Annual Report 2023

At a Glance

Founded in 1859, National Bank of Canada offers financial services to individuals, businesses, institutional clients and governments across Canada. We are one of Canada's six systemically important banks and among the most profitable banks globally in terms of return on equity.

We operate through three business segments in Canada: Personal and Commercial Banking, Wealth Management and Financial Markets. A fourth segment, U.S. Specialty Finance and International, complements the growth of our domestic operations.

We are a leading bank in our core Quebec market, where most of our branches are located, and also hold leadership positions across the country in selected activities.

We strive to meet the highest standards of social responsibility while creating value for our shareholders. We are proud to be recognized as an employer of choice and for promoting diversity and inclusion.

We are headquartered in Montreal, and our securities are listed on the Toronto Stock Exchange (TSX: NA).

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2.8 million Clients[1]

31,243 Employees[2]

$10.2 B Total Revenue

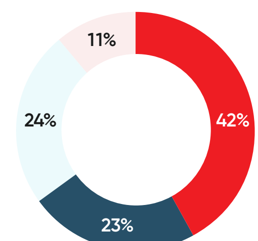
$3.3 B Net Income

$424 B Total Assets

$29.2 B Market Capitalization

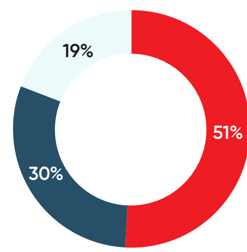
2023 Total Revenue – Adjusted by Business Segment[3]

- Personal and Commercial
- Wealth Management
- Financial Markets
- U.S. Specialty Finance and International



2023 Total Revenue – Adjusted by Geographic Distribution[3]

- Province of Quebec
- Other Canadian provinces
- Outside Canada



(1) Clients of the Personal and Commercial segment
(2) Worldwide
(3) Excluding the *Other* heading. See the Financial Reporting Method section on pages 14 to 19 for additional information on non-GAAP financial measures.

Investing in National Bank

OUR PILLARS

Our Culture

- Entrepreneurial
- Agile
- Collaborative
- Diverse and inclusive

Our Strategic Positioning

- Canadian bank with leading franchise in Quebec
- Differentiated positioning in Financial Markets and Wealth Management
- Focused strategy outside Canada

Our Discipline

- Strong risk management culture
- Disciplined cost management
- Solid capital levels

OUR PERFORMANCE IN 2023

Superior ROE[1]

16.5%
Reported

16.8%[2]
Adjusted

2023 ROE[3]

Strong Earnings Power

(1.2%)
Reported

6.7%[4]
Adjusted

PTPP[5] Growth (2023/2022)

Solid Credit Performance

11 bps

PCL on Impaired Loans (excl. POCI) Ratio[3][6]

Robust Capital Position

13.5%

CET1 Ratio[2] as at October 31, 2023

Sound Liquidity Profile

155%

Liquidity coverage ratio[2] as at October 31, 2023

Sustainable Dividend Growth

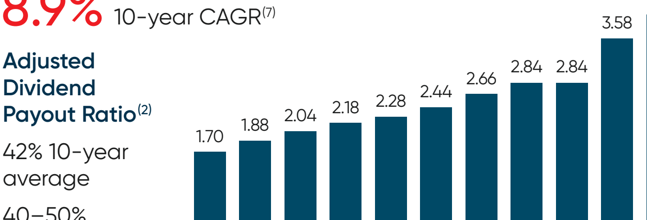
($ per share)

8.9% 10-year CAGR[7]

Adjusted Dividend Payout Ratio[2]

42% 10-year average

40–50% medium-term objective



Leading Total Shareholder Returns[3]

CAGR[7] for the periods ended October 31, 2023

	Ranking[9]	National Bank	Canadian Peers[9]	TSX
3 years	#1	15%	10%	10%
5 years	#1	12%	4%	8%
10 years	#1	11%	7%	7%

Source: Nasdaq IR Insight via Factset

(1) Based on Return on common shareholders' equity (ROE) as reported by Canadian peers, including Bank of Montreal, Canadian Imperial Bank of Commerce, Royal Bank of Canada, Bank of Nova Scotia and Toronto-Dominion Bank (together, the Canadian peers).
(2) See the Financial Reporting Method section on pages 14 to 19 for additional information on non-GAAP ratios and for additional information on capital-management measures.
(3) See the Glossary section on pages 124 to 127 for details on the composition of these measures.
(4) See the Financial Reporting Method section on pages 14 to 19 for additional information on non-GAAP financial measures.
(5) Pre-Tax Pre-Provision earnings (PTPP) refers to income before provisions for credit losses and income taxes.
(6) Provisions for credit losses (PCL) on impaired loans excluding purchased or originated credit impaired (POCI) loans as a percentage of average loans and acceptances.
(7) Compound annual growth rate.
(8) Interruption of dividend increases, as prescribed by the Office of the Superintendent of Financial Institutions (Canada) (OSFI) between March 13, 2020, and November 4, 2021.
(9) Among Canadian peers, as defined above.

Financial Overview

Medium-Term Objectives and Results

	Medium-Term Objectives	2023 Results
Growth in diluted earnings per share – Adjusted[1]	5–10%	(0.1%)
ROE – Adjusted[2]	15–20%	16.8%
Dividend payout ratio – Adjusted[2]	40–50%	41.1%
CET1 capital ratio[2]	Strong	13.5%
Leverage ratio[2]	Strong	4.4%

Financial Highlights

As at October 31 or for the year ended October 31 (millions of Canadian dollars, except per share amounts)	**2023**	2022
Operating results		
Total revenue	**10,170**	9,652
Income before provisions for credit losses and income taxes	**4,369**	4,422
Net income	**3,335**	3,383
Diluted earnings per share	**$ 9.38**	$ 9.61
Return on common shareholders' equity[3]	**16.5 %**	18.8 %
Dividend payout ratio[3]	**42.0 %**	36.8 %
Operating results – Adjusted[1]		
Total revenue – Adjusted	**10,658**	9,934
Income before provisions for credit losses and income taxes – Adjusted	**5,018**	4,704
Net income – Adjusted	**3,409**	3,383
Diluted earnings per share – Adjusted	**$ 9.60**	$ 9.61
Efficiency ratio – Adjusted[2]	**52.9 %**	52.6 %
Dividends declared	**$ 3.98**	$ 3.58
Total assets	**423,578**	403,740

(1) See the Financial Reporting Method section on pages 14 to 19 for additional information on non-GAAP financial measures.
(2) See the Financial Reporting Method section on pages 14 to 19 for additional information on non-GAAP ratios and for additional information on capital management measures.
(3) See the Glossary section on pages 124 to 127 for details on the composition of these measures.

Message From the President and Chief Executive Officer

At National Bank, we have a strong track record of creating sustainable value for our stakeholders while operating in dynamic environments. Our agility, focus, and discipline are core to who we are and who we aim to be as a Bank that Puts People First. These attributes are steeped in our nearly 165-year history and continue to be key in helping the Bank, our clients, our employees, and our communities navigate every stage of the economic cycle and thrive over the long term.

Throughout 2023, tighter monetary policy and cost inflation put increasing pressure on Canadian consumers and businesses alike. Ongoing geopolitical tensions further fuelled market volatility and macroeconomic uncertainty. Despite an increasingly complex environment, the Bank delivered organic growth across its business segments and a strong return on equity for 2023, while prudently managing expenses.

Our ability to generate solid returns over the long term is a result of our diversified business mix and defensive positioning as well as our team's flexibility and focus on strategic priorities. Our disciplined approach to credit, capital, and costs enables us to invest in organic growth and to deliver a strong return of capital to shareholders through sustainable dividend increases, while providing flexibility.

A Strong and Diversified Banking Franchise

In 2023, our Personal and Commercial segment, which enjoys a very strong presence in Quebec and a growing presence in the rest of Canada, continued to deliver on its client acquisition and enhanced engagement objectives. This was achieved through quality advice and solutions as well as digital platform improvements, which will be areas of continued focus going into 2024.

As a leading Canadian full-service brokerage and private bank, our Wealth Management segment delivered record revenue performance in 2023, benefitting from our strong client franchise. We maintained our position as Canada's top solutions provider to independent advisors. Our client-facing strategy and open-architecture approach continues to gain traction as we grow our client base in selected activities across Canada.

Our Financial Markets segment also delivered strong results thanks to a differentiated and diversified business mix, sound risk profile, and client-first focus. This was reflected in the record revenues generated by our corporate and investment banking activities as well as solid performance by Global Markets. Our Financial Markets teams have a solid track record of consistently performing through all market cycles while maintaining disciplined risk management.

Our U.S. specialty finance business, Credigy, generated solid growth in 2023, reflecting its ability to execute in any macro environment. We anticipate ongoing momentum for Credigy to deploy capital in 2024 to continue generating high-quality earnings in the future.

In Cambodia, ABA Bank continued to solidify its leadership position as the preferred bank for individuals and small to medium enterprises with a focus on everyday banking services and secured lending. While the Cambodian economy continues to adjust to softer external demand and a slower recovery in tourism, the long-term outlook for this market is highly attractive. The country's fundamentals are strong with a high-growth economy, favourable demographics, and an underbanked population. This presents substantial growth opportunity for ABA Bank in the future.

Message From the President and Chief Executive Officer (cont.)

Supporting Canadians and the Canadian Economy

By supporting our communities and helping our over 2.8 million clients to achieve their financial goals, we play a crucial role in the economy. This responsibility is reflected in our One Mission to have a Positive Impact in People's Lives by building long-term relationships.

As a bank founded by entrepreneurs, we are passionate about helping Canadian entrepreneurs and businesses invest in innovation and grow their businesses. Fostering entrepreneurship and facilitating the creation of businesses are cornerstones of a healthy and resilient economy. This year, we welcomed new clients to our community following the acquisition of the commercial loan portfolio of Silicon Valley Bank's Canadian branch. In doing so, we strengthened our bond with the Canadian technology and innovation industry, which is critical to solving many of our social and environmental challenges.

A sustainable economy also means supporting our clients in the pursuit of energy transition opportunities. Being among North America's top financial institutions in renewable energy financing, we believe in a balanced approach and have an established energy and natural resources franchise.

As part of our commitment to enriching our communities, we support a broad range of initiatives to empower our stakeholders, from financial education for women to facilitating access to banking services for Indigenous communities. As the first bank to finance the First Nations Finance Authority in 2013, we have helped Indigenous communities invest in housing, health care, and energy projects for a decade and will continue to do so.

We also have a key role to play to help address Canada's housing shortage as one of the country's leading affordable and social-housing lenders. Much more needs to be done on this front, but we are proud to be leading the way in our industry.

These are but a few examples of what we are doing to support our clients and our communities. We will continue to do our part to stimulate the creation of a sustainable and growing Canadian economy. We also support government policy and a regulatory environment that remains conducive to stimulating investments and business growth here in Canada and for Canadians.

Focused Growth and Simplification

With persistent macroeconomic uncertainty and restrictive monetary policy, the outlook for economic growth remains challenging. Canadian consumers and businesses will continue to face higher borrowing costs. During these uncertain times, our goal is, first and foremost, to guide and support our clients.

We remain positive regarding the untapped potential across our Canadian franchise, including wealth management and private and commercial banking. These ambitions are further supported by our now well-entrenched collaborative model across our teams and businesses, enabling us to deepen existing client relationships. Increasing client connectivity is even more important in a challenging economic and market environment.

As a team, we are also prioritizing investments that will simplify our operations to gain efficiencies, while also improving the client experience. Bringing together our information technology and operations under one leadership was a major step in facilitating this work. More broadly, we must ensure that, as we develop processes, solutions, and services, that can be leveraged across our businesses. While this has long been an area of focus, we are further concentrating on simplification and automation.

As we balance investing in organic growth with tight expense management, we believe it is essential to continue investing in our more than 31,000 employees. Ensuring we have the right team in the right place at the right time to offer our clients the advices and solutions they need when they need them is our first responsibility as leaders.

A Strong and Renewed Senior Leadership Team

In 2023, we made key senior leadership appointments in support of our strategic priorities and as part of our succession planning processes.

At the beginning of the year, Étienne Dubuc, Co-Head of Financial Markets since 2022 and with the Bank for 25 years, was named sole head of the franchise. Michael Denham was named head of Commercial and Private Banking after a highly successful stint as President and Chief Executive Officer of the Business Development Bank of Canada, where he was instrumental in doubling its commercial franchise. Finally, Nancy Paquet, with the Bank since 2007 in a range of strategic senior leadership roles, was tapped as the ideal candidate to lead our Wealth Management business.

Today, I am proud to be able to count on a highly experienced and skilled Senior Leadership Team that brings the right combination of continuity and fresh perspective to our work and as we pursue the Bank's strategy for long-term growth.

Agility, Focus and Discipline

In a complex environment, we remain steadfast in our longstanding and proven approach to prudent capital, credit, and cost management. We will pursue our business objectives shrewdly, remaining focused on areas where we have expertise and can be competitive, and by actively seeking and capitalizing on new opportunities.

We will also continue to simplify our operations and processes by focusing on the right priorities, always with a client-first and long-term perspective. In all areas, we work to make a meaningful impact to create a sustainable economy for all our stakeholders.

We have a strong team with a proven ability to create sustainable value and adapt to change. I am confident that our agility, focus, and discipline will continue to serve our clients, our communities, our growth and, ultimately, our shareholders.

Laurent Ferreira
President and Chief
Executive Officer

Members of the Senior Leadership Team

Laurent Ferreira
President and
Chief Executive Officer

Lucie Blanchet
Executive Vice-President,
Personal Banking and
Client Experience

William Bonnell
Executive Vice-President,
Risk Management

Michael Denham
Executive Vice-President,
Commercial and
Private Banking

Étienne Dubuc
Executive Vice-President,
Financial Markets

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

Brigitte Hébert
Executive Vice-President,
Employee Experience

Julie Lévesque
Executive Vice-President,
Technology and Operations

Nancy Paquet
Executive Vice-President,
Wealth Management and
Co-President and Co-Chief
Executive Officer, National Bank
Financial

Message From the Chairman of the Board

Fiscal 2023 ended against a backdrop of economic uncertainty. Thanks to our ambitious, balanced business plan, National Bank was able to come through in good shape and deliver solid performance. In a highly uncertain macroeconomic environment, we maintained prudent positioning. Our credit portfolios continued to do well, and our solid capital levels are giving us the flexibility needed to invest in our operations and future growth. Moreover, we have deployed a variety of communication methods and equipped our teams to reassure clients and maintain close relationships with them.

A Renewed Board of Directors

At the last Annual Meeting of Holders of Common Shares held in April 2023, we had the pleasure of welcoming Annick Guérard, President and Chief Executive Officer of Transat A.T., and Pierre Pomerleau, Executive Chair of the Board of Directors of Pomerleau, to the Board. Their impressive wealth of professional experience, their leadership, and their combined expertise in risk management, information technology, client experience, entrepreneurship, and sustainable development will be immense assets to the Board.

