments.

(unaudited) (millions of Canadian dollars)

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

As at October 31, 2022

	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	–	–	–	–	31,870	31,870	31,870	31,870
Securities	86,338	1,037	8,272	556	13,516	13,007	109,719	109,210
Securities purchased under reverse repurchase agreements and securities borrowed	–	–	–	–	26,486	26,486	26,486	26,486
Loans and acceptances, net of allowances	10,516	–	–	–	196,228	190,955	206,744	201,471
Other								
Derivative financial instruments	18,547	–	–	–	–	–	18,547	18,547
Other assets	87	–	–	–	3,221	3,221	3,308	3,308
Financial liabilities								
Deposits(1)	–	15,355			251,039	249,937	266,394	265,292
Other								
Acceptances	–	–			6,541	6,541	6,541	6,541
Obligations related to securities sold short	21,817	–			–	–	21,817	21,817
Obligations related to securities sold under repurchase agreements and securities loaned	–	–			33,473	33,473	33,473	33,473
Derivative financial instruments	19,632	–			–	–	19,632	19,632
Liabilities related to transferred receivables	–	11,352			14,925	14,137	26,277	25,489
Other liabilities	–	–			2,632	2,627	2,632	2,627
Subordinated debt	–	–			1,499	1,478	1,499	1,478

(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 April 30, 2023 and may change in the future. Furthermore, there may be measurement 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, 2022. 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.

(unaudited) (millions of Canadian dollars)

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, 2022.

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 April 30, 2023, $1 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 ($21 million in securities classified as at fair value through profit or loss during the quarter ended April 30, 2022). Also, during the quarter ended April 30, 2023, $2 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 ($3 million in securities classified as at fair value through profit or loss during the quarter ended April 30, 2022). During the six-month periods ended April 30, 2023 and 2022, financial instruments were transferred to (or from) Level 3 due to changes in the availability of observable market inputs as a result of 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 April 30, 2023
	Level 1	Level 2	Level 3	Total financial assets/liabilities at fair value
Financial assets				
Securities				
At fair value through profit or loss				
Securities issued or guaranteed by				
Canadian government	4,389	10,211	–	14,600
Canadian provincial and municipal governments	–	8,731	–	8,731
U.S. Treasury, other U.S. agencies and other foreign governments	3,997	3,319	–	7,316
Other debt securities	–	3,911	79	3,990
Equity securities	57,525	524	425	58,474
	65,911	26,696	504	93,111
At fair value through other comprehensive income				
Securities issued or guaranteed by				
Canadian government	81	4,008	–	4,089
Canadian provincial and municipal governments	–	2,457	–	2,457
U.S. Treasury, other U.S. agencies and other foreign governments	805	215	–	1,020
Other debt securities	–	1,578	–	1,578
Equity securities	–	237	331	568
	886	8,495	331	9,712
Securities purchased under reverse repurchase agreements and securities borrowed	–	39	–	39
Loans	–	11,330	237	11,567
Other				
Derivative financial instruments	260	13,786	12	14,058
Other assets – Other items	–	–	80	80
	67,057	60,346	1,164	128,567
Financial liabilities				
Deposits(1)	–	18,639	–	18,639
Other				
Obligations related to securities sold short	13,365	5,356	–	18,721
Derivative financial instruments	413	16,439	13	16,865
Liabilities related to transferred receivables	–	10,419	–	10,419
	13,778	50,853	13	64,644

(1) The amounts include the fair value of embedded derivative financial instruments in deposits.

(unaudited) (millions of Canadian dollars)

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

As at October 31, 2022				
	Level 1	Level 2	Level 3	Total financial assets/liabilities at fair value
Financial assets				
Securities				
At fair value through profit or loss				
Securities issued or guaranteed by				
Canadian government	4,736	8,186	–	12,922
Canadian provincial and municipal governments	–	9,260	–	9,260
U.S. Treasury, other U.S. agencies and other foreign governments	10,639	4,445	–	15,084
Other debt securities	–	3,324	60	3,384
Equity securities	45,805	504	416	46,725
	61,180	25,719	476	87,375
At fair value through other comprehensive income				
Securities issued or guaranteed by				
Canadian government	21	3,191	–	3,212
Canadian provincial and municipal governments	–	1,970	–	1,970
U.S. Treasury, other U.S. agencies and other foreign governments	1,687	191	–	1,878
Other debt securities	–	1,212	–	1,212
Equity securities	–	236	320	556
	1,708	6,800	320	8,828
Loans	–	10,272	244	10,516
Other				
Derivative financial instruments	342	18,204	1	18,547
Other assets – Other items	–	–	87	87
	63,230	60,995	1,128	125,353
Financial liabilities				
Deposits(1)	–	15,424	8	15,432
Other				
Obligations related to securities sold short	15,213	6,604	–	21,817
Derivative financial instruments	625	18,989	18	19,632
Liabilities related to transferred receivables	–	11,352	–	11,352
	15,838	52,369	26	68,233

(1) The amounts include the fair value of embedded derivative financial instruments in deposits.

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, 2022. For the quarter and six-month period ended April 30, 2023, 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 Level 3 financial instruments, 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, 2022. For the six-month period ended April 30, 2023, there were no significant changes in the sensitivity analyses of Level 3 financial instruments.

(unaudited) (millions of Canadian dollars)

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.

					Six months ended April 30, 2023
	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, 2022	476	320	331	(17)	(8)
Total realized and unrealized gains (losses) included in *Net income*[3]	1	–	4	4	–
Total realized and unrealized gains (losses) included in *Other comprehensive income*	–	11	–	–	–
Purchases	36	–	–	–	–
Sales	(9)	–	–	–	–
Issuances	–	–	12	–	–
Settlements and other	–	–	(30)	7	–
Financial instruments transferred into Level 3	–	–	–	2	
Financial instruments transferred out of Level 3	–	–	–	3	8
Fair value as at April 30, 2023	504	331	317	(1)	–
Change in unrealized gains and losses included in *Net income* with respect to financial assets and financial liabilities held as at April 30, 2023[4]	13	–	4	4	–

					Six months ended April 30, 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 *Net income*[5]	22	–	(20)	(6)	2
Total realized and unrealized gains (losses) included in *Other comprehensive income*	–	6	–	–	–
Purchases	31	7	71	–	–
Sales	(26)	–	–	–	–
Issuances	–	–	10	–	–
Settlements and other	–	–	7	(4)	–
Financial instruments transferred into Level 3	–	–	1	1	(3)
Financial instruments transferred out of Level 3	(12)	–	–	–	–
Fair value as at April 30, 2022	486	319	366	(7)	(1)
Change in unrealized gains and losses included in *Net income* with respect to financial assets and financial liabilities held as at April 30, 2022[6]	15	12	(20)	(6)	2

(1) The derivative financial instruments include assets and liabilities presented on a net basis.
(2) The amounts include the fair value of embedded derivative financial instruments in deposits.
(3) Total gains (losses) included in *Non-interest income* was a gain of $9 million.
(4) Total unrealized gains (losses) included in *Non-interest income* was an unrealized gain of $21 million.
(5) Total gains (losses) included in *Non-interest income* was a loss of $2 million.
(6) Total unrealized gains (losses) included in *Non-interest income* was an unrealized gain of $3 million.

(unaudited) (millions of Canadian dollars)

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, 2022. 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 certain securities, certain securities purchased under reverse repurchase agreements, and certain liabilities related to transferred receivables at fair value through profit or loss. 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, an observed discount rate for similar securities that reflects the Bank's credit spread and, then, 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 April 30, 2023	**Unrealized gains (losses) for the quarter ended April 30, 2023**	**Unrealized gains (losses) for the six months ended April 30, 2023**	**Unrealized gains (losses) since the initial recognition of the instrument**
Financial assets designated at fair value through profit or loss				
Securities	**855**	**3**	**10**	**3**
Securities purchased under reverse repurchase agreements	**39**	**–**	**–**	**–**
	894	**3**	**10**	**3**
Financial liabilities designated at fair value through profit or loss				
Deposits(1)(2)	**18,625**	**66**	**(1,066)**	**2,071**
Liabilities related to transferred receivables	**10,419**	**(7)**	**(107)**	**410**
	29,044	**59**	**(1,173)**	**2,481**

	Carrying value as at April 30, 2022	Unrealized gains (losses) for the quarter ended April 30, 2022	Unrealized gains (losses) for the six months ended April 30, 2022	Unrealized gains (losses) since the initial recognition of the instrument
Financial assets designated at fair value through profit or loss				
Securities	1,164	(36)	(46)	(20)
Financial liabilities designated at fair value through profit or loss				
Deposits(1)(2)	13,735	1,526	1,675	1,601
Liabilities related to transferred receivables	10,324	273	325	351
	24,059	1,799	2,000	1,952

(1) For the quarter ended April 30, 2023, the change in the fair value of deposits designated at fair value through profit or loss attributable to credit risk, and recorded in *Other comprehensive income,* resulted in a loss of $27 million ($412 million gain for the quarter ended April 30, 2022). For the six-month period ended April 30, 2023, the corresponding change in this item resulted in a loss of $219 million ($441 million gain for the six-month period ended April 30, 2022).

