



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 (<i>dollars</i>)	\$ 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 (<i>dollars</i>)	\$ 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

	Personal and Commercial	Wealth Management	Financial Markets	USSF&I	Other	2023	2022 ⁽¹⁾
						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.

						Six months ended April 30	
						2023	2022 ⁽¹⁾
	Personal and Commercial	Wealth Management	Financial Markets	USF&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

	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 (<i>thousands</i>)	337,720	336,513		337,720	336,513	
Market capitalization	34,120	30,192		34,120	30,192	

(millions of Canadian dollars)	As at		% Change
	April 30, 2023	October 31, 2022	
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			
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 (<i>dollars</i>)	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 (<i>dollars</i>)	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							Ratios 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	
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)

			April 30,	Quarter ended	
	Non-counterparty credit risk	Counterparty credit risk	2023	January 31, 2023	October 31, 2022
			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			
	Balance sheet	Market risk measures		Not subject to market risk	Non-traded risk primary risk sensitivity
		Trading ⁽¹⁾	Non-trading ⁽²⁾		
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

	Balance sheet	Market risk measures		Not subject to market risk	Non-traded risk primary risk sensitivity
		Trading ⁽¹⁾	Non-trading ⁽²⁾		
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.

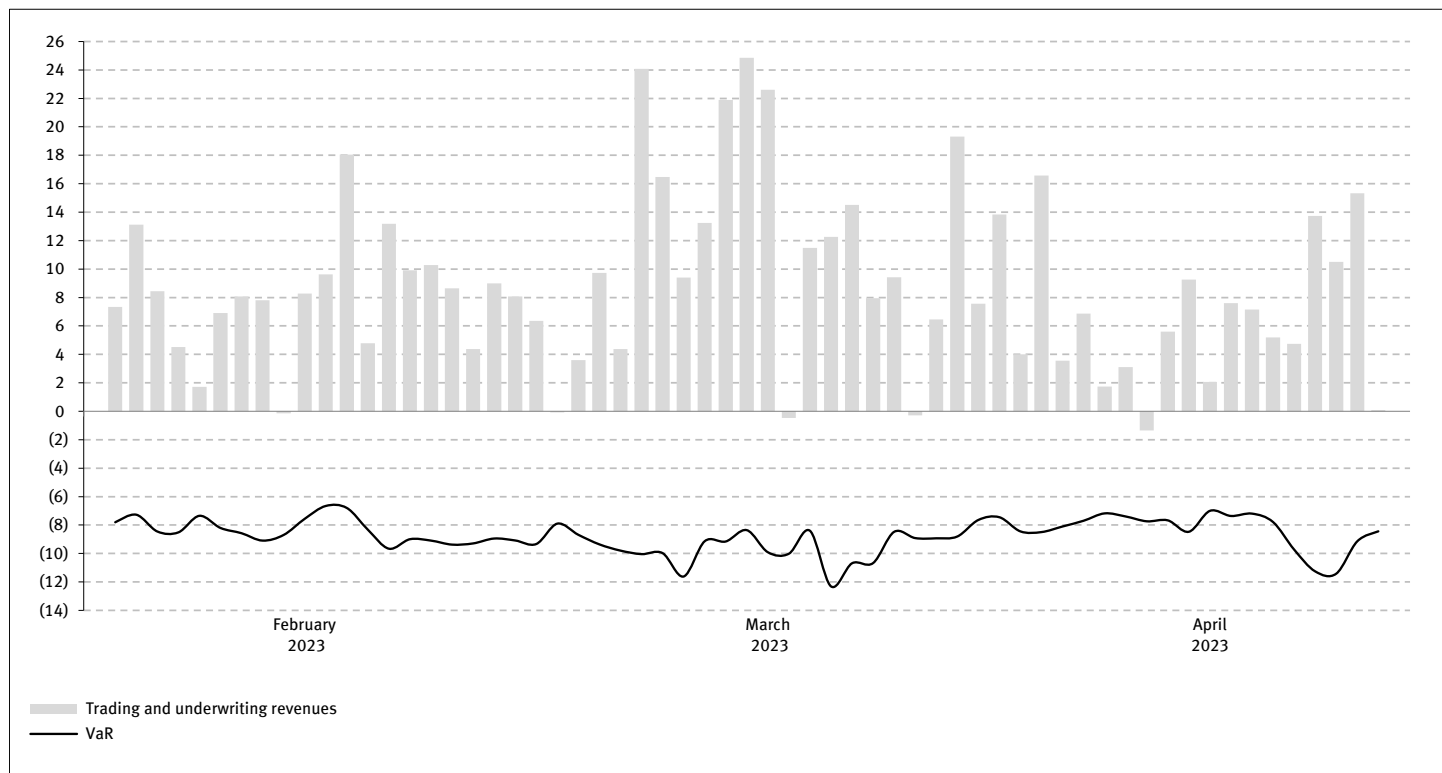
The average total trading VaR remained stable at \$8.7 million for the second quarter of 2023 compared to \$8.6 million for the first quarter of 2023. The average total trading SVaR decreased from \$18.3 million in the first quarter of 2023 to \$14.2 million in the second quarter of 2023. This was driven 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)	April 30, 2023					Quarter ended 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		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		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)

	April 30, 2023		Quarter ended
	Total unweighted value ⁽³⁾ (average)	Total weighted value ⁽⁴⁾ (average)	January 31, 2023 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				Weighted value ⁽³⁾	Weighted value ⁽³⁾
	No maturity	6 months or less	Over 6 months to 1 year	Over 1 year		
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	65,366	25,151	18,058	16,903	13,765	20,640	39,048	27,925	21,746	21,746
									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.

		2022 Annual Report	Report to Shareholders ⁽¹⁾	Pages 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		
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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.