At the same time, Jean Houde ended a chapter of his professional life, completing his mandate as director and Chairman of the Board of Directors. I would like to thank him for his invaluable contribution to the Bank's success and applaud his leadership as Chairman of the Board of Directors over the last nine years and his commitment as a director for the last 12 years.

New Faces on the Senior Leadership Team

During the year, the composition of the Senior Leadership Team changed. Étienne Dubuc now leads the Financial Markets segment, Michael Denham now heads up Commercial and Private Banking, while Nancy Paquet has been given responsibility for the Wealth Management segment. Their knowledge of the organization and their professional experiences in various fields are valuable assets for our Senior Leadership Team. These appointments, some of which are the result of internal succession, further bolster the strength of our team and the talent pool depth that we are proud to be able to count on.

On behalf of the Board of Directors, I would like to thank our almost 31,000 employees for their consistent daily commitment and our shareholders for their constantly renewed trust.

I would also like to thank my colleagues and the members of the Senior Leadership Team, who generously supported me as I integrated into my new role.

My colleagues on the Board of Directors and I look forward to 2024 with optimism and confidence, as we continue to deepen our knowledge of the Bank and build closer bonds with its officers.

Robert Paré
Chairman of the Board of Directors

For more information regarding the Bank's governance, please refer to the most recent *Management Proxy Circular*, which is available on the Bank's website at nbc.ca.

Members of the Board of Directors

Robert Paré
Quebec, Canada
Chairman of the Board of Directors,
National Bank of Canada
and Corporate Director
Director since April 2018

Maryse Bertrand
Quebec, Canada
Corporate Director
Director since April 2012

Pierre Blouin
Quebec, Canada
Corporate Director
Director since September 2016

Pierre Boivin
Quebec, Canada
President and Chief Executive Officer, Claridge Inc.
Director since April 2013

Yvon Charest
Quebec, Canada
Corporate Director
Director since April 2020

Patricia Curadeau-Grou
Quebec, Canada
Corporate Director
Director since April 2019

Laurent Ferreira
Quebec, Canada
President and Chief Executive Officer,
National Bank of Canada
Director since February 2021

Annick Guérard
Quebec, Canada
President and Chief Executive Officer,
Transat A.T. Inc.
Director since April 2023

Karen Kinsley
Ontario, Canada
Corporate Director
Director since December 2014

Lynn Loewen
Quebec, Canada
Corporate Director
Director since April 2022

Rebecca McKillican
Ontario, Canada
Corporate Director
Director since October 2017

Pierre Pomerleau
Quebec, Canada
Executive Chair of the Board of Directors,
Pomerleau Inc.
Director since April 2023

Lino A. Saputo
Quebec, Canada
President and Chief Executive Officer and Chair of the Board of Directors,
Saputo Inc.
Director since April 2012

Macky Tall
Florida, United States
Partner and Chair of the Global Infrastructure Group
The Carlyle Group Inc.
Director since April 2021

Board Committees

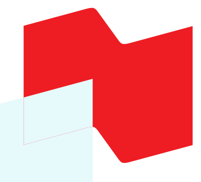
Audit Committee
Lynn Loewen *(Chair)*
Maryse Bertrand
Pierre Blouin
Patricia Curadeau-Grou

Risk Management Committee
Patricia Curadeau-Grou *(Chair)*
Yvon Charest
Annick Guérard
Karen Kinsley
Pierre Pomerleau
Lino A. Saputo
Macky Tall

Technology Committee
Pierre Blouin *(Chair)*
Maryse Bertrand
Lynn Loewen
Rebecca McKillican

Human Resources Committee
Pierre Boivin *(Chair)*
Maryse Bertrand
Pierre Blouin
Yvon Charest
Rebecca McKillican

Conduct Review and Corporate Governance Committee
Yvon Charest *(Chair)*
Patricia Curadeau-Grou
Karen Kinsley
Robert Paré
Macky Tall



OUR ONE MISSION

We exist to have a **POSITIVE IMPACT** in people's lives.

By building ***long-term relationships*** with our clients, employees and communities.

People first.

Why do we need a One Mission?

Our One Mission is aligned with our continued efforts to drive social and economic development. In response to changing trends in the banking industry, we've adopted a people-first approach that will help us achieve our objectives and boost our collaboration with stakeholders.

How is our One Mission put into practice?

- Through the experiences we want to deliver to our clients, our employees and the communities we serve.
- Through behaviours that reflect our values: partnership, empowerment and agility.
- Through the way employees work together to boost client satisfaction, employee engagement and community involvement.
- Through the initiatives we prioritize to have a positive impact.

How We Support Sustainable Development

Our ESG Principles

Supporting sustainable development is an intrinsic part of our One Mission. Environmental, social and governance (ESG) considerations play a key role in our business and operational decisions.

The ESG principles adopted by our Board of Directors demonstrate our commitment to sustainable development and to balancing the interests of different stakeholders in society.

ENVIRONMENT	SOCIAL	GOVERNANCE
We are working to develop a green economy	We enrich communities	We govern according to the highest standards
1. We consider the fight against climate change in our economic and community actions 2. We guide and advise our clients in their energy transition 3. We manage and reduce our environmental footprint in all of our business segments	4. We maximize the potential of individuals and the community 5. We promote inclusion and diversity 6. We foster entrepreneurship, financial literacy, philanthropy and support for health and education	7. We promote a strong ethics culture, sound governance practices and rigorous risk management 8. We manage according to responsible business practices 9. We ensure the long-term viability of the institution

Key United Nations Sustainable Development Goals covered by our principles

Our Commitments

In accordance with our principles and to help the Bank achieve its ESG objectives, we have notably made the following commitments:

ENVIRONMENT

Grow the portfolio of loans related to renewable energy at a faster pace than the portfolio of loans related to non-renewable energy.

Not offer or grant new financing related to oil and gas exploration, exploitation or production in the Arctic.

Not finance new thermal coal mining and processing activities.

SOCIAL

Facilitate access to banking services for underbanked people.

Promote the development and success of women, visible minorities, persons with disabilities, Indigenous persons and members of LGBTQ2+ communities.

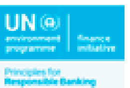
Promote financial literacy to improve financial knowledge and help people achieve financial security.

GOVERNANCE

Protect our clients' personal information to build and maintain a trust-based relationship with them.

OUR TARGETS	
Have **more than a quarter** of our workforce be made up of **visible minorities by the end of 2023**	Reduce greenhouse gas emissions from **our activities by 25% by the end of 2025**
Reduce the intensity of the **Commercial Real Estate** sector portfolio by **50% by 2030**	Reduce portfolio intensity for the **Canadian Oil and Gas Producers** subsector by **31% by 2030**
Reduce the intensity of the **Power Generation** sector portfolio by **33% by 2030**	Achieve **net zero emissions** for our **operations and our financing activities by 2050**

In 2023, the Bank also pursued its commitment to the following initiatives:



For more information about our targets and commitments, see our publications at nbc.ca/esg.

Our Impact

ENVIRONMENT

2

new interim reduction targets for financed GHG emissions.

$11 B

in capital made available for renewable energy projects in North America since 2019, as at October 31, 2023.

SUSTAINABLE FINANCE

One dedicated team

that supports clients during their transition.

$3.2 B

sustainability bonds in circulation, the proceeds of which were used to finance sustainable development projects, as at October 31, 2023.

$4.1 B

volume in assets under management in National Bank Investments' sustainable investments as at October 31, 2023.

98%

of NBI assets under management managed by United Nations Principles for Responsible Investment (PRI) signatories as at October 31, 2023.

SOCIAL

87

With 87 branches in Cambodia, the Bank serves as a driver of economic and social development for individuals and businesses across the country.

Year 1

The Bank completed the first year of certification for the Progressive Aboriginal Relations program rolled out by the Canadian Council for Aboriginal Business.

10

employee resource groups (ERGs) that bring together hundreds of employees representing various diversity segments.

GOVERNANCE

ESG governance

Changes to the governance structure: ESG committee and working groups made up of leaders from various sectors responsible for ESG strategy.

ESG at the Board

ESG responsibilities integrated into the mandate of the Board of Directors and all of its committees.

Accountability

ESG criteria integrated into executive compensation.

Risk Disclosures

In 2012, the Financial Stability Board (FSB) formed a working group, the Enhanced Disclosure Task Force (EDTF), that was mandated to develop principles for enhancing the risk disclosures of major banks, to recommend improvements to current risk disclosures, and to identify risk disclosure best practices used by major financial institutions. The EDTF published a report entitled *Enhancing the Risk Disclosures of Banks*, which contains 32 recommendations. The Bank makes every effort to ensure overall compliance with those recommendations and is continuing to enhance its risk disclosures to meet the best practices on an ongoing basis. The risk disclosures required by the EDTF are provided in this *Annual Report* and in the document entitled *Supplementary Regulatory Capital and Pillar 3 Disclosure* available on the Bank's website at nbc.ca.

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26	Credit risk exposures	83 and 173 to 184	22 to 58 and 22 to 30[2]
27	Policies for identifying impaired loans	80, 81, 147 and 148	
28	Movements in impaired loans and allowances for credit losses	119, 122, 123 and 173 to 184	27 to 30[2]
29	Counterparty credit risk relating to derivative transactions	80 to 82 and 192 to 195	48 to 58, 31[2] and 32[2]
30	Credit risk mitigation	77 to 82, 170 and 178	24, 28 to 30 and 56 to 67
Other risks			
31	Other risks: Governance, measurement and management	72 to 74 and 100 to 106	
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(1) Fourth quarter 2023.
(2) These pages are included in the document entitled *Supplementary Financial Information – Fourth Quarter 2023.*

Management's Discussion and Analysis

November 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 audited annual consolidated financial statements for the year ended October 31, 2023 (the consolidated financial statements) 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 year ended October 31, 2023. 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 sedarplus.ca. 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 *2023 Annual Report*, 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. The forward-looking statements in this document may include, but are not limited to, statements made in the Message From the President and Chief Executive Officer and other statements about the economy, market changes, the Bank's objectives, outlook, and priorities for fiscal year 2024 and beyond, the strategies or actions that will be taken to achieve them, expectations for the Bank's financial condition, its activities, the regulatory environment in which it operates, its environmental, social, and governance targets and commitments, and certain risks to which the Bank is exposed. 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 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. 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 performance targets will not be achieved. 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. Thus, the Bank recommends that readers not place undue reliance on these 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. Investors and others who rely on the Bank's forward-looking statements should carefully consider the factors listed below 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.

Assumptions about the performance of the Canadian and U.S. economies in 2024 and how that performance will affect the Bank's business are among the factors considered in setting the Bank's strategic priorities and objectives, including provisions for credit losses. These assumptions appear in the Economic Review and Outlook section and, for each business segment, in the Economic and Market Review sections, and may be updated in the quarterly reports to shareholders.

The forward-looking statements made in this document 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 the other countries where the Bank operates; the impact of upheavals in the U.S. banking industry; exchange rate and interest rate fluctuations; inflation; global supply chain disruptions; 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; climate change, including physical risks and those related to 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 key short-term priorities and long-term strategies; the timely development and launch of new products and services; the Bank's ability to recruit and retain key personnel; technological innovation, including advances in artificial intelligence and the open banking system, 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; 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 by financial and extra-financial rating agencies; potential disruptions to key suppliers of goods and services to the Bank; the potential impacts of disruptions to the Bank's information technology systems, including cyberattacks as well as identity theft and theft of personal information; the risk of fraudulent activity; and possible impacts of major events affecting the economy, market conditions, or the Bank's outlook, including international conflicts, natural disasters, public health crises, and the measures taken in response to these events.

The foregoing list of risk factors is not exhaustive, and the forward-looking statements made in this document are also subject to credit risk, market risk, liquidity and funding risk, operational risk, regulatory compliance risk, reputation risk, strategic risk, and social and environmental risk as well as certain emerging risks or risks deemed significant. Additional information about these risk factors is provided in the Risk Management section beginning on page 62 of the *2023 Annual Report* and may be updated in the quarterly shareholder's reports subsequently published.

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 related to cloud computing arrangements applied in fiscal 2022. For fiscal 2022, certain amounts in the Business Segment Analysis section were adjusted to reflect this revision.

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 irrespective 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 18 and 19 and in the Consolidated Results table on page 25. Note that, for the year ended October 31, 2023, the following items were excluded from results: a $91 million gain ($67 million net of income taxes) related to the fair value remeasurement of an equity interest, $86 million in impairment losses ($62 million net of income taxes) on intangible assets and premises and equipment, $35 million in litigation expenses ($26 million net of income taxes), a $25 million expense ($18 million net of income taxes) related to the retroactive impact of changes to the *Excise Tax Act*, $15 million in provisions for contracts ($11 million net of income taxes), and a $24 million income tax expense related to the Canadian government's 2022 tax measures. No specified items had been excluded from results for the year ended October 31, 2022.

<u>Adjusted Net Interest Income</u>
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.

<u>Adjusted Non-Interest Income</u>
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.

<u>Adjusted Total Revenues</u>
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 page 19 and in Table 5 on page 117.

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 and certain interest income related to the financing of these financial assets and liabilities, net of interest expenses. 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, realized and unrealized gains and losses as well as interest expense on obligations related to securities sold short, certain commission income as well as 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 irrespective of their tax treatment.

Trading Activity Revenues on a Taxable Equivalent Basis
This item represents trading activity revenues plus a taxable equivalent. These revenues comprise dividends related to financial assets and liabilities associated with trading activities; certain interest income related to the financing of these financial assets and liabilities, net of interest expenses; 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; realized and unrealized gains and losses as well as interest expense on obligations related to securities sold short; certain commission income as well as 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 124 to 127 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

Year ended October 31 (millions of Canadian dollars)						2023	2022
	Personal and Commercial	Wealth Management	Financial Markets	USSF&I	Other		
Net interest income	3,321	778	(1,378)	1,132	(267)	3,586	5,271
Taxable equivalent	–	–	324	–	8	332	234
Net interest income – Adjusted	3,321	778	(1,054)	1,132	(259)	3,918	5,505
Non-interest income	1,195	1,743	3,463	77	106	6,584	4,381
Taxable equivalent	–	–	247	–	–	247	48
Gain on the fair value remeasurement of an equity interest(1)	–	–	–	–	(91)	(91)	–
Non-interest income – Adjusted	1,195	1,743	3,710	77	15	6,740	4,429
Total revenues – Adjusted	4,516	2,521	2,656	1,209	(244)	10,658	9,934
Non-interest expenses	2,510	1,534	1,161	402	194	5,801	5,230
Impairment losses on intangible assets and premises and equipment(2)	(59)	(8)	(7)	–	(12)	(86)	–
Litigation expenses(3)	–	(35)	–	–	–	(35)	–
Expense related to changes to the *Excise Tax Act*(4)	–	–	–	–	(25)	(25)	–
Provisions for contracts(5)	(9)	–	–	–	(6)	(15)	–
Non-interest expenses – Adjusted	2,442	1,491	1,154	402	151	5,640	5,230
Income before provisions for credit losses and income taxes – Adjusted	2,074	1,030	1,502	807	(395)	5,018	4,704
Provisions for credit losses	238	2	39	113	5	397	145
Income before income taxes – Adjusted	1,836	1,028	1,463	694	(400)	4,621	4,559
Income taxes	486	271	(170)	146	(96)	637	894
Taxable equivalent	–	–	571	–	8	579	282
Income taxes on the gain on the fair value remeasurement of an equity interest(1)	–	–	–	–	(24)	(24)	–
Income taxes on the impairment losses on intangible assets and premises and equipment(2)	17	2	2	–	3	24	–
Income taxes on the litigation expenses(3)	–	9	–	–	–	9	–
Income taxes on the expense related to changes to the *Excise Tax Act*(4)	–	–	–	–	7	7	–
Income taxes on the provisions for contracts(5)	2	–	–	–	2	4	–
Income taxes related to the Canadian government's 2022 tax measures(6)	–	–	–	–	(24)	(24)	–
Income taxes – Adjusted	505	282	403	146	(124)	1,212	1,176
Net income – Adjusted	1,331	746	1,060	548	(276)	3,409	3,383
Specified items after income taxes	(49)	(32)	(5)	–	12	(74)	–
Net income	1,282	714	1,055	548	(264)	3,335	3,383
Non-controlling interests	–	–	–	–	(2)	(2)	(1)
Net income attributable to the Bank's shareholders and holders of other equity instruments	1,282	714	1,055	548	(262)	3,337	3,384
Net income attributable to the Bank's shareholders and holders of other equity instruments – Adjusted	1,331	746	1,060	548	(274)	3,411	3,384
Dividends on preferred shares and distributions on limited recourse capital notes						141	107
Net income attributable to common shareholders – Adjusted						3,270	3,277

(1) During the year ended October 31, 2023, the Bank concluded that it had lost significant influence over TMX Group Limited (TMX) and therefore 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. Upon the fair value measurement, a gain of $91 million ($67 million net of income taxes) was recorded.