(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.

(unaudited) (millions of Canadian dollars)

Note 4 – Securities

Credit Quality

As at April 30, 2023 and as at October 31, 2022, securities at fair value through other comprehensive income and securities at amortized cost were mainly 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.

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

				As at April 30, 2023
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Carrying value(1)
Securities issued or guaranteed by				
Canadian government	4,220	8	(139)	4,089
Canadian provincial and municipal governments	2,520	23	(86)	2,457
U.S. Treasury, other U.S. agencies and other foreign governments	1,054	8	(42)	1,020
Other debt securities	1,670	3	(95)	1,578
Equity securities	568	17	(17)	568
	10,032	59	(379)	9,712

				As at October 31, 2022
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Carrying value(1)
Securities issued or guaranteed by				
Canadian government	3,386	1	(175)	3,212
Canadian provincial and municipal governments	2,129	1	(160)	1,970
U.S. Treasury, other U.S. agencies and other foreign governments	2,022	–	(144)	1,878
Other debt securities	1,355	–	(143)	1,212
Equity securities	570	21	(35)	556
	9,462	23	(657)	8,828

(1) The allowances for credit losses on securities at fair value through other comprehensive income (excluding the equity securities), representing $2 million as at April 30, 2023 ($2 million as at October 31, 2022), 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 six-month period ended April 30, 2023, a dividend income amount of $12 million was recognized for these investments ($7 million for the six-month period ended April 30, 2022), including amounts of $1 million for investments that were sold during the six-month period ended April 30, 2023 ($1 million for investments that were sold during the six-month period ended April 30, 2022).

	Six months ended April 30, 2023			Six months ended April 30, 2022		
	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	320	236	556	306	311	617
Change in fair value	11	(3)	8	6	(29)	(23)
Designated at fair value through other comprehensive income	–	44	44	7	44	51
Sales(1)	–	(40)	(40)	–	(71)	(71)
Fair value at end	331	237	568	319	255	574

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

(unaudited) (millions of Canadian dollars)

Note 4 – Securities (cont.)

Securities at Amortized Cost

	As at April 30, 2023	As at October 31, 2022
Securities issued or guaranteed by		
Canadian government	5,630	5,737
Canadian provincial and municipal governments	1,890	1,826
U.S. Treasury, other U.S. agencies and other foreign governments	545	150
Other debt securities	6,042	5,810
Gross carrying value	14,107	13,523
Allowances for credit losses	8	7
Carrying value	14,099	13,516

Gains (Losses) on Disposals of Securities at Amortized Cost

During the six-month period ended April 30, 2023, the Bank did not dispose of any securities measured at amortized cost. During the six-month period ended April 30, 2022, the Bank had sold certain debt securities measured at amortized cost. The carrying value of these securities upon disposal was $287 million, and the Bank had recognized gains of $4 million 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.

Non-Impaired Loans
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.

Impaired Loans
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, 2022.

Credit Quality of Loans

The following tables present the gross carrying amounts of loans as at April 30, 2023 and as at October 31, 2022, 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 Internal Ratings-Based (IRB) categories, see the Internal Default Risk Ratings table on page 78 in the Credit Risk section of the *2022 Annual Report*.

(unaudited) (millions of Canadian dollars)

						As at April 30, 2023
	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	29,851	1	–	–	–	29,852
Good	16,937	140	–	–	–	17,077
Satisfactory	10,545	3,832	–	–	–	14,377
Special mention	359	744	–	–	–	1,103
Substandard	57	196	–	–	–	253
Default	–	–	53	–	–	53
IRB Approach	57,749	4,913	53	–	–	62,715
Standardized Approach	8,743	198	204	335	11,246	20,726
Gross carrying amount	66,492	5,111	257	335	11,246	83,441
Allowances for credit losses[2]	64	81	63	(67)	–	141
Carrying amount	66,428	5,030	194	402	11,246	83,300
Personal						
Excellent	21,692	20	–	–	–	21,712
Good	8,262	652	–	–	–	8,914
Satisfactory	5,985	1,797	–	–	–	7,782
Special mention	1,905	804	–	–	–	2,709
Substandard	27	208	–	–	–	235
Default	–	–	149	–	–	149
IRB Approach	37,871	3,481	149	–	–	41,501
Standardized Approach	3,575	80	44	55	–	3,754
Gross carrying amount	41,446	3,561	193	55	–	45,255
Allowances for credit losses[2]	79	110	83	(10)	–	262
Carrying amount	41,367	3,451	110	65	–	44,993
Credit card						
Excellent	629	–	–	–	–	629
Good	360	1	–	–	–	361
Satisfactory	701	59	–	–	–	760
Special mention	276	191	–	–	–	467
Substandard	37	79	–	–	–	116
Default	–	–	–	–	–	–
IRB Approach	2,003	330	–	–	–	2,333
Standardized Approach	100	–	–	–	–	100
Gross carrying amount	2,103	330	–	–	–	2,433
Allowances for credit losses[2]	33	101	–	–	–	134
Carrying amount	2,070	229	–	–	–	2,299
Business and government[3]						
Excellent	7,922	–	–	–	103	8,025
Good	27,987	1	–	–	53	28,041
Satisfactory	31,328	6,354	–	–	138	37,820
Special mention	150	1,697	–	–	–	1,847
Substandard	10	259	301	–	–	570
Default	–	–	43	–	–	43
IRB Approach	67,397	8,311	344	–	294	76,346
Standardized Approach	9,255	57	20	–	27	9,359
Gross carrying amount	76,652	8,368	364	–	321	85,705
Allowances for credit losses[2]	163	179	191	–	–	533
Carrying amount	76,489	8,189	173	–	321	85,172
Total loans and acceptances						
Gross carrying amount	186,693	17,370	814	390	11,567	216,834
Allowances for credit losses[2]	339	471	337	(77)	–	1,070
Carrying amount	186,354	16,899	477	467	11,567	215,764

(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.

(unaudited) (millions of Canadian dollars)

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

As at October 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	30,465	–	–	–	–	30,465
Good	16,351	12	–	–	–	16,363
Satisfactory	10,765	3,269	–	–	–	14,034
Special mention	609	394	–	–	–	1,003
Substandard	76	140	–	–	–	216
Default	–	–	49	–	–	49
AIRB Approach	58,266	3,815	49	–	–	62,130
Standardized Approach	7,266	179	211	384	9,959	17,999
Gross carrying amount	65,532	3,994	260	384	9,959	80,129
Allowances for credit losses(2)	53	80	61	(76)	–	118
Carrying amount	65,479	3,914	199	460	9,959	80,011
Personal						
Excellent	22,190	22	–	–	–	22,212
Good	8,792	479	–	–	–	9,271
Satisfactory	6,928	1,394	–	–	–	8,322
Special mention	358	775	–	–	–	1,133
Substandard	26	203	–	–	–	229
Default	–	–	130	–	–	130
AIRB Approach	38,294	2,873	130	–	–	41,297
Standardized Approach	3,837	78	36	75	–	4,026
Gross carrying amount	42,131	2,951	166	75	–	45,323
Allowances for credit losses(2)	67	113	75	(16)	–	239
Carrying amount	42,064	2,838	91	91	–	45,084
Credit card						
Excellent	600	–	–	–	–	600
Good	359	–	–	–	–	359
Satisfactory	689	51	–	–	–	740
Special mention	287	178	–	–	–	465
Substandard	37	71	–	–	–	108
Default	–	–	–	–	–	–
AIRB Approach	1,972	300	–	–	–	2,272
Standardized Approach	117	–	–	–	–	117
Gross carrying amount	2,089	300	–	–	–	2,389
Allowances for credit losses(2)	31	95	–	–	–	126
Carrying amount	2,058	205	–	–	–	2,263
Business and government(3)						
Excellent	6,140	2	–	–	147	6,289
Good	27,607	112	–	–	53	27,772
Satisfactory	26,567	8,803	–	–	145	35,515
Special mention	75	1,172	–	–	–	1,247
Substandard	41	272	–	–	–	313
Default	–	–	367	–	–	367
AIRB Approach	60,430	10,361	367	–	345	71,503
Standardized Approach	8,096	28	19	–	212	8,355
Gross carrying amount	68,526	10,389	386	–	557	79,858
Allowances for credit losses(2)	115	160	197	–	–	472
Carrying amount	68,411	10,229	189	–	557	79,386
Total loans and acceptances						
Gross carrying amount	178,278	17,634	812	459	10,516	207,699
Allowances for credit losses(2)	266	448	333	(92)	–	955
Carrying amount	178,012	17,186	479	551	10,516	206,744

(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.

(unaudited) (millions of Canadian dollars)

The following table presents the credit risk exposures of off-balance-sheet commitments as at April 30, 2023 and as at October 31, 2022 according to credit quality and ECL impairment stage.

	As at April 30, 2023				As at October 31, 2022			
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Off-balance-sheet commitments[1]								
Retail								
Excellent	15,821	14	–	15,835	15,292	13	–	15,305
Good	3,397	203	–	3,600	3,316	165	–	3,481
Satisfactory	1,224	209	–	1,433	1,170	180	–	1,350
Special mention	224	78	–	302	193	68	–	261
Substandard	17	17	–	34	15	15	–	30
Default	–	–	1	1	–	–	1	1
Non-retail								
Excellent	14,795	–	–	14,795	13,136	–	–	13,136
Good	19,544	–	–	19,544	18,723	24	–	18,747
Satisfactory	10,800	3,210	–	14,010	7,894	3,488	–	11,382
Special mention	15	277	–	292	12	246	–	258
Substandard	6	24	–	30	4	24	–	28
Default	–	–	1	1	–	–	18	18
IRB Approach	65,843	4,032	2	69,877	59,755	4,223	19	63,997
Standardized Approach	16,617	–	9	16,626	15,432	–	–	15,432
Total exposure	82,460	4,032	11	86,503	75,187	4,223	19	79,429
Allowances for credit losses	94	54	–	148	99	63	–	162
Total exposure, net of allowances	82,366	3,978	11	86,355	75,088	4,160	19	79,267

(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 April 30, 2023				As at October 31, 2022			
	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	70	94	24	13	106	105	23	23
61 to 90 days	41	41	13	18	38	30	11	9
Over 90 days[3]	–	–	27	–	–	–	22	–
	111	135	64	31	144	135	56	32

(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 April 30, 2023			As at October 31, 2022		
	Gross	Allowances for credit losses	Net	Gross	Allowances for credit losses	Net
Loans – Stage 3						
Residential mortgage	257	63	194	260	61	199
Personal	193	83	110	166	75	91
Credit card[1]	–	–	–	–	–	–
Business and government[2]	364	191	173	386	197	189
	814	337	477	812	333	479
Loans – POCI	390	(77)	467	459	(92)	551
	1,204	260	944	1,271	241	1,030

(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.

(unaudited) (millions of Canadian dollars)

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

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 April 30, 2023
	Allowances for credit losses as at January 31, 2023	Provisions for credit losses	Write-offs(1)	Disposals	Recoveries and other	Allowances for credit losses as at April 30, 2023
Balance sheet						
Cash and deposits with financial institutions(2)(3)	5	2	–	–	–	7
Securities(3)						
At fair value through other comprehensive income(4)	1	1	–	–	–	2
At amortized cost(2)	8	–	–	–	–	8
Securities purchased under reverse repurchase agreements and securities borrowed(2)(3)	–	–	–	–	–	–
Loans(5)						
Residential mortgage	135	6	–	–	–	141
Personal	257	21	(21)	–	5	262
Credit card	136	14	(20)	–	4	134
Business and government	432	63	(3)	–	3	495
Customers' liability under acceptances	47	(9)	–	–	–	38
	1,007	95	(44)	–	12	1,070
Other assets(2)(3)	–	–	–	–	–	–
Off-balance-sheet commitments(6)						
Letters of guarantee and documentary letters of credit	13	(2)	–	–	–	11
Undrawn commitments	142	(11)	–	–	–	131
Backstop liquidity and credit enhancement facilities	6	–	–	–	–	6
	161	(13)	–	–	–	148
	1,182	85	(44)	–	12	1,235

						Quarter ended April 30, 2022
	Allowances for credit losses as at January 31, 2022	Provisions for credit losses	Write-offs(1)	Disposals	Recoveries and other	Allowances for credit losses as at April 30, 2022
Balance sheet						
Cash and deposits with financial institutions(2)(3)	7	(2)	–	–	–	5
Securities(3)						
At fair value through other comprehensive income(4)	1	–	–	–	–	1
At amortized cost(2)	5	1	–	–	–	6
Securities purchased under reverse repurchase agreements and securities borrowed(2)(3)	–	–	–	–	–	–
Loans(5)						
Residential mortgage	80	1	(1)	–	1	81
Personal	212	11	(12)	–	4	215
Credit card	124	8	(15)	–	5	122
Business and government	451	10	(14)	–	1	448
Customers' liability under acceptances	61	(12)	–	–	–	49
	928	18	(42)	–	11	915
Other assets(2)(3)	–	–	–	–	–	–
Off-balance-sheet commitments(6)						
Letters of guarantee and documentary letters of credit	10	1	–	–	–	11
Undrawn commitments	130	(15)	–	–	–	115
Backstop liquidity and credit enhancement facilities	5	–	–	–	–	5
	145	(14)	–	–	–	131
	1,086	3	(42)	–	11	1,058

(1) The contractual amount outstanding on financial assets that were written off during the quarter ended April 30, 2023 and that are still subject to enforcement activity was $27 million ($25 million for the quarter ended April 30, 2022).
(2) These financial assets are presented net of the allowances for credit losses on the Consolidated Balance Sheet.
(3) As at April 30, 2023 and 2022, 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.

(unaudited) (millions of Canadian dollars)

	Six months ended April 30, 2023					
	Allowances for credit losses as at October 31, 2022	Provisions for credit losses	Write-offs(1)	Disposals	Recoveries and other	Allowances for credit losses as at April 30, 2023
Balance sheet						
Cash and deposits with financial institutions(2)(3)	5	2	–	–	–	7
Securities(3)						
At fair value through other comprehensive income(4)	2	–	–	–	–	2
At amortized cost(2)	7	1	–	–	–	8
Securities purchased under reverse repurchase agreements and securities borrowed(2)(3)	–	–	–	–	–	–
Loans(5)						
Residential mortgage	118	25	(1)	–	(1)	141
Personal	239	52	(37)	–	8	262
Credit card	126	39	(38)	–	7	134
Business and government	418	82	(8)	–	3	495
Customers' liability under acceptances	54	(16)	–	–	–	38
	955	182	(84)	–	17	1,070
Other assets(2)(3)	–	–	–	–	–	–
Off-balance-sheet commitments(6)						
Letters of guarantee and documentary letters of credit	13	(2)	–	–	–	11
Undrawn commitments	143	(12)	–	–	–	131
Backstop liquidity and credit enhancement facilities	6	–	–	–	–	6
	162	(14)	–	–	–	148
	1,131	171	(84)	–	17	1,235

	Six months ended April 30, 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 April 30, 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	3	–	–	–	6
Securities purchased under reverse repurchase agreements and securities borrowed(2)(3)	–	–	–	–	–	–
Loans(5)						
Residential mortgage	71	11	(2)	–	1	81
Personal	202	26	(23)	–	10	215
Credit card	122	21	(30)	–	9	122
Business and government	515	10	(81)	–	4	448
Customers' liability under acceptances	88	(39)	–	–	–	49
	998	29	(136)	–	24	915
Other assets(2)(3)	–	–	–	–	–	–
Off-balance-sheet commitments(6)						
Letters of guarantee and documentary letters of credit	13	(2)	–	–	–	11
Undrawn commitments	143	(28)	–	–	–	115
Backstop liquidity and credit enhancement facilities	6	(1)	–	–	–	5
	162	(31)	–	–	–	131
	1,169	1	(136)	–	24	1,058

(1) The contractual amount outstanding on financial assets that were written off during the six-month period ended April 30, 2023 and that are still subject to enforcement activity was $52 million ($47 million for the six-month period ended April 30, 2022).
(2) These financial assets are presented net of the allowances for credit losses on the Consolidated Balance Sheet.
(3) As at April 30, 2023 and 2022, 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.