(2) During the year ended October 31, 2023, the Bank recorded $75 million in intangible asset impairment losses ($54 million net of income taxes) on technology development for which the Bank has decided to cease its use or development, and it recorded $11 million in premises and equipment impairment losses ($8 million net of income taxes) related to right-of-use assets.

(3) During the year ended October 31, 2023, the Bank recorded $35 million in litigation expenses ($26 million net of income taxes) to resolve litigations and other disputes arising from ongoing or potential claims against the Bank.

(4) During the year ended October 31, 2023, the Bank recorded a $25 million expense ($18 million net of income taxes) related to the retroactive impact of changes 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).

(5) During the year ended October 31, 2023, the Bank recorded $15 million in charges ($11 million net of income taxes) for contract termination penalties and for provisions for onerous contracts.

(6) During the year ended October 31, 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 50.

Presentation of Basic and Diluted Earnings per Share – Adjusted

Year ended October 31 (Canadian dollars)	2023	2022
Basic earnings per share	**$ 9.47**	$ 9.72
Gain on the fair value remeasurement of an equity interest[1]	(0.20)	–
Impairment losses on intangible assets and premises and equipment[2]	0.19	–
Litigation expenses[3]	0.08	–
Expense related to changes to the *Excise Tax Act*[4]	0.05	–
Provisions for contracts[5]	0.03	–
Income taxes related to the Canadian government's 2022 tax measures[6]	0.07	–
Basic earnings per share – Adjusted	**$ 9.69**	$ 9.72
Diluted earnings per share	**$ 9.38**	$ 9.61
Gain on the fair value remeasurement of an equity interest[1]	(0.20)	–
Impairment losses on intangible assets and premises and equipment[2]	0.19	–
Litigation expenses[3]	0.08	–
Expense related to changes to the *Excise Tax Act*[4]	0.05	–
Provisions for contracts[5]	0.03	–
Income taxes related to the Canadian government's 2022 tax measures[6]	0.07	–
Diluted earnings per share – Adjusted	**$ 9.60**	$ 9.61

(1) During the year ended October 31, 2023, the Bank concluded that it had lost significant influence over TMX and therefore 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. Upon the fair value measurement, a gain of $91 million ($67 million net of income taxes) was recorded.
(2) During the year ended October 31, 2023, the Bank recorded $75 million in intangible asset impairment losses ($54 million net of income taxes) on technology development for which the Bank has decided to cease its use or development, and it recorded $11 million in premises and equipment impairment losses ($8 million net of income taxes) related to right-of-use assets.
(3) During the year ended October 31, 2023, the Bank recorded $35 million in litigation expenses ($26 million net of income taxes) to resolve litigations and other disputes arising from ongoing or potential claims against the Bank.
(4) During the year ended October 31, 2023, the Bank recorded a $25 million expense ($18 million net of income taxes) related to the retroactive impact of changes 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).
(5) During the year ended October 31, 2023, the Bank recorded $15 million in charges ($11 million net of income taxes) for contract termination penalties and for provisions for onerous contracts.
(6) During the year ended October 31, 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 50.

Presentation of Non-Trading Net Interest Income – Adjusted

Year ended October 31 (millions of Canadian dollars)	2023	2022
Net interest income – Adjusted	3,918	5,505
Less: Net interest (loss) income related to trading activities on a taxable equivalent basis	(1,495)	911
Net interest income, non-trading – Adjusted	**5,413**	4,594

Financial Disclosure

Disclosure Controls and Procedures

The Bank's financial information is prepared with the support of a set of disclosure controls and procedures (DC&P) that are implemented by the President and Chief Executive Officer (CEO) and by the Chief Financial Officer and Executive Vice-President, Finance (CFO). During the year ended October 31, 2023, in accordance with *National Instrument 52-109 Certification of Disclosure in Issuers' Annual and Interim Filings* (National Instrument 52-109) released by the CSA, the design and operation of these controls and procedures were evaluated to determine their effectiveness.

As at October 31, 2023, the CEO and the CFO confirmed the effectiveness of the DC&P. These controls are designed to provide reasonable assurance that the information disclosed in annual and interim filings and in other reports filed or submitted under securities legislation is recorded, processed, summarized, and reported within the time periods specified by that legislation. These controls and procedures are also designed to ensure that such information is accumulated and communicated to the Bank's management, including its signing officers, as appropriate, to allow for timely decisions regarding disclosure.

This *Annual Report* was reviewed by the Bank's Disclosure Committee, Audit Committee, and the Board of Directors (the Board), which approved it prior to publication.

Internal Control Over Financial Reporting

The internal control over financial reporting (ICFR) is designed to provide reasonable assurance that the financial information presented is reliable and that the consolidated financial statements were prepared in accordance with GAAP, which are based on IFRS, unless indicated otherwise as explained on pages 14 to 19 of this MD&A. Due to inherent limitations of internal controls, the ICFR may not prevent or detect all misstatements in a timely manner.

The CEO and the CFO oversaw the evaluation work performed on the design and operation of the Bank's ICFR in accordance with National Instrument 52-109. The ICFR was evaluated in accordance with the control framework of the Committee of Sponsoring Organizations of the Treadway Commission (COSO — 2013) for financial controls and in accordance with the control framework of the Control Objectives for Information and Related Technologies (COBIT) for information technology general controls.

Based on the evaluation results, the CEO and CFO concluded, as at October 31, 2023, that there are no material weaknesses, that the ICFR is effective and provides reasonable assurance that the financial reporting is reliable, and that the Bank's consolidated financial statements were prepared in accordance with GAAP.

Changes to Internal Control Over Financial Reporting

The CEO and CFO also undertook work that enabled them to conclude that, during the year ended October 31, 2023, no changes were made to the ICFR that have materially affected, or are reasonably likely to materially affect, the design or operation of the ICFR.

Disclosure Committee

The Bank's Disclosure Committee assists the CEO and CFO by ensuring the design, implementation, and operation of the DC&P and ICFR. In so doing, the committee ensures that the Bank is meeting its disclosure obligations under current regulations and that the CEO and CFO are producing the requisite certifications.

Overview

Highlights

As at October 31 or for the year ended October 31 (millions of Canadian dollars, except per share amounts)	2023	2022	% change
Operating results			
Total revenues	10,170	9,652	5
Income before provisions for credit losses and income taxes	4,369	4,422	(1)
Net income	3,335	3,383	(1)
Net income attributable to the Bank's shareholders and holders of other equity instruments	3,337	3,384	(1)
Return on common shareholders' equity[1]	16.5 %	18.8 %	
Dividend payout ratio[1]	42.0 %	36.8 %	
Earnings per share			
Basic	$ 9.47	$ 9.72	(3)
Diluted	9.38	9.61	(2)
Operating results – Adjusted[2]			
Total revenues – Adjusted[2]	10,658	9,934	7
Income before provisions for credit losses and income taxes – Adjusted[2]	5,018	4,704	7
Net income – Adjusted[2]	3,409	3,383	1
Return on common shareholders' equity – Adjusted[3]	16.8 %	18.8 %	
Dividend payout ratio – Adjusted[3]	41.1 %	36.8 %	
Operating leverage – Adjusted[3]	(0.5) %	2.1 %	
Efficiency ratio – Adjusted[3]	52.9 %	52.6 %	
Earnings per share – Adjusted[2]			
Basic	$ 9.69	$ 9.72	–
Diluted	9.60	9.61	–
Common share information			
Dividends declared	$ 3.98	$ 3.58	11
Book value[1]	60.68	55.24	
Share price			
High	103.58	105.44	
Low	84.97	83.12	
Close	86.22	92.76	
Number of common shares *(thousands)*	338,285	336,582	
Market capitalization	29,167	31,221	
Balance sheet and off-balance-sheet			
Total assets	423,578	403,740	5
Loans and acceptances, net of allowances	225,443	206,744	9
Deposits	288,173	266,394	8
Equity attributable to common shareholders	20,526	18,594	10
Assets under administration[1]	652,631	616,165	6
Assets under management[1]	120,858	112,346	8
Regulatory ratios under Basel III[4]			
Capital ratios			
Common Equity Tier 1 (CET1) capital ratio	13.5 %	12.7 %	
Tier 1	16.0 %	15.4 %	
Total	16.8 %	16.9 %	
Leverage ratio	4.4 %	4.5 %	
TLAC ratio[4]	29.2 %	27.7 %	
TLAC leverage ratio[4]	8.0 %	8.1 %	
Liquidity coverage ratio (LCR)[4]	155 %	140 %	
Net stable funding ratio (NSFR)[4]	118 %	117 %	
Other information			
Number of employees – Worldwide (full-time equivalent)	28,916	27,103	7
Number of branches in Canada	368	378	(3)
Number of banking machines in Canada	944	939	1

(1) See the Glossary section on pages 124 to 127 for details on the composition of these measures.
(2) See the Financial Reporting Method section on pages 14 to 19 for additional information on non-GAAP financial measures.
(3) See the Financial Reporting Method section on pages 14 to 19 for additional information on non-GAAP ratios.
(4) See the Financial Reporting Method section on pages 14 to 19 for additional information on capital management measures.

About National Bank

The Bank carries out its activities in four business segments: Personal and Commercial, Wealth Management, Financial Markets as well as U.S. Specialty Finance and International (USSF&I), 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. For additional information, see the Business Segment Analysis section of this MD&A.

Objectives and 2023 Results

When setting its objectives, the Bank aims for a realistic challenge in the prevailing business environment by considering such factors as changes in banking industry financial results as well as the Bank's business development plan. When the Bank sets its medium-term objectives, it does not take into consideration specified items, if any, which are not reflective of the underlying financial performance of the Bank's operations. Management therefore excludes specified items when assessing the Bank's performance against its objectives.

For fiscal 2023, the Bank recorded $3,335 million in net income compared to $3,383 million in fiscal 2022, and its diluted earnings per share stood at $9.38 compared to $9.61 in fiscal 2022. The Bank's return on common shareholders' equity (ROE) was 16.5% in fiscal 2023 versus 18.8% in fiscal 2022. As for its adjusted diluted earnings per share, it stood at $9.60 in fiscal 2023, relatively stable compared to the $9.61 posted in fiscal 2022. Furthermore, adjusted ROE was 16.8% in fiscal 2023 compared to 18.8% in fiscal 2022.

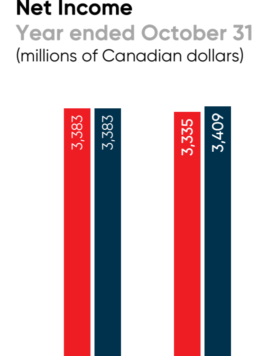
The following table compares the Bank's medium-term objectives with its fiscal 2023 results.

	Medium-Term Objectives (%)	2023 Results
Growth in diluted earnings per share – Adjusted[1]	5 – 10	(0.1)%
ROE – Adjusted[2]	15 – 20	16.8%
Dividend payout ratio – Adjusted[2]	40 – 50	41.1%
CET1 capital ratio[3]	Strong capital level	13.5%
Leverage ratio[3]	Strong capital level	4.4%

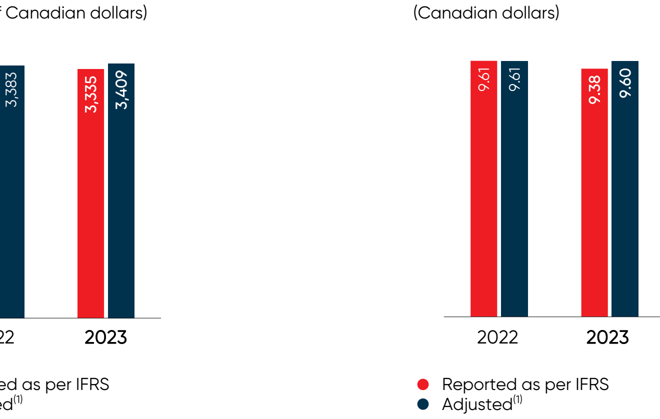
The Bank's financial results met all of its medium-term objectives, except for growth in adjusted diluted earnings per share. Adjusted diluted earnings per share for fiscal 2023 did not increase year over year and is below target due to higher provisions for credit losses, which more than offset the strong performance by all the business segments. For fiscal 2023, adjusted ROE was in the lower range of the target. The adjusted dividend payout ratio fell within the target distribution range as a result of higher dividends paid during the fiscal year. The CET1 capital ratio and the leverage ratio, at 13.5% and 4.4%, respectively, also met the objectives.

The Bank also examines its performance using the efficiency ratio and operating leverage. For fiscal 2023, the efficiency ratio was 57.0% compared to 54.2% in fiscal 2022, a deterioration that was notably due to the adverse effect of the specified items reported in *Non-interest expenses* in 2023. As for the adjusted efficiency ratio, it stood at 52.9% in fiscal 2023 compared to 52.6% in fiscal 2022, demonstrating disciplined expense management by all the Bank's segments in a more difficult economic environment. Also for fiscal 2023, operating leverage and adjusted operating leverage were (5.5)% and (0.5)%, respectively.