(unaudited) (millions of Canadian dollars)

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

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 April 30, 2023					Quarter ended April 30, 2022				
	Allowances for credit losses on non-impaired loans		Allowances for credit losses on impaired loans			Allowances for credit losses on non-impaired loans		Allowances for credit losses on impaired loans		
	Stage 1	Stage 2	Stage 3	POCI[1]	Total	Stage 1	Stage 2	Stage 3	POCI[1]	Total
Residential mortgage										
Balance at beginning	62	84	60	(71)	135	40	63	34	(57)	80
Originations or purchases	3	–	–	–	3	4	–	–	–	4
Transfers[2]:										
to Stage 1	13	(11)	(2)	–	–	7	(6)	(1)	–	–
to Stage 2	(3)	9	(6)	–	–	(1)	1	–	–	–
to Stage 3	–	(6)	6	–	–	–	–	–	–	–
Net remeasurement of loss allowances[3]	(9)	9	5	5	10	(5)	(1)	6	(1)	(1)
Derecognitions[4]	(2)	(4)	(1)	–	(7)	(1)	(1)	–	–	(2)
Changes to models	–	–	–	–	–	–	–	–	–	–
Provisions for credit losses	2	(3)	2	5	6	4	(7)	5	(1)	1
Write-offs	–	–	–	–	–	–	–	(1)	–	(1)
Disposals	–	–	–	–	–	–	–	–	–	–
Recoveries	–	–	–	–	–	–	–	1	–	1
Foreign exchange movements and other	–	–	1	(1)	–	–	1	–	(1)	–
Balance at end	64	81	63	(67)	141	44	57	39	(59)	81
Includes:										
Amounts drawn	64	81	63	(67)	141	44	57	39	(59)	81
Undrawn commitments[5]	–	–	–	–	–	–	–	–	–	–
Personal										
Balance at beginning	75	121	79	(11)	264	70	111	63	(25)	219
Originations or purchases	7	–	–	–	7	12	–	–	–	12
Transfers[2]:										
to Stage 1	29	(28)	(1)	–	–	13	(12)	(1)	–	–
to Stage 2	(3)	5	(2)	–	–	(3)	4	(1)	–	–
to Stage 3	–	(14)	14	–	–	–	(7)	7	–	–
Net remeasurement of loss allowances[3]	(25)	35	11	1	22	(19)	16	5	3	5
Derecognitions[4]	(2)	(5)	(1)	–	(8)	(2)	(4)	–	–	(6)
Changes to models	–	–	–	–	–	–	–	–	–	–
Provisions for credit losses	6	(7)	21	1	21	1	(3)	10	3	11
Write-offs	–	–	(21)	–	(21)	–	–	(12)	–	(12)
Disposals	–	–	–	–	–	–	–	–	–	–
Recoveries	–	–	4	–	4	–	–	5	–	5
Foreign exchange movements and other	1	–	–	–	1	(1)	1	(1)	–	(1)
Balance at end	82	114	83	(10)	269	70	109	65	(22)	222
Includes:										
Amounts drawn	79	110	83	(10)	262	67	105	65	(22)	215
Undrawn commitments[5]	3	4	–	–	7	3	4	–	–	7

(1) No POCI loan was acquired during the quarter ended April 30, 2023 (the total amount of undiscounted initially expected credit losses on the POCI loans acquired during the quarter ended April 30, 2022 was $4 million). 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.

(unaudited) (millions of Canadian dollars)

	Quarter ended April 30, 2023					Quarter ended April 30, 2022				
	Allowances for credit losses on non-impaired loans		Allowances for credit losses on impaired loans			Allowances for credit losses on non-impaired loans		Allowances for credit losses on impaired loans		
	Stage 1	Stage 2	Stage 3	POCI[1]	Total	Stage 1	Stage 2	Stage 3	POCI[1]	Total
Credit card										
Balance at beginning	59	117	–	–	176	55	103	–	–	158
Originations or purchases	3	–	–	–	3	3	–	–	–	3
Transfers[2]:										
to Stage 1	22	(22)	–	–	–	21	(21)	–	–	–
to Stage 2	(4)	4	–	–	–	(4)	4	–	–	–
to Stage 3	–	(9)	9	–	–	–	(6)	6	–	–
Net remeasurement of loss allowances[3]	(22)	32	7	–	17	(20)	23	4	–	7
Derecognitions[4]	(1)	(1)	–	–	(2)	–	(1)	–	–	(1)
Changes to models	–	–	–	–	–	–	–	–	–	–
Provisions for credit losses	(2)	4	16	–	18	–	(1)	10	–	9
Write-offs	–	–	(20)	–	(20)	–	–	(15)	–	(15)
Disposals	–	–	–	–	–	–	–	–	–	–
Recoveries	–	–	4	–	4	–	–	5	–	5
Foreign exchange movements and other	–	–	–	–	–	–	–	–	–	–
Balance at end	57	121	–	–	178	55	102	–	–	157
Includes:										
Amounts drawn	33	101	–	–	134	33	89	–	–	122
Undrawn commitments[5]	24	20	–	–	44	22	13	–	–	35
Business and government[6]										
Balance at beginning	197	198	179	–	574	175	202	224	–	601
Originations or purchases	22	–	–	–	22	14	–	–	–	14
Transfers[2]:										
to Stage 1	15	(15)	–	–	–	12	(12)	–	–	–
to Stage 2	(5)	6	(1)	–	–	(4)	5	(1)	–	–
to Stage 3	–	(1)	1	–	–	–	–	–	–	–
Net remeasurement of loss allowances[3]	(5)	27	15	–	37	(22)	(2)	6	–	(18)
Derecognitions[4]	(5)	(11)	(2)	–	(18)	(9)	(3)	(2)	–	(14)
Changes to models	(1)	(1)	–	–	(2)	–	–	–	–	–
Provisions for credit losses	21	5	13	–	39	(9)	(12)	3	–	(18)
Write-offs	–	–	(3)	–	(3)	–	–	(14)	–	(14)
Disposals	–	–	–	–	–	–	–	–	–	–
Recoveries	–	–	2	–	2	–	–	1	–	1
Foreign exchange movements and other	–	1	–	–	1	–	–	–	–	–
Balance at end	218	204	191	–	613	166	190	214	–	570
Includes:										
Amounts drawn	163	179	191	–	533	115	168	214	–	497
Undrawn commitments[5]	55	25	–	–	80	51	22	–	–	73
Total allowances for credit losses at end[7]	421	520	337	(77)	1,201	335	458	318	(81)	1,030
Includes:										
Amounts drawn	339	471	337	(77)	1,070	259	419	318	(81)	915
Undrawn commitments[5]	82	49	–	–	131	76	39	–	–	115

(1) No POCI loan was acquired during the quarter ended April 30, 2023 (the total amount of undiscounted initially expected credit losses on the POCI loans acquired during the quarter ended April 30, 2022 was $4 million). 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.