Net Income
Year ended October 31
(millions of Canadian dollars)



Diluted Earnings Per Share
Year ended October 31
(Canadian dollars)



Efficiency Ratio[4]
Year ended October 31
(%)

(1) See the Financial Reporting Method section on pages 14 to 19 for additional information on non-GAAP financial measures.
(2) See the Financial Reporting Method section on pages 14 to 19 for additional information on non-GAAP ratios.
(3) See the Financial Reporting Method section on pages 14 to 19 for additional information on capital management measures.
(4) See the Glossary section on pages 124 to 127 for details on the composition of these measures.

Dividends
For fiscal 2023, the Bank declared $1,344 million in dividends to common shareholders (2022: $1,206 million), representing 42.0% of net income attributable to common shareholders (2022: 36.8%) and representing 41.1% of adjusted net income attributable to common shareholders (2022: 36.8%).

Solid Capital Levels[1]

As at October 31, 2023, the Bank's CET1, Tier 1, and Total capital ratios were, respectively, 13.5%, 16.0% and 16.8%, 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 the credit and operational risk frameworks. These factors were partly offset by growth in RWA and by the end of the transitional measures applicable to expected credit loss provisioning implemented by OSFI at the beginning of the COVID-19 pandemic. The Total capital ratio increased due to the same factors mentioned above, but the increase was more than offset by the $750 million redemption of medium-term notes on February 1, 2023.

As at October 31, 2023, the leverage ratio was 4.4% compared to 4.5% as at October 31, 2022. The decrease in the leverage ratio was 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.

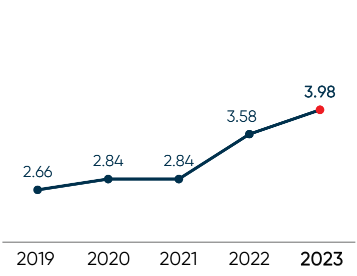
High-Quality Loan Portfolio

Loans and acceptances, net of allowances for credit losses, accounted for 53% of the Bank's total assets and amounted to $225.4 billion as at October 31, 2023. For fiscal 2023, the Bank recorded $397 million in provisions for credit losses compared to $145 million in fiscal 2022. This increase was due to higher provisions for credit losses on non-impaired loans resulting from loan portfolio growth, from the migration of credit risk, and from updates and revisions to the probability weightings of scenarios, reflecting uncertainty in the macroeconomic outlook, uncertainties such as high inflationary pressure, high interest rates, and geopolitical instability. As for provisions for credit losses on impaired loans excluding POCI[1] loans, they increased year over year; these increases came from Personal Banking (including credit card receivables) and Commercial Banking, reflecting a normalization of credit risk, and from the USSF&I segment, essentially attributable to the Credigy subsidiary. Provisions for credit losses on POCI loans were down year over year due to favourable remeasurements of certain Credigy portfolios as well as to recoveries of credit losses following repayments of Commercial Banking POCI loans. Gross impaired loans totalled $1,584 million as at October 31, 2023 compared to $1,271 million as at October 31, 2022 and represented 0.70% of total loans and acceptances.

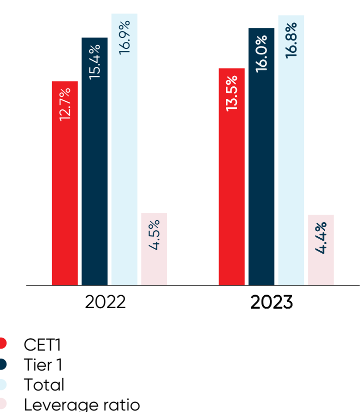
Risk Profile

As at October 31 or for the year ended October 31 (millions of Canadian dollars)	2023		2022	
Provisions for credit losses	**397**		145	
Provisions for credit losses as a % of average loans and acceptances[2]	**0.18**	**%**	0.07	%
Provisions for credit losses on impaired loans excluding POCI loans as a % of average loans and acceptances[2]	**0.11**	**%**	0.07	%
Net write-offs excluding POCI loans as a % of average loans and acceptances[2]	**0.07**	**%**	0.10	%
Gross impaired loans as a % of total loans and acceptances[2]	**0.70**	**%**	0.61	%
Gross impaired loans	**1,584**		1,271	
Net impaired loans	**1,276**		1,030	

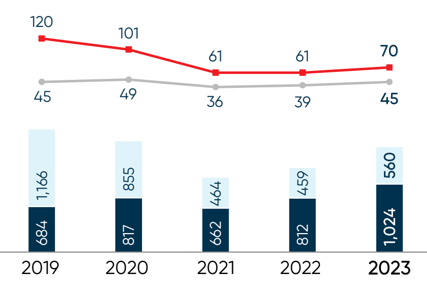
Annual Dividend Per Common Share
Year ended October 31
(Canadian dollars)



Evolution of Regulatory Ratios Under Basel III[1]
As at October 31



Gross Impaired Loans
As at October 31
(millions of Canadian dollars)



Impaired loans – Stage 3
Impaired loans – POCI
Gross impaired loans as a % of total loans and acceptances (bps)[2]
Gross impaired loans exlcuding POCI as a % of total loans and acceptances (bps)[2]

(1) See the Financial Reporting Method section on pages 14 to 19 for additional information on capital management measures.
(2) See the Glossary section on pages 124 to 127 for details on the composition of these measures.

Economic Review and Outlook

Global Economy

Global manufacturing activity has slowed considerably of late, which appears to be impacting European plants in particular. Unfortunately, this weakness has been exacerbated by the European Central Bank's efforts to bring inflation down to the targeted level. These combined factors explain why the eurozone's GDP contracted during the third quarter of 2023. However, given that the non-annualized decrease of 0.1% came on the heels of mediocre results in previous quarters, it led to zero annual growth. In the past, such lacklustre growth over a 12-month period tended to herald a recession. This is what we expect to see again. Meanwhile, China continues to suffer setbacks due to a real estate crisis although it would appear that the Chinese government has finally decided to take the necessary steps to boost demand and avoid a deflationary spiral. On October 24, 2023, the authorities approved the issuance of an additional one thousand billion yuan (0.8% of GDP) of central government bonds to fund various recovery initiatives. Despite these announcements, we remain prudent and believe that after barely achieving its 5.0%[(1)] growth objective this year, China will see somewhat weaker growth in 2024. The global economy, for its part, is expected to grow by 3.0%[(1)] this year, followed by only 2.2%[(1)] growth next year.

U.S. GDP figures for the third quarter of 2023 point to 4.9% annualized growth—the best result in two years. While we recognize that the U.S. economy is showing surprising resilience in the face of the significant U.S. Federal Reserve (the Fed) monetary tightening, we still have some reservations regarding how long the current growth trend will last. Our doubts are largely attributable to the fact that higher household spending in the third quarter was not accompanied by an equivalent increase in disposable income, instead resulting from the sharp decline in the savings rate—which is counterintuitive in an environment with higher interest rates. This decline suggests that consumers have been forced to live beyond their means in the third quarter. The most recent credit data confirm this assumption, with a significant increase in the percentage of consumer loans that fell into serious delinquency in the third quarter, even before the resumption of student loan payments in the fourth quarter. A slowdown in consumer spending therefore seems inevitable, although the extent will depend on the resilience of the labour market. While the labour market has remained quite solid until now, a number of leading indicators point to a slowdown in the months to come, with sharp declines in hours worked and the job vacancy rate. We have some reservations regarding the scenario presented by the Fed, in which a mere slowdown would rebalance supply and demand. While the previous interest rate hikes will continue to impact the U.S. economy, we expect U.S. GDP to contract in the first half of 2024—a scenario that would result in only 0.3%[(1)] growth next year.

Canadian Economy

In Canada, it appears that the rate hikes announced since the start of the monetary tightening cycle are starting to produce results. Preliminary data published by Statistics Canada suggest zero growth in the third quarter of 2023—a particularly weak performance when soaring demographic growth is taken into consideration. In the past four quarters, per capita GDP decreased by 2.4%, something which, historically, was only seen in a recession. A slowing labour market is also evident, with hiring not keeping pace with demographic growth. As a result, after reaching a cyclical low of 4.9%, the unemployment rate jumped eight-tenths of a percentage point to 5.7% in October. An increase of such magnitude, other than in a recessionary period in Canada, has been seen once since the early 1980s, that is, when the tech bubble burst in 2001. This is even more concerning in a broader context where the rate hikes announced until now have not produced their full impact on the economy. According to our calculations, no less than 42% of the impacts of interest rate hikes have yet to be felt in terms of consumption. Moreover, with no apparent signs of an economic recovery in the months to come, the level of confidence among consumers and small and medium-sized businesses will be more akin to levels seen during a recession. In this broader context, a contraction in GDP cannot be ruled out in the months to come, which would lead to a stagnant economy in 2024[(1)].

Quebec Economy

The Quebec economy experienced a difficult second quarter compared to the rest of the country in terms of economic growth, which declined by 1.9% compared to a slight decline for Canada as a whole (-0.2%). In the next few quarters, weaker demographic growth than in the rest of Canada and the growing impact of interest rate hikes will continue to temper growth. We nonetheless remain confident that this sluggish performance is temporary and believe that Quebec's economy could be more resilient relatively speaking. Quebec households are carrying less debt than in the rest of Canada and, therefore, are less susceptible to interest payment shock. Moreover, housing is more accessible in Quebec compared to elsewhere in Canada, and the predominant use of hydroelectricity means that households are less exposed to soaring electricity costs. Quebec also has a highly diversified economy and the government provides a series of fiscal support measures. Finally, Quebec's real policy rate (defined as the policy rate minus inflation and not including groceries and energy) was the lowest among all provinces in September, indicating that Quebec's monetary policy is less restrictive. When all these factors are taken into account, we predict that Quebec's economy will not grow in 2024[(1)], which is consistent with the rest of Canada in spite of less favourable demographic growth. According to these same predictions, Quebec's unemployment rate should remain among the lowest of all ten provinces.

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

Financial Analysis

Consolidated Results

Year ended October 31 (millions of Canadian dollars)	2023	2022	% change
Operating results			
Net interest income	3,586	5,271	(32)
Non-interest income	6,584	4,381	50
Total revenues	10,170	9,652	5
Non-interest expenses	5,801	5,230	11
Income before provisions for credit losses and income taxes	4,369	4,422	(1)
Provisions for credit losses	397	145	
Income before income taxes	3,972	4,277	(7)
Income taxes	637	894	(29)
Net income	3,335	3,383	(1)
Diluted earnings per share *(dollars)*	9.38	9.61	(2)
Taxable equivalent basis[1]			
Net interest income	332	234	
Non-interest income	247	48	
Income taxes	579	282	
Impact of taxable equivalent basis on net income	–	–	
Specified items[1]			
Gain on the fair value remeasurement of an equity interest	91	–	
Impairment losses on premises and equipment and intangible assets	(86)	–	
Litigation expenses	(35)	–	
Expense related to changes to the *Excise Tax Act*	(25)	–	
Provisions for contracts	(15)	–	
Specified items before income taxes	(70)	–	
Income taxes related to the Canadian government's 2022 tax measures	24	–	
Income taxes on specified items	(20)	–	
Specified items after income taxes	(74)	–	
Operating results – Adjusted[1]			
Net interest income – Adjusted	3,918	5,505	(29)
Non-interest income – Adjusted	6,740	4,429	52
Total revenues – Adjusted	10,658	9,934	7
Non-interest expenses – Adjusted	5,640	5,230	8
Income before provisions for credit losses and income taxes – Adjusted	5,018	4,704	7
Provisions for credit losses	397	145	
Income before income taxes – Adjusted	4,621	4,559	1
Income taxes – Adjusted	1,212	1,176	3
Net income – Adjusted	3,409	3,383	1
Diluted earnings per share – Adjusted *(dollars)*	9.60	9.61	–
Average assets[2]	430,646	393,847	9
Average loans and acceptances[2]	215,976	194,340	11
Average deposits[2]	284,570	258,929	10
Operating leverage[3]	(5.5) %	1.4 %	
Operating leverage – Adjusted[4]	(0.5) %	2.1 %	
Efficiency ratio[3]	57.0 %	54.2 %	
Efficiency ratio – Adjusted[4]	52.9 %	52.6 %	
Net interest margin, non-trading – Adjusted[4]	2.15 %	1.96 %	

(1) See the Financial Reporting Method section on pages 14 to 19 for additional information on non-GAAP financial measures.
(2) Represents an average of the daily balances for the period.
(3) See the Glossary section on pages 124 to 127 for details on the composition of these measures.
(4) See the Financial Reporting Method section on pages 14 to 19 for additional information on non-GAAP ratios.

Analysis of Consolidated Results

Financial Results

For fiscal 2023, the Bank's net income totalled $3,335 million, down 1% from $3,383 million in fiscal 2022. Revenue growth in all of the business segments was more than offset by higher non-interest expenses (partly due to the specified items[1] recorded during fiscal 2023) and by significantly higher provisions for credit losses. The fiscal 2023 income before provisions for credit losses and income taxes was down 1% compared to fiscal 2022.

As for adjusted net income, it totalled $3,409 million in fiscal 2023, up 1% from $3,383 million in fiscal 2022. The fiscal 2023 specified items had a $74 million unfavourable impact on net income in fiscal 2023. Revenue growth in all of the business segments was offset by higher non-interest expenses and higher provisions for credit losses. As for adjusted income before provisions for credit losses and income taxes, it rose 7% year over year.

Total Revenues

For fiscal 2023, the Bank's total revenues amounted to $10,170 million versus $9,652 million in fiscal 2022, a $518 million or 5% increase that was driven by total revenue growth in all of the Bank's business segments. For additional information on total revenues, see Table 2 on page 116. As for adjusted total revenues, they amounted to $10,658 million in fiscal 2023, up $724 million or 7% from $9,934 million in fiscal 2022.

Net Interest Income

For fiscal 2023, the Bank's net interest income totalled $3,586 million, down 32% from $5,271 million in fiscal 2022 (see Table 3, page 116). Adjusted net interest income was $3,918 million in fiscal 2023, down 29% from $5,505 million in fiscal 2022.

In the Personal and Commercial segment, net interest income totalled $3,321 million in fiscal 2023, a $456 million or 16% year-over-year increase that was essentially driven by a higher net interest margin (owing to interest rate hikes), which was 2.35% in 2023 versus 2.15% in 2022 and mainly due to the deposit margin. The increase was also driven by year-over-year growth in loans and deposits, which rose 6% and 5%, respectively. The loan growth came mainly from mortgage credit and business and government lending. In the Wealth Management segment, net interest income totalled $778 million, a 31% year-over-year increase that was attributable to the interest rate hikes that occurred in fiscal years 2023 and 2022.

In the Financial Markets segment, net interest income on a taxable equivalent basis was down considerably from fiscal 2022, mainly due to trading activities, and should be examined together with the other items of trading activity revenues. In the USSF&I segment, net interest income rose $42 million or 4% year over year, essentially due to business growth at the ABA Bank subsidiary, notably sustained growth in loans.

Non-Interest Income

For fiscal 2023, the Bank's non-interest income totalled $6,584 million, up 50% from $4,381 million in fiscal 2022. For additional information on non-interest income, see Table 4 on page 117. As for adjusted non-interest income, it totalled $6,740 million in fiscal 2023, up 52% year over year.