(unaudited) (millions of Canadian dollars)

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

	Six months ended April 30, 2023					Six months ended April 30, 2022				
	Allowances for credit losses on non-impaired loans		Allowances for credit losses on impaired loans			Allowances for credit losses on non-impaired loans		Allowances for credit losses on impaired loans		
	Stage 1	Stage 2	Stage 3	POCI(1)	Total	Stage 1	Stage 2	Stage 3	POCI(1)	Total
Residential mortgage										
Balance at beginning	53	80	61	(76)	118	50	52	29	(60)	71
Originations or purchases	8	–	–	–	8	9	–	–	–	9
Transfers(2):										
to Stage 1	21	(18)	(3)	–	–	10	(9)	(1)	–	–
to Stage 2	(6)	18	(12)	–	–	(2)	2	–	–	–
to Stage 3	–	(14)	14	–	–	–	–	–	–	–
Net remeasurement of loss allowances(3)	(9)	21	8	8	28	(23)	13	12	3	5
Derecognitions(4)	(3)	(5)	(3)	–	(11)	(1)	(2)	–	–	(3)
Changes to models	–	–	–	–	–	–	–	–	–	–
Provisions for credit losses	11	2	4	8	25	(7)	4	11	3	11
Write-offs	–	–	(1)	–	(1)	–	–	(2)	–	(2)
Disposals	–	–	–	–	–	–	–	–	–	–
Recoveries	–	–	–	–	–	–	–	1	–	1
Foreign exchange movements and other	–	(1)	(1)	1	(1)	1	1	–	(2)	–
Balance at end	64	81	63	(67)	141	44	57	39	(59)	81
Includes:										
Amounts drawn	64	81	63	(67)	141	44	57	39	(59)	81
Undrawn commitments(5)	–	–	–	–	–	–	–	–	–	–
Personal										
Balance at beginning	70	117	75	(16)	246	73	103	63	(29)	210
Originations or purchases	17	–	–	–	17	24	–	–	–	24
Transfers(2):										
to Stage 1	48	(45)	(3)	–	–	31	(28)	(3)	–	–
to Stage 2	(7)	9	(2)	–	–	(6)	7	(1)	–	–
to Stage 3	–	(26)	26	–	–	–	(13)	13	–	–
Net remeasurement of loss allowances(3)	(43)	68	18	6	49	(45)	39	8	7	9
Derecognitions(4)	(4)	(9)	(2)	–	(15)	(5)	(8)	(1)	–	(14)
Changes to models	1	–	–	–	1	(2)	8	–	–	6
Provisions for credit losses	12	(3)	37	6	52	(3)	5	16	7	25
Write-offs	–	–	(37)	–	(37)	–	–	(23)	–	(23)
Disposals	–	–	–	–	–	–	–	–	–	–
Recoveries	–	–	9	–	9	–	–	10	–	10
Foreign exchange movements and other	–	–	(1)	–	(1)	–	1	(1)	–	–
Balance at end	82	114	83	(10)	269	70	109	65	(22)	222
Includes:										
Amounts drawn	79	110	83	(10)	262	67	105	65	(22)	215
Undrawn commitments(5)	3	4	–	–	7	3	4	–	–	7

(1) No POCI loan was acquired during the six-month period ended April 30, 2023 (the total amount of undiscounted initially expected credit losses on the POCI loans acquired during the six-month period ended April 30, 2022 was $9 million). 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.

(unaudited) (millions of Canadian dollars)

	Six months ended April 30, 2023					Six months ended April 30, 2022				
	Allowances for credit losses on non-impaired loans		Allowances for credit losses on impaired loans			Allowances for credit losses on non-impaired loans		Allowances for credit losses on impaired loans		
	Stage 1	Stage 2	Stage 3	POCI[1]	Total	Stage 1	Stage 2	Stage 3	POCI[1]	Total
Credit card										
Balance at beginning	53	112	–	–	165	57	101	–	–	158
Originations or purchases	5	–	–	–	5	6	–	–	–	6
Transfers[2]:										
to Stage 1	47	(47)	–	–	–	43	(43)	–	–	–
to Stage 2	(8)	8	–	–	–	(9)	9	–	–	–
to Stage 3	–	(16)	16	–	–	–	(11)	11	–	–
Net remeasurement of loss allowances[3]	(38)	65	15	–	42	(41)	47	10	–	16
Derecognitions[4]	(2)	(1)	–	–	(3)	(1)	(1)	–	–	(2)
Changes to models	–	–	–	–	–	–	–	–	–	–
Provisions for credit losses	4	9	31	–	44	(2)	1	21	–	20
Write-offs	–	–	(38)	–	(38)	–	–	(30)	–	(30)
Disposals	–	–	–	–	–	–	–	–	–	–
Recoveries	–	–	7	–	7	–	–	9	–	9
Foreign exchange movements and other	–	–	–	–	–	–	–	–	–	–
Balance at end	57	121	–	–	178	55	102	–	–	157
Includes:										
Amounts drawn	33	101	–	–	134	33	89	–	–	122
Undrawn commitments[5]	24	20	–	–	44	22	13	–	–	35
Business and government[6]										
Balance at beginning	177	195	197	–	569	177	238	287	–	702
Originations or purchases	46	–	–	–	46	36	–	–	–	36
Transfers[2]:										
to Stage 1	32	(32)	–	–	–	40	(40)	–	–	–
to Stage 2	(11)	14	(3)	–	–	(12)	14	(2)	–	–
to Stage 3	–	(2)	2	–	–	–	(1)	1	–	–
Net remeasurement of loss allowances[3]	(15)	48	5	–	38	(57)	(4)	7	–	(54)
Derecognitions[4]	(10)	(19)	(4)	–	(33)	(18)	(17)	(2)	–	(37)
Changes to models	(1)	(1)	–	–	(2)	–	–	–	–	–
Provisions for credit losses	41	8	–	–	49	(11)	(48)	4	–	(55)
Write-offs	–	–	(8)	–	(8)	–	–	(81)	–	(81)
Disposals	–	–	–	–	–	–	–	–	–	–
Recoveries	–	–	3	–	3	–	–	2	–	2
Foreign exchange movements and other	–	1	(1)	–	–	–	–	2	–	2
Balance at end	218	204	191	–	613	166	190	214	–	570
Includes:										
Amounts drawn	163	179	191	–	533	115	168	214	–	497
Undrawn commitments[5]	55	25	–	–	80	51	22	–	–	73
Total allowances for credit losses at end[7]	421	520	337	(77)	1,201	335	458	318	(81)	1,030
Includes:										
Amounts drawn	339	471	337	(77)	1,070	259	419	318	(81)	915
Undrawn commitments[5]	82	49	–	–	131	76	39	–	–	115

(1) No POCI loan was acquired during the six-month period ended April 30, 2023 (the total amount of undiscounted initially expected credit losses on the POCI loans acquired during the six-month period ended April 30, 2022 was $9 million). 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.

(unaudited) (millions of Canadian dollars)

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

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 April 30, 2023
	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]	(0.3) %	1.7 %	0.5 %	1.9 %	(5.1) %	2.6 %
Unemployment rate	5.8 %	6.3 %	5.5 %	5.5 %	7.3 %	6.9 %
Housing price index growth[2]	(6.6) %	1.4 %	(0.7) %	1.2 %	(13.9) %	0.3 %
BBB spread[3]	2.2 %	2.0 %	1.9 %	1.8 %	3.1 %	2.3 %
S&P/TSX growth[2][4]	1.2 %	2.0 %	5.6 %	2.6 %	(25.6) %	5.5 %
WTI oil price[5] *(US$ per barrel)*	71	69	84	80	43	52

						As at January 31, 2023
	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]	0.3 %	1.8 %	0.8 %	1.9 %	(5.1) %	2.6 %
Unemployment rate	5.8 %	6.2 %	5.5 %	5.6 %	7.3 %	6.8 %
Housing price index growth[2]	(9.6) %	1.3 %	(0.8) %	0.4 %	(13.9) %	0.3 %
BBB spread[3]	2.3 %	2.1 %	2.1 %	1.9 %	3.3 %	2.5 %
S&P/TSX growth[2][4]	4.2 %	2.0 %	5.6 %	2.6 %	(25.6) %	5.5 %
WTI oil price[5] *(US$ per barrel)*	77	75	92	87	46	57

						As at October 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]	0.6 %	1.7 %	1.1 %	1.6 %	(5.2) %	2.9 %
Unemployment rate	6.0 %	6.1 %	5.4 %	5.4 %	7.4 %	6.4 %
Housing price index growth[2]	(11.2) %	0.7 %	– %	0.2 %	(13.9) %	0.3 %
BBB spread[3]	2.4 %	2.1 %	2.0 %	1.9 %	3.4 %	2.6 %
S&P/TSX growth[2][4]	(4.3) %	2.4 %	5.1 %	2.6 %	(25.6) %	5.5 %
WTI oil price[5] *(US$ per barrel)*	78	77	102	97	44	51

(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.

(unaudited) (millions of Canadian dollars)

During the quarter ended April 30, 2023, the macroeconomic risks are similar to those of the previous quarter, with uncertainty remaining high.

Despite greater-than-anticipated resilience in global growth in early 2023, new concerns have emerged, in particular surrounding the U.S. and European banking systems, which could slow growth. The restrictive monetary policy ushered in by the major central banks in response to rising inflation, which is improving but still too high globally, suggests a cautious outlook. In the United States, negotiations over raising the debt ceiling is making investors nervous as the government could find itself short of liquidity during the summer. The U.S. Federal Reserve is pausing interest rate hikes but the underlying inflation and high wages do not suggest rate cuts before the last quarter of the year. Monetary policy that remains so restrictive for so long will translate, in our scenario, into three quarters of economic contraction starting in the fourth quarter. The Bank of Canada was able to announce a rate hike pause before the U.S. Federal Reserve given greater success against inflation but that may not prevent the Canadian economy from experiencing lethargy caused by the high interest rates. A stronger banking system, greater excess savings, and advantageous foreign exchange terms lead us to believe that Canada's economy might be more resilient than the U.S. economy in the coming quarters. After 12 months, the unemployment rate rises 1.2 percentage points to 6.2%. Housing prices decrease by 6.6% year over year. The S&P/TSX sits at 20,427 points after one year, and the price of oil hovers around US$66.

In the upside scenario, an easing of geopolitical tensions boosts confidence. Inflation comes under control as supply chains normalize, and the tight monetary policy does not inflict too much damage on the economy. Governments maintain a sizable fiscal stimulus in Canada and the United States, offsetting the tight monetary policy. Consumer spending is surprisingly high because of the excess savings amassed since the start of the pandemic. After one year, the unemployment rate is more favourable than the base scenario (five-tenths lower). Housing prices remain unchanged, the S&P/TSX is at 21,305 points after one year, and the price of oil hovers around US$84.

In the downside scenario, central bankers have underestimated the impact of their simultaneous tightening measures, and the global economy sinks into a recession, as a decrease in demand is reflected in reduced investment by businesses, which also carry out layoffs. Given budgetary constraints, governments cannot support households and businesses as they did during the pandemic. After 12 months, the economic contraction pushes the unemployment rate to 8.1%. Housing prices decrease considerably. The S&P/TSX sits at 15,015 points after one year, and the price of oil hovers around US$37.

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 April 30, 2023 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 April 30, 2023	**941**
Simulations	
100% upside scenario	**699**
100% base scenario	**773**
100% downside scenario	**1,183**

Note 6 – Other Assets

	As at April 30, 2023	As at October 31, 2022
Receivables, prepaid expenses and other items	**3,070**	2,591
Interest and dividends receivable	**1,590**	1,057
Due from clients, dealers and brokers	**631**	842
Defined benefit asset	**470**	498
Deferred tax assets	**450**	389
Current tax assets	**762**	471
Reinsurance assets	**6**	6
Insurance assets	**128**	104
	7,107	5,958

(unaudited) (millions of Canadian dollars)

Note 7 – Deposits

				As at April 30, 2023	As at October 31, 2022
	On demand[1]	After notice[2]	Fixed term[3]	Total	Total
Personal	4,591	35,986	45,029	85,606	78,811
Business and government	62,134	32,512	97,109	191,755	184,230
Deposit-taking institutions	1,340	121	2,692	4,153	3,353
	68,065	68,619	144,830	281,514	266,394

(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 other similar instruments.

The *Deposits – Business and government* item includes, among other items, covered bonds for which the balance was $13.2 billion as at April 30, 2023 ($10.4 billion as at October 31, 2022). During the six-month period ended April 30, 2023, the Bank issued 280 million Swiss francs and 1.0 billion euros in covered bonds (1.0 billion euros in covered bonds came to maturity, and the Bank issued 1.3 billion euros and US$1.5 billion in covered bonds during the six-month period ended April 30, 2022). For additional information on covered bonds, see Note 27 to the audited annual consolidated financial statements for the year ended October 31, 2022.

In addition, as at April 30, 2023, the *Deposits – Business and government* item also includes deposits of $15.4 billion ($12.8 billion as at October 31, 2022) 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 8 – Other Liabilities

	As at April 30, 2023	As at October 31, 2022
Accounts payable and accrued expenses	2,038	2,582
Subsidiaries' debts to third parties	268	156
Interest and dividends payable	1,769	1,063
Lease liabilities	536	552
Due to clients, dealers and brokers	495	730
Defined benefit liability	116	111
Allowances for credit losses – Off-balance-sheet commitments (Note 5)	148	162
Deferred tax liabilities	17	14
Current tax liabilities	87	67
Insurance liabilities	10	10
Other items[1][2][3]	1,125	914
	6,609	6,361

(1) As at April 30, 2023, *Other items* included $6 million in litigation provisions ($11 million as at October 31, 2022).
(2) As at April 30, 2023, *Other items* included $32 million in provisions for onerous contracts ($33 million as at October 31, 2022).
(3) As at April 30, 2023, *Other items* included the financial liability resulting from put options written to non-controlling interests of Flinks Technology Inc. (Flinks) for an amount of $26 million ($33 million as at October 31, 2022).

Note 9 – Subordinated Debt

Redemption of Subordinated Debt
On February 1, 2023, the Bank redeemed $750 million of medium-term notes maturing on February 1, 2028 at a price equal to their nominal value plus accrued interest.

(unaudited) (millions of Canadian dollars)

Note 10 – Share Capital and Other Equity Instruments

Shares and Other Equity Instruments Outstanding

	As at April 30, 2023		As at October 31, 2022	
	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
LRCN – Series 3	500,000	500	500,000	500
	1,500,000	1,500	1,500,000	1,500
Preferred shares and other equity instruments	67,500,000	3,150	67,500,000	3,150
Common shares at beginning of fiscal year	336,582,124	3,196	337,912,283	3,160
Issued pursuant to the Stock Option Plan	1,088,870	60	1,193,663	61
Repurchases of common shares for cancellation	–	–	(2,500,000)	(24)
Impact of shares purchased or sold for trading[2]	48,589	5	(18,295)	(1)
Other	–	–	(5,527)	–
Common shares at end of period	337,719,583	3,261	336,582,124	3,196

(1) Limited Recourse Capital Notes (LRCN).
(2) As at April 30, 2023, a total of 43,339 shares were sold short for trading, representing $5 million (5,250 shares were held for trading, representing a negligible amount as at October 31, 2022).

Dividends Declared and Distributions on Other Equity Instruments

	Six months ended April 30			
	2023		2022	
	Dividends or interest $	Dividends per share	Dividends or interest $	Dividends per share
First Preferred Shares				
Series 30	7	0.5031	7	0.5031
Series 32	6	0.4799	6	0.4799
Series 38	14	0.8784	9	0.5563
Series 40	7	0.5750	7	0.5750
Series 42	7	0.6188	7	0.6188
	41		36	
Other equity instruments				
LRCN – Series 1[1]	10		10	
LRCN – Series 2[2]	10		10	
LRCN – Series 3[3]	19		–	
	39		20	
Preferred shares and other equity instruments	80		56	
Common shares	655	1.9400	587	1.7400
	735		643	

(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.
(3) The LRCN – Series 3 bear interest at a fixed rate of 7.50% per annum.

Note 10 – Share Capital and Other Equity Instruments (cont.)

Repurchase of Common Shares

On December 12, 2022, the Bank began a normal course issuer bid to repurchase for cancellation up to 7,000,000 common shares (representing approximately 2.1% of its outstanding common shares) over the 12-month period ending on December 11, 2023. On December 10, 2021, the Bank had begun a normal course issuer bid to repurchase for cancellation up to 7,000,000 common shares (representing approximately 2% of its then outstanding common shares) over the 12-month period ended 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 six-month period ended April 30, 2023, the Bank did not repurchase any common shares. During the six-month period ended April 30, 2022, the Bank had repurchased 2,500,000 common shares for $245 million, which had reduced *Common share* capital by $24 million and *Retained earnings* by $221 million.