The fiscal 2023 revenues from underwriting and advisory fees were up 17% year over year, notably due to capital markets activities and merger and acquisition activity in the Financial Markets segment. Revenues from securities brokerage commissions were down 15% year over year, essentially due to a decrease in commissions on transactions in the Wealth Management segment. Combined, mutual fund revenues and revenues from investment management and trust service fees totalled $1,583 million, down $1 million year over year.

Combined, the fiscal 2023 credit fee revenues and revenues from acceptances and letters of credit and guarantee rose $84 million year over year owing to growth in credit lending at Commercial Banking, in the Financial Markets segment, and at Credigy. In addition, card revenues grew 9% year over year due to a notable increase in purchasing volume, and revenues from deposit and payment service charges rose 1%.

(1) See the Financial Reporting Method section on pages 14 to 19 for additional information on non-GAAP financial measures.

Non-interest income related to trading activity on a taxable equivalent basis totalled $2,943 million in fiscal 2023, up from $596 million in fiscal 2022 (Table 5, page 117). Including the portion recorded in net interest income, trading activity revenues on a taxable equivalent basis amounted to $1,448 million in fiscal 2023, a $59 million year-over-year decrease that was attributable to equity securities revenues, whereas there were increases in revenues from fixed-income securities and revenues from commodities and foreign exchange activities in the Financial Markets segment. The trading activity revenues on a taxable equivalent basis from the Bank's other business segments decreased year over year.

The fiscal 2023 gains on non-trading securities were down $43 million year over year, mainly due to business activity at Financial Markets and to Treasury activities. Insurance revenues were up $13 million year over year, reflecting revisions to actuarial reserves. Foreign exchange revenues and the share in the net income of associates and joint ventures decreased by $28 million and $17 million, respectively, year over year. Lastly, other revenues amounted to $261 million in fiscal 2023, a $19 million year-over-year increase that was notably due to a $91 million gain recorded upon the fair value remeasurement of an equity interest, partly offset by a higher unfavourable impact of a fair value remeasurement of certain Credigy portfolios during fiscal 2022.

Non-Interest Expenses

For fiscal 2023, the Bank's non-interest expenses stood at $5,801 million, up $571 million or 11% from fiscal 2022 (Table 6, page 118). They included the following specified items: $86 million in impairment losses on premises and equipment and intangible assets, $35 million in litigation expenses, a $25 million expense related to changes to the *Excise Tax Act,* and $15 million in provisions for contracts. As for adjusted non-interest expenses, they stood at $5,640 million in fiscal 2023, up $410 million or 8% from non-interest expenses of $5,230 million in fiscal 2022.

Compensation and employee benefits stood at $3,452 million in fiscal 2023, a 5% year-over-year increase that was mainly due to wage growth and a greater number of employees. Occupancy expense, including amortization expense on premises and equipment, was also up, partly due to the expanding banking network at ABA Bank, to expenses related to the Bank's new head office building, and to impairment losses on premises and equipment. An increase in technology expenses, including amortization, came from the significant investments made to support the Bank's technological evolution and business development plan as well as from the intangible asset impairment losses recorded in fiscal 2023. The fiscal 2023 communication expenses remained relatively stable year over year, whereas professional fees were up slightly. In addition, higher advertising and business development expenses came from travel expenses, as activities with clients resumed, and from an increase in advertising expenses. Other expenses were also up year over year due in part to litigation expenses, an expense related to changes to the *Excise Tax Act,* and provisions for contracts recorded during fiscal 2023.

Provisions for Credit Losses

For fiscal 2023, the Bank recorded $397 million in provisions for credit losses compared to $145 million in fiscal 2022 (Table 7, page 119). The increase came mainly from a $174 million increase in provisions for credit losses on non-impaired loans resulting from growth in the loan portfolios, a migration of credit risk, a recalibration of certain risk parameters, and updates and revisions to the probability weightings of scenarios, reflecting the uncertainties in the macroeconomic outlook, uncertainties such as rising inflationary pressure, high interest rates, and geopolitical instability. As for provisions for credit losses on impaired loans excluding POCI(1) loans, they stood at $245 million, rising $107 million year over year; these increases came from Personal Banking (including credit card receivables) and Commercial Banking, which rose $44 million and $35 million, respectively, reflecting a normalization of credit risk, and from the USSF&I segment, which rose $28 million, essentially attributable to the Credigy subsidiary. Provisions for credit losses on POCI loans were down $29 million year over year due to favourable remeasurements of certain Credigy portfolios during fiscal 2023 as well as to recoveries of credit losses following repayments of POCI loans at Commercial Banking. For fiscal 2023, the provisions for credit losses on impaired loans excluding POCI loans(1) represented 0.11% of average loans and acceptances compared to 0.07% in fiscal 2022.

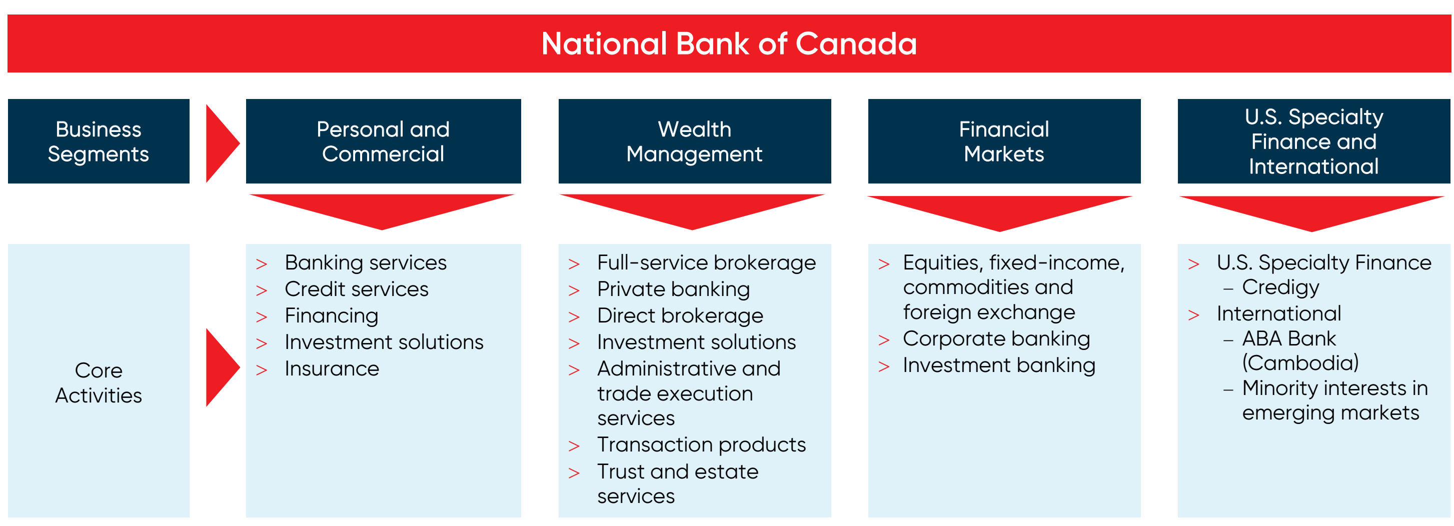
Income Taxes

Detailed information about the Bank's income taxes is provided in Note 24 to the consolidated financial statements. For fiscal 2023, income taxes stood at $637 million, representing an effective income tax rate of 16%, which compares to income taxes of $894 million and a 21% effective income tax rate in fiscal 2022. The 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 during fiscal 2023. These factors were 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 124 to 127 for details on the composition of these measures.

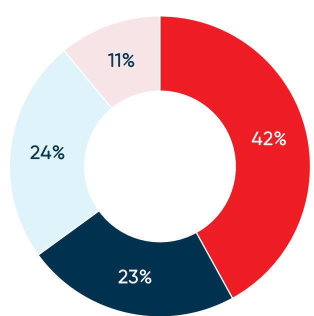
Business Segment Analysis

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



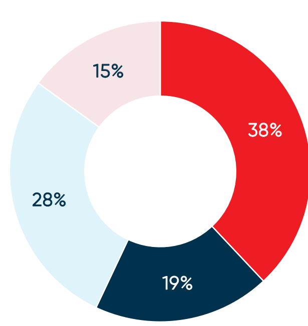
Other: Treasury activities, liquidity management, Bank funding, asset/liability management, Flinks Technology Inc. subsidiary activities (a fintech specialized in financial data aggregation and distribution), and corporate units.

Total Revenues by Business Segment[1]
Year ended October 31, 2023



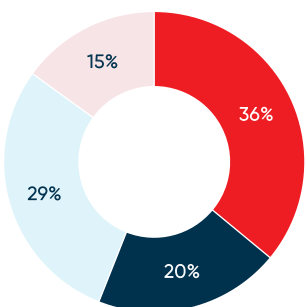
- Personal and Commercial (2022: 40%)
- Wealth Management (2022: 24%)
- Financial Markets (2022: 25%)
- USSF&I (2022: 11%)

Income Before Provisions for Credit Losses and Income Taxes by Business Segment[1]
Year ended October 31, 2023



- Personal and Commercial (2022: 36%)
- Wealth Management (2022: 20%)
- Financial Markets (2022: 29%) USSF&I (2022: 15%)

Net Income by Business Segment[1]
Year ended October 31, 2023



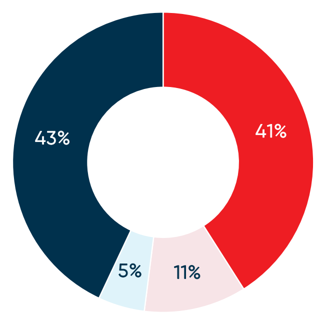
- Personal and Commercial (2022: 35%)
- Wealth Management (2022: 20%)
- Financial Markets (2022: 30%)
- USSF&I (2022: 15%)

(1) Excluding the *Other* heading.

Personal and Commercial

The Personal and Commercial segment meets the financial needs of close to 2.7 million individuals and over 147,000 businesses across Canada. These clients entrust the Bank to manage, invest, and safeguard their assets and to finance their projects. Clients turn to the Bank's experienced advisors who take the time to understand their specific needs and help them reach their financial goals. Thanks to the Bank's convenient self-banking channels, 368 branches, and 944 banking machines across Canada, clients can do their daily banking whenever and wherever they wish.

Total Revenues by Category
Year ended October 31, 2023



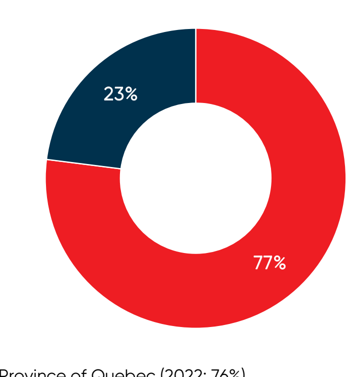
- Retail (2022: 42%)
- Payment Solutions (2022: 11%)
- Insurance (2022: 5%)
- Commercial Banking (2022: 42%)

$4,516 million
Total revenues

$2,006 million
Income before provisions for credit losses and income taxes

$1,282 million
Net income

Total Revenues by Geographic Distribution
Year ended October 31, 2023



- Province of Quebec (2022: 76%)
- Other provinces (2022: 24%)

Personal Banking
Personal Banking provides a complete range of financing and investment products and services to help clients reach their financial goals throughout every stage in their lives. It offers everyday transaction solutions, mortgage loans and home equity lines of credit, consumer loans, payment solutions, savings and investment solutions as well as a range of insurance products.

Commercial Banking
Commercial Banking serves the financial needs of small- and medium-sized enterprises (SMEs) and large corporations, helping them to achieve growth. It offers a full line of financial products and services, including credit, deposit, and investment solutions as well as international trade, foreign exchange transaction, payroll, cash management, insurance, electronic transaction, and complementary services. With deep roots in the entrepreneur community for over 160 years, Commercial Banking is the leading bank in the Quebec market.

Key Success Factors

- Strong penetration in our core Quebec market thanks to a full range of personal and commercial banking services.
- Well-established and enduring client relationships grounded in an ability to provide both advice and a full range of solutions tailored to specific client needs.
- Vast sales force in Quebec, consisting of both generalists and specialists, positioning the Bank to offer the best advice to clients.
- Unmatched closeness to Quebec entrepreneurs, with leading expertise in business lending and risk management solutions.
- Ability to meet all the needs facing businesses and entrepreneurs in collaboration with other Bank segments.

Economic and Market Review

In Canada, signs of an economic slowdown in response to rapidly rising interest rates are evident, with GDP essentially stagnating in recent months. Against a backdrop of galloping population growth, this is a major setback, reflected in a seven-tenths rise in the unemployment rate since April 2023. The impact of restrictive monetary policy has been particularly visible in the housing market, where sales are contracting due to deteriorating affordability despite strong population growth. In this context, and with purchasing power reduced by the recent surge in inflation, household confidence is at a lower level than in the last two recessions. According to surveys, businesses also share this pessimism, with a large proportion reporting weak domestic demand and a less optimistic sales outlook for the year ahead. This situation is reflected in a rapid slowdown in investment and hiring intentions. Given the lags in monetary policy transmission, the economy is set to weaken further in 2024. In Quebec, economic growth is also expected to be sluggish in 2024, but the province has the strengths to weather the current headwinds, including households with lower debt levels and a greater proportion of dual-income households.

The economic environment in 2023 and the outlook for 2024 are discussed in more detail in the Economic Review and Outlook section on page 24.

Objectives and Strategic Priorities

The Personal and Commercial segment is targeting growth by becoming a more simple, efficient bank focused on constantly improving the client experience.