Note 11 – Capital Disclosure

The Bank and all other major Canadian banks have to maintain the following minimum capital ratios established by OSFI: a CET1 capital ratio of at least 11.0%, a Tier 1 capital ratio of at least 12.5%, and a Total capital ratio of at least 14.5%. All of these ratios include a capital conservation buffer of 2.5% established by the Basel Committee on Banking Supervision and OSFI, a 1.0% surcharge applicable solely to Domestic Systemically Important Banks (D-SIBs) and a 3.0% domestic stability buffer. On December 8, 2022, OSFI expanded the domestic stability buffer range, setting it at 0% to 4.0% instead of the previous range of 0% to 2.5%, and it announced that the buffer would rise from 2.5% to 3.0% effective February 1, 2023. The domestic stability buffer must consist 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 must provide a remediation plan to OSFI. Banks also have to meet the requirements of an updated capital output floor calculated under the Basel III revised Standardized Approach. If the capital requirement is less than 65.0% of the capital output floor requirement calculated using the Basel III revised Standardized Approach, the difference is added to the total risk-weighted assets. Lastly, OSFI requires D-SIBs to maintain a Basel III leverage ratio of at least 3.5%. Effective February 1, 2023, OSFI increased the leverage ratio minimum requirement by imposing a Tier 1 capital buffer of 0.5% applicable only to D-SIBs.

OSFI also requires D-SIBs to maintain a risk-based total loss-absorbing capacity (TLAC) ratio of at least 24.5% (including the domestic stability buffer) of risk-weighted assets and a TLAC leverage ratio of at least 7.25% (increased by 0.5% effective February 1, 2023). The purpose of TLAC is to ensure that a D-SIB has sufficient loss-absorbing capacity to support its internal recapitalization in the unlikely event it becomes non-viable.

In the second quarter of 2023, the Bank implemented OSFI's guidance relating to the Basel III reforms, notably:

- a revised Standardized Approach and Internal Ratings-Based (IRB) Approach to credit risk;
- a revised Standardized Approach for operational risk;
- a revised capital output floor;
- a revised Leverage Ratio Framework; and
- revised Pillar 3 disclosure requirements.

The Basel III reforms also affected the market risk and credit valuation adjustment (CVA) risk frameworks, which will be implemented in the first quarter of 2024.

During the quarter and six-month period ended April 30, 2023, the Bank was in compliance with all of OSFI's regulatory capital, leverage, and TLAC requirements.

(unaudited) (millions of Canadian dollars)

Regulatory Capital[1], Leverage Ratio[1] and TLAC[2]

	As at April 30, 2023	As at October 31, 2022
Capital		
CET1	**15,892**	14,818
Tier 1	**19,037**	17,961
Total	**20,110**	19,727
Risk-weighted assets	**119,111**	116,840
Total exposure	**448,584**	401,780
Capital ratios		
CET1	**13.3 %**	12.7 %
Tier 1	**16.0 %**	15.4 %
Total	**16.9 %**	16.9 %
Leverage ratio	**4.2 %**	4.5 %
Available TLAC	**34,886**	32,351
TLAC ratio	**29.3 %**	27.7 %
TLAC leverage ratio	**7.8 %**	8.1 %

(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 Guideline* and *Leverage Requirements Guideline*. The calculation of the figures as at October 31, 2022 had included the transitional measure applicable to expected credit loss provisioning and the temporary measure regarding the exclusion of central bank reserves implemented by OSFI in response to the COVID-19 pandemic. These provisions ceased to apply on November 1, 2022 and April 1, 2023, respectively.
(2) Available TLAC, the TLAC ratio, and the TLAC leverage ratio are calculated in accordance with OSFI's *Total Loss Absorbing Capacity Guideline*.

Note 12 – Share-Based Payments

Stock Option Plan
During the quarters ended April 30, 2023 and 2022, the Bank did not award any stock options. During the six-month period ended April 30, 2023, the Bank awarded 1,416,060 stock options (1,771,588 stock options during the six-month period ended April 30, 2022) with an average fair value of $14.76 per option ($13.24 in 2022).

As at April 30, 2023, there were 12,170,881 stock options outstanding (11,861,749 stock options as at October 31, 2022).

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.

	Six months ended April 30	
	2023	2022
Risk-free interest rate	**3.25%**	1.79%
Expected life of options	**7 years**	7 years
Expected volatility	**23.13%**	22.68%
Expected dividend yield	**4.23%**	3.88%

During the quarter ended April 30, 2023, a $4 million compensation expense was recorded for this plan ($4 million for the quarter ended April 30, 2022). During the six-month period ended April 30, 2023, a $9 million compensation expense was recorded for this plan ($8 million for the six-month period ended April 30, 2022).

(unaudited) (millions of Canadian dollars)

Note 13 – Employee Benefits – Pension Plans and Other Post-Employment Benefit Plans

The Bank offers pension plans that have a defined benefit component and a defined contribution component. The Bank also offers 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 April 30
	Pension plans		Other post-employment benefit plans	
	2023	2022	**2023**	2022
Current service cost	**23**	31	**–**	–
Interest expense (income), net	**(6)**	(5)	**1**	1
Administrative costs	**1**	1		
Expense of the defined benefit component	**18**	27	**1**	1
Expense of the defined contribution component	**3**			
Expense recognized in *Net income*	**21**	27	**1**	1
Remeasurements[1]				
Actuarial (gains) losses on defined benefit obligation	**32**	(725)	**1**	(19)
Return on plan assets[2]	**(37)**	641		
Remeasurements recognized in *Other comprehensive income*	**(5)**	(84)	**1**	(19)
	16	(57)	**2**	(18)

				Six months ended April 30
	Pension plans		Other post-employment benefit plans	
	2023	2022	**2023**	2022
Current service cost	**46**	62	**–**	–
Interest expense (income), net	**(12)**	(10)	**3**	2
Administrative costs	**2**	2		
Expense of the defined benefit component	**36**	54	**3**	2
Expense of the defined contribution component	**4**			
Expense recognized in *Net income*	**40**	54	**3**	2
Remeasurements[1]				
Actuarial (gains) losses on defined benefit obligation	**362**	(910)	**7**	(23)
Return on plan assets[2]	**(301)**	699		
Remeasurements recognized in *Other comprehensive income*	**61**	(211)	**7**	(23)
	101	(157)	**10**	(21)

(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 14 – Income Taxes

Notice of Assessment
In March 2023, the Bank was reassessed by the Canada Revenue Agency (CRA) for additional income tax and interest of approximately $90 million (including estimated provincial tax and interest) in respect of certain Canadian dividends received by the Bank during the 2018 taxation year.

In prior fiscal years, the Bank had been reassessed for additional income tax and interest of approximately $875 million (including provincial tax and interest) in respect of certain Canadian dividends received by the Bank during the 2012-2017 taxation years.

In the reassessments, the CRA alleges that the dividends were received as part of a "dividend rental arrangement".

The CRA may issue reassessments to the Bank for taxation years subsequent to 2018 in regard to certain activities similar to those that were the subject of the above-mentioned reassessments. The Bank remains confident that its tax position was appropriate and intends to vigorously defend its position. As a result, no amount has been recognized in the consolidated financial statements as at April 30, 2023.

Canadian Government's 2022 Tax Measures
On November 4, 2022, the Government of Canada introduced Bill C-32 – *An Act to implement certain provisions of the fall economic statement tabled in Parliament on November 3, 2022 and certain provisions of the budget tabled in Parliament on April 7, 2022* to implement tax measures applicable to certain entities of banking and life insurer groups, as presented in its April 7, 2022 budget. These tax measures include the Canada Recovery Dividend (CRD), which is a one-time, 15% tax on the fiscal 2021 and 2020 average taxable income above $1 billion, as well as a 1.5% increase in the statutory tax rate. On December 15, 2022, Bill C-32 received royal assent. Given that these tax measures were in effect at the financial reporting date, a $32 million tax expense for the CRD and an $8 million tax recovery for the tax rate increase, including the impact related to current and deferred taxes for fiscal 2022, were recognized in the consolidated financial statements as at April 30, 2023.

Proposed Legislation
In its March 28, 2023 budget, the Government of Canada proposed to introduce certain tax measures applicable to the Bank. The measures include the denial of the deduction in respect of dividends received after 2023 on shares that are mark-to-market property for tax purposes, the application of a 2% tax on the net value of equity repurchases occurring as of January 1, 2024, as well as the government's intention to implement the Pillar Two rules (global minimum tax) published by the Organization for Economic Co-operation and Development (OECD) for fiscal years beginning as of December 31, 2023. The proposed measures have not yet been included in a bill at the reporting date.