<table>
<tr><th></th><th>2023 Achievements and Highlights</th><th>2024 Priorities</th></tr>
<tr><td>Accelerate net client acquisition</td><td>> Delivered unparalleled performance in terms of total client acquisition, notably through:
• Targeted strategies aimed at priority markets and our differentiated offerings to the professional, newcomer and young client segments.
• Greater contact frequency and more joint meetings with clients by our Commercial Banking and Private Banking 1859 (PB1859) sales forces to better serve entrepreneur clients and meet their business, family, and personal needs.
> Adopted more competitive pricing following a review of banking packages, the purpose being to meet our clients' digital needs.
> Launched a unique, digital appointment-booking capability free of any geographical constraints.
> Acquired the loan portfolio of the Canadian branch of the Silicon Valley Bank, thereby enhancing our Technology Activities and Health Sciences sector of activity.
> Enhanced our ESG impact by taking concrete action to promote the transition of clients to a sustainable environment and social inclusion.</td><td>> Enhance the visibility of our brand image across Canada by accentuating our distinguishing characteristics.
> Focus on our priority clientele and high-potential niche markets outside Quebec by developing our digital acquisition capabilities and by building on our personalized advice.
> Expand our sales and sales support teams in Western Canada for key sectors.
> Continue developing our offerings and joint Commercial Banking and PB1859 advice to generate business and market opportunities.
> Expand client support by improving the customer journey through innovative technological capabilities.
> Maintain a good proportion of our growth in CMHC insured loans in the Commercial Banking segment and maintain our mix of business activities.
> Strengthen the ESG culture and performance of our own activities in order to leverage client acquisition.</td></tr>
<tr><td>Improve client engagement</td><td>> Accelerated our shift to advice and synergy initiatives, resulting in more core clients and more clients conducting business with more than one segment of the Bank.
> Promoted savings among our clients by being the first bank to offer them a first home savings account (FHSA).
> Deployed significantly enhanced client interaction capabilities, enabling us to offer proactive advice through customer journeys and personalized advice banners.
> Enhanced our digital capabilities in order to improve the ability of clients to independently manage their personal finances, transactions, and personal profiles.
> Enhanced user experience and autonomy by modernizing the cash management features most used by our clients.
> Implemented a series of initiatives to ensure accessibility to our Client Contact Centres, in particular by setting up a dedicated, no-wait telephone line for joint Commercial Banking and PB1859 clients.
> Implemented a strategy of proactive support and advice for our clients most affected by the market fluctuations caused by rapidly rising rates, in particular to help them meet their mortgage obligations.</td><td>> Continue to improve our advisory services by focusing on learning and skills development for all our banking advisors.
> Develop new, modernized technological interfaces to provide our Commercial Banking clients with an enhanced, high-performance digital experience.
> Engage clients by relying on our conversational capabilities, personalized customer journeys, and proactive advice.
> Finalize the deployment of the New Experience across all our branches, supporting our experts and promoting digital engagement.
> Enhance our payment offering by modernizing our digital payment ecosystem.</td></tr>
</table>

	2023 Achievements and Highlights	2024 Priorities
Leverage our simplification, and enhance operational efficiency	> Continuously improved our customer journey, notably by: • Simplifying the experience when opening a bank account 100% remotely, thereby providing greater flexibility to clients. • Reducing disbursement times for commercial financing thanks to a reorganization of our work, streamlined business processes, and simplified support models. > Modernized our more sophisticated cash management product line to suit the needs of large Corporate Banking clients. > Simplified our support to clients in Western Canada with self-service solutions, flexible advisory services integrated into our virtual branch, and cashless branches.	> Operate closer to clients by reviewing our branch operational support structure and maximize sales force activities. > Modify our support model to better serve our Commercial Banking and PB1859 clients according to their needs. > Capitalize on our acceleration of digital services to simplify the transactional offering across all our channels. > Emphasize our high-potential investments in terms of operational efficiency and effectiveness. > Focus on the modernization and transformation of our Client Contact Centres to improve accessibility and client experience. > Continue automating our business processes and thereby enhance operational efficiency.

Segment Results – Personal and Commercial

Year ended October 31 (millions of Canadian dollars)	2023		2022[1]		% change
Net interest income	3,321		2,865		16
Non-interest income	1,195		1,169		2
Total revenues	4,516		4,034		12
Non-interest expenses	2,510		2,241		12
Income before provisions for credit losses and income taxes	2,006		1,793		12
Provisions for credit losses	238		97		
Income before income taxes	1,768		1,696		4
Income taxes	486		449		8
Net income	1,282		1,247		3
Less: Specified items after income taxes[2]	(49)		–		
Net income – Adjusted[2]	1,331		1,247		7
Net interest margin[3]	2.35	%	2.15	%	
Average interest-bearing assets[3]	141,458		133,543		6
Average assets[4]	148,511		140,300		6
Average loans and acceptances[4]	147,716		139,538		6
Net impaired loans[3]	285		193		48
Net impaired loans as a % of total loans and acceptances[3]	0.2	%	0.1	%	
Average deposits[4]	85,955		81,996		5
Efficiency ratio[3]	55.6	%	55.6	%	
Efficiency ratio – Adjusted[5]	54.1	%	55.6	%	

(1) For the year ended October 31, 2022, certain amounts were reclassified, notably due to a revised method for the sectoral allocation of technology investment expenses.
(2) See the Financial Reporting Method section on pages 14 to 19 for additional information on non-GAAP financial measures. During fiscal 2023, the segment recorded, in the *Non-interest expenses* item, $59 million in intangible asset impairment losses ($42 million net of income taxes) on technology development as well as charges of $9 million ($7 million net of income taxes) for contract termination penalties.
(3) See the Glossary section on pages 124 to 127 for details on the composition of these measures.
(4) Represents an average of the daily balances for the period.
(5) See the Financial Reporting Method section on pages 14 to 19 for additional information on non-GAAP ratios.

Financial Results

In the Personal and Commercial segment, net income totalled $1,282 million in fiscal 2023, a 3% increase from $1,247 million in fiscal 2022 that was due to growth of $482 million in the segment's total revenues, partly offset by higher non-interest expenses (including the fiscal 2023 specified items) and by significantly higher provisions for credit losses. As for the segment's adjusted net income in fiscal 2023, it totalled $1,331 million, up 7% year over year. For fiscal 2023, the segment's income before provisions for credit losses and income taxes amounted to $2,006 million, up 12% year over year, while its adjusted income before provisions for credit losses and income taxes rose 16%. The segment's total revenues grew year over year, essentially due to a $456 million increase in net interest income that was driven mainly by a higher deposit margin (partly offset by a lower loan margin) given the interest rate hikes that occurred during fiscal 2023. This increase had a favourable impact on the segment's net interest margin, which stood at 2.35% in fiscal 2023 versus 2.15% in fiscal 2022. The increase in net interest income also came from growth in personal and commercial loans and deposits.

For fiscal 2023, the Personal and Commercial segment's non-interest expenses stood at $2,510 million, a 12% year-over-year increase that was mainly due to $68 million in specified items recorded during fiscal 2023 as well as to higher compensation and employee benefits (resulting from wage growth), to greater investments made as part of the segment's technological evolution, and to increases in operations support charges. At 55.6%, the segment's efficiency ratio remained stable compared to October 31, 2022. As for the segment's adjusted non-interest expenses for fiscal 2023, they stood at $2,442 million, up 9% year over year. At 54.1%, the segment's 2023 adjusted efficiency ratio improved by 1.5 percentage points from 55.6% in 2022.

The segment recorded $238 million in provisions for credit losses in fiscal 2023, which is $141 million more than the $97 million recorded in fiscal 2022. This increase was mainly due to higher provisions for credit losses on impaired Personal Banking loans (including credit card receivables) and impaired Commercial Banking loans, reflecting a normalization of credit performance. As for the segment's provisions for credit losses on non-impaired loans, they were up due to growth in the loan portfolios, to the migration of credit risk, and to a less favourable macroeconomic outlook during fiscal 2023. Also during fiscal 2023, the segment recorded recoveries of credit losses on Commercial Banking's POCI loans as a result of loan repayments.

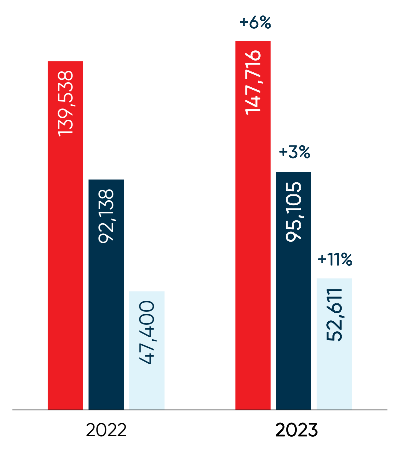
Personal Banking

Personal Banking's total revenues amounted to $2,539 million in fiscal 2023, an 8% increase from $2,360 million in fiscal 2022. Its net interest income increased, as there was 3% growth in loan volumes, 5% growth in deposit volumes, and a higher deposit margin that was partly offset by a lower loan margin. Non-interest income was also up, rising $17 million year over year, essentially due to higher credit card revenues given a notable increase in purchasing volume and higher insurance revenues (reflecting revisions to actuarial reserves). Personal Banking's non-interest expenses rose $188 million in fiscal 2023, mainly due to the fiscal 2023 specified items as well as to higher compensation and employee benefits (resulting from wage growth), to greater investments made as part of the segment's technological evolution, and to an increase in operations support charges.

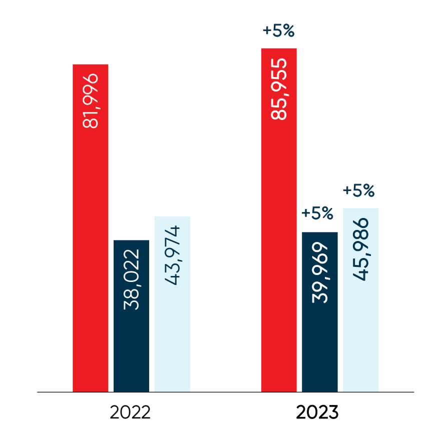
Commercial Banking

Commercial Banking's total revenues amounted to $1,977 million in fiscal 2023, rising 18% from $1,674 million in fiscal 2022. Net interest income was up, essentially due to an improved net interest margin on deposits given the interest rate hikes that occurred in fiscal 2023 as well as to 11% growth in loans and 5% growth in deposits. Non-interest income was also up, rising $9 million compared to fiscal 2022, mainly due to increases in revenues from bankers' acceptances, partly offset by a decrease in revenues from foreign exchange activities. Commercial Banking's non-interest expenses rose $81 million in fiscal 2023, mainly due to higher compensation and employee benefits (resulting from wage growth), to the fiscal 2023 specified items, and to an increase in operations support charges.

Average Loans and Acceptances
Year ended October 31
(millions of Canadian dollars)



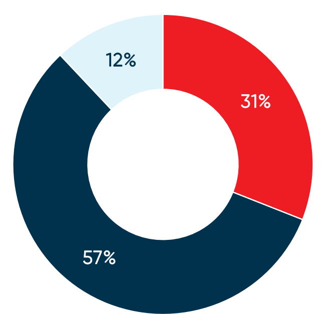
Average Deposits
Year ended October 31
(millions of Canadian Dollars)



Wealth Management

As a leader in Quebec and firmly established across Canada, the Wealth Management segment serves all market segments by emphasizing advisory-based service and close client relationships. It delivers a full range of wealth management products and solutions through an omnichannel distribution network and a differentiated business model. Wealth Management also provides services to independent advisors and institutional clients.

Total Revenues by Category
Year ended October 31, 2023



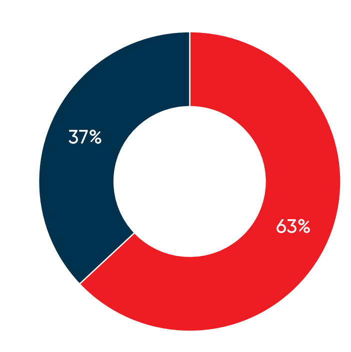
- Net interest income (2022: 25%)
- Fee-based services (2022: 60%)
- Transaction-based and other revenues (2022: 15%)

$2,521 million
Total revenues

$987 million
Income before provisions for credit losses and income taxes

$714 million
Net income

Total Revenues by Geographic Distribution
Year ended October 31, 2023



- Province of Quebec (2022: 63%)
- Other provinces (2022: 37%)

Full-Service Brokerage
Drawing on the largest network of investment advisors in Quebec, National Bank Financial Wealth Management (NBFWM) provides wealth management advisory services through 800-plus advisors at close to 100 service points across Canada. Its advisors serve their clients, proposing portfolio management services, financial and succession planning services, and insurance services while working in close collaboration with other segments of the Bank.

Private Banking
Private Banking 1859 (PB1859) offers highly personalized wealth management services and advice across Canada, helping affluent clients benefit from comprehensive management of their personal and family fortunes. As a true market leader in Quebec, PB1859 is continuing to expand throughout Canada with its extensive range of banking services, financial solutions and strategies for the protection, growth, and transmission of wealth.

Key Success Factors

- Leadership in Canada in securities custody and brokerage services for independent wealth management firms.
- Firmly established across Canada in full-service brokerage services.
- Ability to forge strong and lasting client relationships and help their assets grow with personalized solutions and advice at every life stage.
- High rate of satisfaction across our distribution channels.
- Proven track record and excellent reputation as a business partner to non-banking financial institutions.
- Strong synergies with the Personal and Commercial and Financial Markets segments, allowing a holistic service offering.

Direct Brokerage
National Bank Direct Brokerage (NBDB) offers a multitude of financial products and investment tools to self-directed investors across Canada through its online investment solution. NBDB helps customers manage their investments through digital platforms or by speaking directly to a representative on the phone.

Investment Solutions
National Bank Investments Inc. (NBI) manufactures and offers mutual funds, exchange-traded funds (ETFs), investment solutions, and services to consumers and institutional investors through the Bank's extended network. Thanks to its open architecture model, NBI is Canada's largest investment fund manager to entrust the management of its investments exclusively to external portfolio managers.

Administrative and Trade Execution Services
National Bank Independent Network (NBIN) is a Canadian leader in providing administrative services such as trade execution, custodial services, and brokerage solutions to many independent financial services firms across Canada, in particular to introducing brokers, portfolio managers, and investment fund managers.

Transaction Products
The Wealth Management segment provides independent advisors across Canada with a vast array of investment products, including guaranteed investment certificates (GICs), mutual funds, notes, structured products, and monetization, helping to support their own business needs and client relationships.

Trust and Estate Services
Through National Bank Trust Inc. (NBT), Wealth Management provides retail and institutional clients with turnkey services and solutions. Its team of experts offers a full range of high value-added services designed to consolidate, protect, and transfer its customers' wealth and give them peace of mind. NBT also provides integrated trustee and depository services as well as securities custody services.

Economic and Market Review

While the U.S. Federal Reserve's aggressive tightening of monetary policy appears to be coming to an end, the U.S. economy has been surprisingly resilient. The confluence of good economic growth and weakening price pressures has convinced proponents of the "immaculate disinflation" scenario that it is materializing. This has spurred gains in equity markets, notably the S&P 500, which has risen sharply since the start of the year. In Canada, the transmission of monetary policy to the economy has been more rapid, and S&P/TSX performance has therefore been more modest. However, it is premature to assert that the fight against inflation is over and that there is no longer any risk of economic damage. Given the lags in transmission and the low savings rate of U.S. households, the risks of recession remain high for 2024. On the housing front, signs of a slowdown are already noticeable on both sides of the border, as high interest rates have caused a sharp deterioration in affordability. Under the weight of declining purchasing power caused by high interest rates and inflation, consumer confidence has plummeted in recent months. Businesses share this sentiment, forecasting fewer sales and hiring in the months ahead.

The economic environment in 2023 and the outlook for 2024 are discussed in more detail in the Economic Review and Outlook section on page 24.

Objectives and Strategic Priorities

The Wealth Management segment will capitalize on the strength of the Bank's brand by generating sustained earnings growth, further improving client satisfaction, and maintaining high employee engagement. Wealth Management distinguishes itself in the market through its strategic positioning, offering an outstanding client experience with its advisory services, innovative solutions, and exceptional service delivered by agile and aligned multifunctional teams. This segment aims to continue penetrating this market across Canada through organic growth, targeted initiatives, and its unique market positioning.

	2023 Achievements and Highlights	2024 Priorities
Create highly engaged clients thanks to an exceptional advisory-based experience	> Leveraged our growth strategies (intersegment synergies, high-potential segments and markets). > Further developed a distinctive offering for clients who are in both our PB1859 and Commercial Banking sectors by adding differentiating revenue-generating components. > Continued to see improved results from our client satisfaction surveys. > Increased net client acquisition, exceeding forecasts in most areas of activity. > Developed new tools to help manage client relationships.	> Apply client knowledge to help meet expectations and use data responsibly. Continue developing analytic foundations in order to put data (360-degree holistic view) at the service of clients. > Foster strong client engagement with an advisory-driven experience. > Increase client acquisition activities in promising markets and rapidly growing segments. > Simplify our IT ecosystem and automate certain operating processes more quickly.
Have best-in-class investment and digital solutions	> Continued to develop new investment solutions to meet client needs (with an emphasis on responsible investing, ETFs and alternative solutions). > Continually simplified and improved digital solutions to reflect client needs, in particular brokerage clients. > Continued to improve our advisory solutions.	> Foster client engagement with enhanced digital capabilities. > Improve the advisor experience by developing and improving available digital capabilities. > Strengthen the client/advisor relationship through responsible investing and meet the growing appetite among investors for this type of investment. > Continue to develop fully integrated solutions to support advisors and independent firms.
Encourage entrepreneurial culture and talent development	> Created a team composed of members from all segments to propose major Diversity and Inclusion initiatives.	> Leverage our culture of integration to attract and retain talent. > Foster a culture of continuous professional development.

Segment Results – Wealth Management

Year ended October 31 (millions of Canadian dollars)	2023	2022[1]	% change
Net interest income	778	594	31
Fee-based revenues	1,432	1,429	–
Transaction and other revenues	311	352	(12)
Total revenues	2,521	2,375	6
Non-interest expenses	1,534	1,417	8
Income before provisions for credit losses and income taxes	987	958	3
Provisions for credit losses	2	3	(33)
Income before income taxes	985	955	3
Income taxes	271	254	7
Net income	714	701	2
Less: Specified items after income taxes[2]	(32)	–	
Net income – Adjusted[2]	746	701	6
Average assets[3]	8,560	8,440	1
Average loans and acceptances[3]	7,582	7,343	3
Net impaired loans[4]	8	15	(47)
Average deposits[3]	40,216	35,334	14
Efficiency ratio[4]	60.8 %	59.7 %	
Efficiency ratio – Adjusted[5]	59.1 %	59.7 %	

	2023	2022[1]	% change
Assets under administration[4]	652,631	616,165	6
Assets under management[4]			
Individual	72,245	65,214	11
Mutual funds	48,613	47,132	3
	120,858	112,346	8

(1) For the year ended October 31, 2022, certain amounts were reclassified, notably due to a revised method for the sectoral allocation of technology investment expenses.
(2) See the Financial Reporting Method section on pages 14 to 19 for additional information on non-GAAP financial measures. During fiscal 2023, the segment recorded, in the *Non-interest expenses* item, $8 million in intangible asset impairment losses ($6 million net of income taxes) on technology development as well as $35 million in litigation expenses ($26 million net of income taxes) to resolve litigations and other disputes on various ongoing or potential claims against the Bank.
(3) Represents an average of the daily balances for the period.
(4) See the Glossary section on pages 124 to 127 for details on the composition of these measures.
(5) See the Financial Reporting Method section on pages 14 to 19 for additional information on non-GAAP ratios.

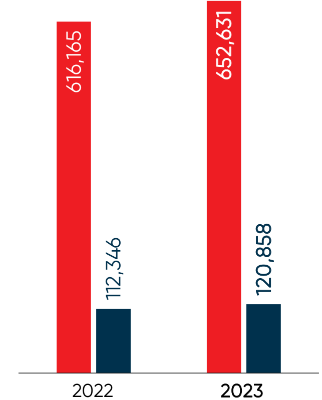
Financial Results

In the Wealth Management segment, net income totalled $714 million in fiscal 2023 compared to $701 million in fiscal 2022, a 2% increase that was due to growth in the segment's total revenues, partly offset by higher non-interest expenses (including the specified items recorded in fiscal 2023). As for the segment's adjusted net income in fiscal 2023, it totalled $746 million, up 6% from $701 million in fiscal 2022. The segment's total revenues amounted to $2,521 million in fiscal 2023, up 6% from $2,375 million in fiscal 2022. The segment's net interest income was up, rising $184 million or 31% as a result of the interest rate hikes that occurred during fiscal years 2023 and 2022. The fiscal 2023 fee-based revenues remained relatively stable compared to fiscal 2022. As for transaction and other revenues, they were down 12% year over year given a decrease in trading commissions during fiscal 2023.

The segment's non-interest expenses stood at $1,534 million in fiscal 2023 versus $1,417 million in fiscal 2022, for an 8% increase that was due to higher compensation and employee benefits, to higher technology expenses related to the segment's initiatives, and to $43 million in specified items recorded in fiscal 2023. At 60.8% in fiscal 2023, the segment's efficiency ratio deteriorated, essentially due to the fiscal 2023 specified items. As for the segment's adjusted non-interest expenses, they stood at $1,491 million, up 5% from $1,417 million in fiscal 2022. At 59.1%, the adjusted efficiency ratio improved by 0.6 percentage points from 59.7% in fiscal 2022.

Wealth Management recorded $2 million in provisions for credit losses in fiscal 2023 compared to $3 million recorded in fiscal 2022.

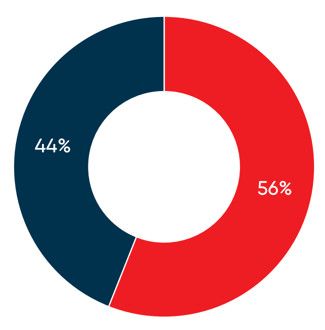
Assets Under Administration and Assets Under Management
Year ended October 31
(millions of Canadian dollars)



Financial Markets

The Financial Markets segment offers a complete suite of products and services to corporations, institutional clients, and public-sector entities. Whether providing comprehensive advisory services and research or capital markets products and services, the segment focuses on relationships with clients and their growth. Over 900 professionals serve clients through its offices in North America, Europe, the UK, and Asia.

Total Revenues by Category
Year ended October 31, 2023



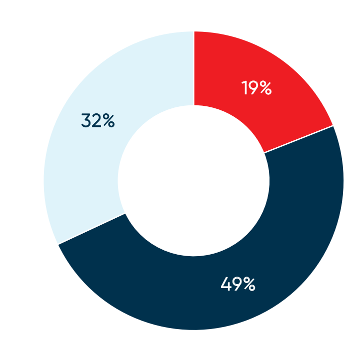
- Global Markets (2022: 61%)
- Corporate and Investment Banking (2022: 39%)

$2,656 million
Total revenues

$1,495 million
Income before provisions for credit losses and income taxes

$1,055 million
Net income

Total Revenues by Geographic Distribution
Year ended October 31, 2023



- Province of Quebec (2022: 31%)
- Other provinces (2022: 52%)
- Outside of Canada (2022: 17%)

Global Markets
Financial Markets is a Canadian leader in risk management solutions, structured products, and market-making in ETFs by volume. The segment offers solutions in the areas of fixed-income securities, currencies, equities, and commodities in order to mitigate the financial and business risks of clients. It also provides new product development expertise to asset managers and fund companies and supports their success by providing liquidity, research, and counterparty services. Financial Markets also provides tailored investment products across all asset classes to institutional and retail distribution channels.

Corporate and Investment Banking
Financial Markets provides corporate banking, advisory, and capital markets services. It offers loan origination and syndication to large corporations for project financing, merger and acquisition transactions, and corporate financing solutions. The segment is also an investment banking leader in Quebec and across Canada. Its comprehensive services include strategic advisory for financing and merger and acquisition initiatives as well as for debt and equity underwriting. It is the Canadian leader in government debt and corporate high-yield debt underwriting. Dominant in Quebec, the segment is the leader in debt underwriting for provincial and municipal governments across Canada while growing its national position in infrastructure and project financing. Financial Markets is active in securitization financing, mainly mortgages insured by the Government of Canada and mortgage-backed securities.

Key Success Factors

- Pan-Canadian franchise with established leadership in government debt underwriting and ETF market-making in addition to securities lending and recognized capabilities in risk management solutions, structured products, and equity derivatives.
- Client-centric business with a differentiated and diversified revenue mix.
- Sound risk management.
- Flexible approach to capital allocation and proven ability to adapt to evolving capital market conditions and to deliver consistent financial performance.
- Entrepreneurial culture: Integrated approach, teamwork, and alignment among all groups, including other segments of the Bank.

Economic and Market Review

In an attempt to curb inflation, central banks have tightened monetary policy considerably in recent months, historically the main cause of recessions in the G7 countries. Since this tightening has been highly synchronized, and the impact of interest rate hikes is usually felt with a lag, the risks of lackluster economic performance are high for the global economy in 2024. Slowing inflation means that interest rates are becoming increasingly restrictive in real terms. With the exception of the U.S., several economies are already showing signs of significant weakening, notably the eurozone and China. What's more, the geopolitical context remains uncertain, with rising tensions in the Middle East and the continuing war in Ukraine. Given this highly uncertain backdrop and the high cost of capital, North American companies are likely to be very cautious about investing and hiring, pointing to a sluggish year marked by high market volatility.

The economic environment in 2023 and the outlook for 2024 are discussed in more detail in the Economic Review and Outlook section on page 24.

Objectives and Strategic Priorities

	2023 Achievements and Highlights	2024 Priorities
Maintain our leadership in established businesses and leverage our strengths onto other businesses	> Ranked number one in Canadian government debt underwriting for a ninth consecutive year. > First leading role for a public sector client in the U.S. market with a joint lead role on an Ontario Teachers' Finance Trust US$1.5 billion 5-year bond offering. > Won the coveted 1-month and 3-month CORRA market-making mandates, which enabled us to participate in the Montréal Exchange's panel discussions on CORRA in various cities around the world. > Won Best Client Service at the 2023 Structured Products Intelligence Awards. > Received five awards at the inaugural Canadian ETF Express awards: • Best ETF Research Provider in Canada • Best Institutional ETF Broker in Canada • Best Market Maker/Authorised Participant – Equity ETFs in Canada • Best Market Maker/Authorised Participant – Fixed Income ETFs in Canada • Best Overall ETF Liquidity Provider/Market Maker in Canada	> Maintain our leadership through quality and innovation.
Carry on international expansion supported by an innovative offering	> Continued U.S. coverage enhancement in key sectors and distribution of select products. > National Bank Financial's inaugural role as a joint bookrunner on a World Bank (International Bank for Reconstruction and Development (IBRD)) US$500 million 7-year sustainable development floating-rate note. > Exclusive financial advisor to Triple Flag Precious Metals Corp. on its combination with Maverix Metals Inc. for a total consideration of US$606 million. The transaction positioned Triple Flag as a gold-focused, emerging senior streaming and royalty company, with a portfolio of 229 streams and royalties on 29 producing mines and 200 development- and exploration-stage projects, predominantly located in the Americas and Australia. > Financial advisor to Alpha Auto Group on its acquisition, by its related company Global Auto Holdings Limited, of UK-listed Lookers plc for £504 million. > Exclusive financial advisor to North American Construction Group Ltd. on its $395 million acquisition of Australian-based MacKellar Group.	> Assist our clients in their growth ambitions and funding needs.

	2023 Achievements and Highlights	2024 Priorities
Strengthen our leadership role in sustainable financing solutions	> Guided and advised our clients in their energy transitions. > Created the role of Head of Sustainable Finance in order to better spearhead our vision and strategy with the rest of the Bank. > Exclusive financial advisor, lead left underwriter, joint bookrunner, and co-sustainability advisor for $1.45 billion of green bonds and construction revolver facilities to support the Connect 6ix[(1)] $9.0 billion, 39-year public-private partnership for the Ontario Line Rolling Stock, Systems, Operations and Maintenance project in Toronto, Ontario. > Co-financial advisor to Certarus Ltd. on its $1.05 billion sale to Superior Plus Corp. The transaction establishes a lower carbon and renewable fuels platform via the addition of compressed natural gas, renewable natural gas, and hydrogen to Superior's extensive distribution platform. > Joint lead placement agent, joint bookrunner, and financial advisor on Nautilus Solar Energy, LLC's inaugural US$202.3 million institutional investment-grade community solar private placement issuance. The issuance was backed by a 185 megawatt portfolio of 58 operating community solar projects located across the Northeastern United States, Colorado, and Minnesota. > Exclusive financial advisor to Eavor Technologies Inc. on its latest financing round, which will enable Eavor to accelerate the development and deployment of its revolutionary geothermal technology. > Sustainability swap provider to Bell Canada on its first sustainability-linked derivative to support its ESG objectives.	> Continue discussions with clients, employees, and other stakeholders to achieve net-zero greenhouse gas (GHG) emissions by 2050. > Ensure depth and quality of our coverage regarding the global energy transition. > Make ESG principles a growth lever and impact multiplier for Financial Markets.
Ensure continued growth by recruiting, coaching, and retaining a diversified workforce	> Continued to advance our Inclusion and Diversity strategy through scholarship and sponsorship programs. > Coached and retained our talent at all levels through mentorship and executive development programs. > Launched an employee development roadmap to help make career paths clearer.	> Implement innovative practices for employee recruitment, coaching, and retention while fostering inclusion.
Further strengthen information technology to enhance and accelerate our execution	> Invested in technology and talent to deploy technology enhancements. > Improved alignment of IT projects through a newly created project governance committee. > Used the latest advances in deep learning to automate and scale our platform.	> Continue to create differentiated technology across all Financial Markets' business lines.

(1) The members are: Plenary Americas LP, Hitachi Rail STS S.p.A, Webuild – Canada Holding Inc., and Transdev Canada Inc.

	2023 Achievements and Highlights	2024 Priorities
Strengthen our ability to deliver integrated advice and solutions to clients	> Through collaborative efforts within Corporate and Investment Banking and a focus on energy infrastructure, acted as joint bookrunner on $4.4 billion of senior, hybrid and sustainability-linked debt offerings for Enbridge Inc., Enbridge Gas Inc., and Enbridge Pipelines Inc. for acquisition and ongoing capital needs. > Exclusive financial advisor to Sun Life Financial Inc. in the divestiture of its association and affinity and group creditor business in Canada to Canadian Premier Life Insurance Company. > Exclusive financial advisor to Dialogue Health Technologies Inc. in its acquisition by Sun Life Financial Inc. for $365 million. > Exclusive financial advisor to Northleaf Capital Partners on its majority acquisition of Provident Energy Management Inc.; administrative agent, sole bookrunner, and lead arranger of senior secured credit facilities to finance the acquisition. > Sponsored the annual Bloomberg Canadian Finance Conference for the eleventh year in a row.	> Deepen our relationships with corporations, institutional clients, and public-sector entities and help support their growth.