Note 15 – 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 April 30		Six months ended April 30	
	2023	2022[(1)]	**2023**	2022[(1)]
Basic earnings per share				
Net income attributable to the Bank's shareholders and holders of other equity instruments	**848**	890	**1,729**	1,820
Dividends on preferred shares and distributions on other equity instruments	**35**	25	**70**	51
Net income attributable to common shareholders	**813**	865	**1,659**	1,769
Weighted average basic number of common shares outstanding *(thousands)*	**337,497**	337,381	**337,241**	337,724
Basic earnings per share *(dollars)*	**2.41**	2.56	**4.92**	5.24
Diluted earnings per share				
Net income attributable to common shareholders	**813**	865	**1,659**	1,769
Weighted average basic number of common shares outstanding *(thousands)*	**337,497**	337,381	**337,241**	337,724
Adjustment to average number of common shares *(thousands)*				
Stock options[(2)]	**3,474**	4,037	**3,384**	4,126
Weighted average diluted number of common shares outstanding *(thousands)*	**340,971**	341,418	**340,625**	341,850
Diluted earnings per share *(dollars)*	**2.38**	2.53	**4.87**	5.17

(1) For the quarter and six-month period ended April 30, 2022, certain amounts have been adjusted to reflect a change in accounting policy related to cloud computing arrangements. For additional information, see Note 1.
(2) For the quarter and six-month period ended April 30, 2023, as 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 (no options were excluded from the diluted earnings per share calculation for the quarter and six-month period ended April 30, 2022).

Note 16 – 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, 2022. This presentation reflects a revision to the method used for the sectoral allocation of technology investment expenses, which are now immediately allocated to the various business segments, whereas certain expenses, notably costs incurred during the research phase of projects, had previously been recorded in the *Other* heading of segment results. This revision is consistent with the accounting policy change applied in fiscal 2022 related to cloud computing arrangements. For the quarter and six-month period ended April 30, 2022, certain amounts have been adjusted to reflect this accounting policy change (for additional information, see Note 1).

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 subsidiary; the activities of the ABA Bank 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, a fintech company specialized in financial data aggregation and distribution; certain specified items; and the unallocated portion of corporate units.

(unaudited) (millions of Canadian dollars)

Quarter ended April 30(1)

	Personal and Commercial		Wealth Management		Financial Markets		USSF&I		Other		Total	
	2023	2022	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022
Net interest income(2)	**802**	670	**190**	127	**(212)**	355	**269**	277	**(167)**	(116)	**882**	1,313
Non-interest income(2)	**298**	292	**427**	452	**884**	277	**16**	8	**(28)**	97	**1,597**	1,126
Total revenues	**1,100**	962	**617**	579	**672**	632	**285**	285	**(195)**	(19)	**2,479**	2,439
Non-interest expenses	**601**	552	**372**	357	**283**	258	**98**	88	**20**	44	**1,374**	1,299
Income before provisions for credit losses and income taxes	**499**	410	**245**	222	**389**	374	**187**	197	**(215)**	(63)	**1,105**	1,140
Provisions for credit losses	**37**	11	**–**	–	**19**	(16)	**26**	9	**3**	(1)	**85**	3
Income before income taxes (recovery)	**462**	399	**245**	222	**370**	390	**161**	188	**(218)**	(62)	**1,020**	1,137
Income taxes (recovery)(2)	**127**	106	**67**	59	**102**	103	**33**	36	**(156)**	(56)	**173**	248
Net income	**335**	293	**178**	163	**268**	287	**128**	152	**(62)**	(6)	**847**	889
Non-controlling interests	**–**	–	**–**	–	**–**	–	**–**	–	**(1)**	(1)	**(1)**	(1)
Net income attributable to the Bank's shareholders and holders of other equity instruments	**335**	293	**178**	163	**268**	287	**128**	152	**(61)**	(5)	**848**	890
Average assets(3)	**147,316**	137,636	**8,518**	8,327	**172,361**	149,029	**22,562**	18,230	**70,458**	71,404	**421,215**	384,626
Total assets	**148,914**	141,068	**8,699**	8,426	**168,164**	142,421	**23,243**	18,634	**68,664**	59,021	**417,684**	369,570

Six months ended April 30(1)

	Personal and Commercial		Wealth Management		Financial Markets		USSF&I		Other		Total	
	2023	2022	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022
Net interest income(4)	**1,627**	1,339	**398**	246	**(303)**	753	**568**	547	**(309)**	(240)	**1,981**	2,645
Non-interest income(4)	**597**	581	**856**	925	**1,664**	541	**36**	23	**(73)**	190	**3,080**	2,260
Total revenues	**2,224**	1,920	**1,254**	1,171	**1,361**	1,294	**604**	570	**(382)**	(50)	**5,061**	4,905
Non-interest expenses	**1,207**	1,107	**736**	717	**570**	521	**196**	168	**68**	66	**2,777**	2,579
Income before provisions for credit losses and income taxes	**1,017**	813	**518**	454	**791**	773	**408**	402	**(450)**	(116)	**2,284**	2,326
Provisions for credit losses	**98**	6	**–**	–	**10**	(32)	**61**	27	**2**	–	**171**	1
Income before income taxes (recovery)	**919**	807	**518**	454	**781**	805	**347**	375	**(452)**	(116)	**2,113**	2,325
Income taxes (recovery)(4)(5)	**253**	214	**142**	121	**215**	213	**72**	75	**(297)**	(117)	**385**	506
Net income	**666**	593	**376**	333	**566**	592	**275**	300	**(155)**	1	**1,728**	1,819
Non-controlling interests	**–**	–	**–**	–	**–**	–	**–**	–	**(1)**	(1)	**(1)**	(1)
Net income attributable to the Bank's shareholders and holders of other equity instruments	**666**	593	**376**	333	**566**	592	**275**	300	**(154)**	2	**1,729**	1,820
Average assets(3)	**146,714**	136,852	**8,521**	8,329	**172,819**	153,467	**22,076**	18,100	**72,981**	69,935	**423,111**	386,683
Total assets	**148,914**	141,068	**8,699**	8,426	**168,164**	142,421	**23,243**	18,634	**68,664**	59,021	**417,684**	369,570

(1) For the quarter and six-month period ended April 30, 2022, certain amounts have been reclassified, notably due to a revised method for the sectoral allocation of technology investment expenses. In addition, certain amounts have been adjusted to reflect a change in accounting policy related to cloud computing arrangements (for additional information, see Note 1).
(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 of grossing up certain revenues taxed at lower rates by the income tax to a level that would make it comparable to revenues from taxable sources in Canada. For the business segments as a whole, *Net interest income* was grossed up by $76 million ($49 million in 2022), *Non-interest income* was grossed up by $56 million ($3 million in 2022), 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, which is also the basis on which sectoral assets are reported in the business segments.
(4) During the six-month period ended April 30, 2023, for the business segments as whole, *Net interest income* was grossed up by $154 million ($109 million in 2022), *Non-interest income* was grossed up by $108 million ($7 million in 2022), and an equivalent amount was recognized in *Income taxes (recovery)*. The effect of these adjustments has been reversed under the *Other* heading.
(5) During the six-month period ended April 30, 2023, the Bank recorded a $32 million tax expense with respect to the Canada Recovery Dividend, i.e., a one-time, 15% tax on the fiscal 2021 and 2020 average taxable income above $1 billion, as well as an $8 million tax recovery related to a 1.5% increase in the statutory tax rate, which includes the impact related to current and deferred taxes for fiscal 2022. These items are recorded in the *Other* heading. For additional information on these tax measures, see Note 14.

Note 17 – Event After the Consolidated Balance Sheet Date

On May 2, 2023, the Bank concluded that it had lost significant influence over TMX Group Limited (TMX) and therefore, as of this date, ceased using the equity method to account for this investment. The Bank designated its investment in TMX as a financial asset measured at fair value through other comprehensive income in an amount of $191 million. Following the fair value measurement, a $91 million gain will be recorded in the *Non-interest income – Other* item of the Consolidated Statement of Income and will be reported in the *Other* heading of segment results during the third quarter of 2023. As at April 30, 2023, the Bank's ownership interest in TMX was 2.5%.

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 2023
(subject to approval by the Board of Directors of the Bank)

First quarter	March 1
Second quarter	May 31
Third quarter	August 30
Fourth quarter	December 1

Disclosure of Second Quarter 2023 Results

Conference Call
- A conference call for analysts and institutional investors will be held on Wednesday, May 31, 2023 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 9583004#.
- A recording of the conference call can be heard until August 31, 2023 by dialing 1-800-408-3053 or 905-694-9451. The access code is 5604431#.

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.

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).

NATIONAL BANK