Segment Results – Financial Markets

Year ended October 31 (taxable equivalent basis)[1] (millions of Canadian dollars)	2023	2022[2]	% change
Global markets			
Equities	**904**	979	**(8)**
Fixed-income	**417**	367	**14**
Commodities and foreign exchange	**173**	156	**11**
	1,494	1,502	**(1)**
Corporate and investment banking	**1,162**	966	**20**
Total revenues[1]	**2,656**	2,468	**8**
Non-interest expenses	**1,161**	1,029	**13**
Income before provisions for credit losses and income taxes	**1,495**	1,439	**4**
Provisions for credit losses	**39**	(23)	
Income before income taxes	**1,456**	1,462	**–**
Income taxes[1]	**401**	388	**3**
Net income	**1,055**	1,074	**(2)**
Less: Specified items after income taxes[3]	**(5)**	–	
Net income – Adjusted[3]	**1,060**	1,074	**(1)**
Average assets[4]	**180,837**	154,349	**17**
Average loans and acceptances[4] (Corporate Banking only)	**29,027**	22,311	**30**
Net impaired loans[5]	**30**	91	**(67)**
Net impaired loans as a % of total loans and acceptances[5]	**0.1 %**	0.4 %	
Average deposits[4]	**57,459**	47,242	**22**
Efficiency ratio[5]	**43.7 %**	41.7 %	
Efficiency ratio – Adjusted[6]	**43.4 %**	41.7 %	

(1) The *Total revenues* and *Income taxes* items of the Financial Markets segment are presented on a taxable equivalent basis. Taxable equivalent basis is a calculation method that consists in grossing up certain 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 year ended October 31, 2023, *Total revenues* were grossed up by $571 million ($277 million in 2022), and an equivalent amount was recognized in *Income taxes*. The effect of these adjustments is reversed under the *Other* heading of segment results.
(2) For the year ended October 31, 2022, certain amounts were reclassified, notably due to a revised method for the sectoral allocation of technology investment expenses.
(3) See the Financial Reporting Method section on pages 14 to 19 for additional information on non-GAAP financial measures. During fiscal 2023, the segment recorded, in the *Non-interest expenses* item, $7 million in intangible asset impairment losses ($5 million net of income taxes) on technology development.
(4) Represents an average of the daily balances for the period.
(5) See the Glossary section on pages 124 to 127 for details on the composition of these measures.
(6) See the Financial Reporting Method section on pages 14 to 19 for additional information on non-GAAP ratios.

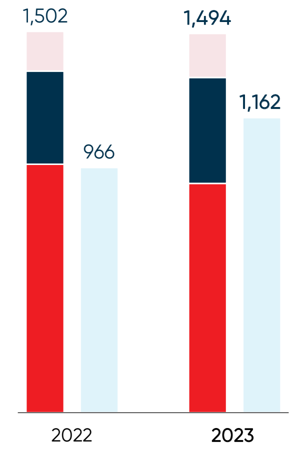
Financial Results

In the Financial Markets segment, net income totalled $1,055 million in fiscal 2023, down 2% year over year. Growth in the segment's total revenues was more than offset by higher non-interest expenses and higher provisions for credit losses. As for adjusted net income, which excludes intangible asset impairment losses, it totalled $1,060 million, down 1% from $1,074 million in fiscal 2022. The segment's income before provisions for credit losses and income taxes stood at $1,495 million in fiscal 2023, up $56 million or 4% from fiscal 2022. Its fiscal 2023 total revenues on a taxable equivalent basis amounted to $2,656 million, a $188 million or 8% year-over-year increase. Global markets revenues were down 1% due to an 8% decrease in revenues from equity securities, whereas revenues from fixed-income securities rose 14% and revenues from commodities and foreign exchange activities rose 11%. As for the fiscal 2023 corporate and investment banking revenues, were up 20% year over year given growth in banking service revenues, revenues from capital markets activity, and revenues from merger and acquisition activity.

For fiscal 2023, the segment's non-interest expenses rose 13% year over year. This increase was due to higher compensation and employee benefits (notably wage growth and the variable compensation associated with revenue growth), to higher technology investment expenses, and to expenses related to the segment's business growth. At 43.7%, the fiscal 2023 efficiency ratio deteriorated when compared to 41.7% in fiscal 2022. As for the segment's adjusted non-interest expenses, they stood at $1,154 million in fiscal 2023 versus $1,029 million in fiscal 2022. And as for the adjusted efficiency ratio, it was 43.4% versus 41.7% in fiscal 2022.

Financial Markets recorded $39 million in provisions for credit losses during fiscal 2023 compared to $23 million in recoveries of credit losses in fiscal 2022. This increase was mainly due to a $60 million increase in provisions for credit losses on non-impaired loans, as there was loan portfolio growth in fiscal 2023 and the fiscal 2023 macroeconomic conditions were less favourable than those of fiscal 2022. As for provisions for credit losses on impaired loans, they were up slightly year over year.

Total Revenues by Category
Year ended October 31
(millions of Canadian dollars)



U.S. Specialty Finance and International

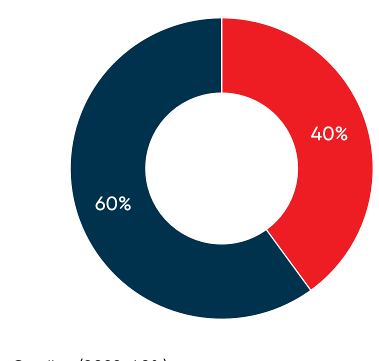
The Bank complements its Canadian growth with a targeted, disciplined international strategy that aims for superior returns. The Bank is currently focused on specialty finance in the U.S. through its Credigy subsidiary and on personal and commercial banking in Cambodia through its ABA Bank subsidiary. The Bank also holds minority positions in financial groups operating in French-speaking Africa and Africa-Asia. The Bank currently has a moratorium on any new significant investments in emerging markets. During fiscal 2023, the U.S. Specialty Finance and International (USSF&I) segment generated 12% of the Bank's consolidated total revenue and 16% of its net income.

$483 million
Total revenues

$343 million
Income before provisions for credit losses and income taxes

$207 million
Net income

Breakdown of Total Revenues
Year ended October 31, 2023



- Credigy (2022: 40%)
- ABA Bank (2022: 60%)

ABA Bank

$726 million
Total revenues

$466 million
Income before provisions for credit losses and income taxes

$343 million
Net income

U.S. Specialty Finance – Credigy

Founded in 2001 and based in Atlanta, Georgia, Credigy is a specialty finance company primarily active in financing and acquiring a diverse range of performing assets. Its portfolio is mostly comprised of diversified secured consumer receivables in the U.S. market. Through its best-in-class modelling expertise, flexibility, and client-centric approach, Credigy is a partner of choice for financial services institutions.

Key Success Factors

- Proven investment strategy that is adaptable to rapidly changing market conditions.
- Diversification across several classes of performing assets.
- Market credibility achieved through 370-plus transactions and over US$25 billion in total investments life-to-date.
- Rigorous underwriting approach with continuous refinement of modelling and analytics capabilities.
- Resilience to unfavourable economic conditions owing to credit quality and structural enhancements that provide downside protection.
- Emphasis on recruiting and retaining exceptional talent.

Economic and Market Review

The progress made in recent months in the United States towards achieving the Federal Reserve's dual mandate of maintaining full employment and keeping inflation stable around 2% has certainly been greeted with enthusiasm. Indeed, there seems to be a growing number of investors who now expect a greater possibility of a soft landing for the economy. But the fact that inflation has so far fallen without too much damage to growth does not guarantee that future progress towards price stability will be painless. It's a safe bet that inflation will continue to fall in 2024, as the U.S. central bank believes, but there's a significant risk that this will be to the detriment of economic activity. It turns out that rate hikes tend to affect the economy with a long lag, especially in the U.S. where most mortgages are fixed over a long period. But with the cost of servicing non-mortgage debt rising, consumers may well have to show more restraint in the quarters ahead, especially as the excess savings accumulated during the pandemic may have been fully deployed. This hypothesis seems to be borne out by data already showing a significant increase in the percentage of consumer loans that have fallen into serious delinquency (90 days or more overdue) in the third quarter of 2023. High interest rates are likely to dissuade consumers from making major purchases, and cause businesses to postpone investments as they face an interest payment shock for refinancing. In such a context, the U.S. economy is expected to slide into contraction in the first half of 2024, a scenario that would translate into growth of just 0.3% next year.

The economic environment in 2023 and the outlook for 2024 are discussed in more detail in the Economic Review and Outlook section on page 24.

Objectives and Strategic Priorities – Credigy

Credigy aims to provide customized solutions for the acquisition or financing of consumer assets in pursuit of the best risk-adjusted returns and a pre-tax return on assets (ROA) of at least 2.5%.

	2023 Achievements and Highlights	2024 Priorities
Sustain deal flow by being a partner of choice for institutions facing complex challenges and strategic changes	> Achieved balance sheet growth through a disciplined investment approach. > Invested by establishing new relationships and leveraging existing partners. > Maintained average assets of approximately $9.8 billion.	> Leverage relationships with current and prospective partners. > Remain prepared to seize opportunities in rapidly evolving markets.
Maintain a diversified mix of performing assets	> Invested in prime performing secured assets that lengthened the average life of the business book. > Continued asset class diversification that is focused on high-quality consumer, mortgage, and insurance assets. > Leveraged flexibility to invest via financing and direct acquisitions.	> Favour asset diversification and a prudent investment profile. > Maintain a stable risk-reward balance while optimizing for capital efficiency.
Achieve best risk-adjusted returns	> Actively monitored the economy for opportunities. > Refined and calibrated credit models to target the best risk-return investments. > Maintained a prudent approach to achieve a risk-return balance.	> Actively monitor macroeconomic conditions to implement risk mitigation strategies. > Deliver asset growth through a balanced mix of financing and direct acquisitions.

International – ABA Bank

Established in 1996, ABA Bank provides financial services to individuals and businesses in Cambodia. It is now the largest by assets and the fastest growing commercial bank in Cambodia. ABA Bank offers a full spectrum of financial services to micro, small and medium enterprises (MSMEs) as well as to individuals through 87 branches, 43 self-banking units, 1,395 automated teller machines (ATMs) and other self-service machines, and advanced online banking and mobile banking platforms. It has been selected as the Best Bank in Cambodia by financial magazines *The Banker*, *Global Finance* (ninth consecutive year), *Euromoney* (tenth consecutive year) and *Asiamoney.*

Key Success Factors

- Loan strategy targeting MSMEs with simple products.
- Disciplined risk management that drives high credit quality.
- Ability to fund loan growth through the deposit strategy.
- Deposit strategy based on state-of-the art technology, leading to a self-sufficient and expanding transactional banking ecosystem.
- Experienced leadership team and skilled workforce supported by robust training programs.
- Governance structure based on rigorous international standards while providing local management with the autonomy to pursue strategic priorities and business objectives.
- Leveraging National Bank's reputation as a world-class financial institution.
- International recognition of ABA Bank.

Economic and Market Review

Signs of economic slowdown in China continue to affect Cambodia's tourism industry as well as foreign direct investments. Garment and textile exports are impacted by weakening global external demand from the U.S. and Europe, while regional exports continue to benefit from recent free-trade agreements[1] and from the diversification of the manufacturing sector. The highly dollarized nature of the Cambodian economy (80%+) helps to keep the inflation under control. After peaking at around 8% in mid-2022, economic growth currently stands at around 2.5%. The economy grew by 5.2% in 2022 and is expected to grow between 5.5% and 6.0% in 2023. In 2024, growth rates should remain between 5% and 6%, as tourism and investments trend towards more normalized levels. Cambodia will also continue to benefit from increased regional economic integration under the ASEAN trade association. The Cambodian market is underbanked; there is a high adoption and use of mobile technology and social media in the country, and over 65% of the population of 17 million is under 35 years of age.

(1) Regional Comprehensive Trade Partnership between the Association of Southeast Asian Nations (ASEAN), Australia, New Zealand, Brunei Darussalam, China and Japan, Cambodia-China, Cambodia-South Korea.

Objectives and Strategic Priorities – ABA Bank

ABA Bank is pursuing an omnichannel banking strategy with the goal of becoming the lending partner of choice to MSMEs while increasing market penetration in deposits and transactional services for retail and business clients.

	2023 Achievements and Highlights	2024 Priorities
Grow market share in MSME lending	> Achieved 27% growth in loan volumes. > Maintained its leading market position while continuing to grow the business. > Continued to adapt the MSME lending strategy to support the growing needs of customers as their businesses become more mature. > Opened six new branches, bringing the total to 87 throughout the country.	> Open 8 branches and 15 self-banking units in 2024 to extend its reach in Cambodia, continue modernizing its branch network, and gain direct access to a larger pool of MSME customers and retail deposits. > Focus on MSME clients in industries that have been minimally affected by the current economic slowdown. > Continue to adapt the lending strategy in line with the growing needs of MSME customers as their businesses become more mature.
Maintain credit quality	> Maintained a well-diversified portfolio (98% of loans are secured with an average loan-to-value between 40 and 50). > At 3.3% of the loan portfolio as at October 31, 2023, non-performing loans were below market average. > Closely monitored clients that are impacted by the current economic slowdown. > Standard & Poor's maintained ABA Bank's long-term credit rating at B+ with a "Stable" outlook, based on its strong financial profile underpinned by its advanced digital platforms and transactional banking.	> Maintain strong governance, disciplined risk management, and sound business processes. > Ensure good credit quality across the loan portfolio to keep non-performing loan levels below market averages. > Continue to focus on secured lending.
Sustain growth in deposits and transactional services	> Grew deposit volume by 25% from fiscal 2022. > Continued to enhance self-banking capabilities, including the market-leading full-scale mobile banking application in Cambodia. > Self-banking transactions made up 99% of total transactions. > Further expanded ABA 24/7, a network of standalone self-banking locations that provide customers with round-the-clock access to their accounts and that now has 43 locations throughout the country.	> Further develop the transactional banking model to accelerate the migration of cash transactions, payments, and money transfers to self-service and digital banking channels. > Adapt the product offering to support the growth and evolving needs of clients. > Increase the deposit base by providing convenience to retail customers through an advanced digital and self-banking infrastructure and by expanding the network of self-service locations.

Segment Results – USSF&I

Year ended October 31 (millions of Canadian dollars)	2023	2022	% change
Total revenues			
Credigy	483	439	10
ABA Bank	726	669	9
International	–	2	
	1,209	1,110	9
Non-interest expenses			
Credigy	140	131	7
ABA Bank	260	212	23
International	2	1	
	402	344	17
Income before provisions for credit losses and income taxes	807	766	5
Provisions for credit losses			
Credigy	81	35	
ABA Bank	32	31	3
	113	66	71
Income before income taxes	694	700	(1)
Income taxes			
Credigy	55	57	(4)
ABA Bank	91	86	6
	146	143	2
Net income			
Credigy	207	216	(4)
ABA Bank	343	340	1
International	(2)	1	
	548	557	(2)
Average assets[1]	23,007	18,890	22
Average loans and receivables[1]	18,789	15,283	23
Purchased or originated credit-impaired (POCI) loans	511	459	11
Net impaired loans excluding POCI loans[2]	283	180	
Average deposits[1]	10,692	8,577	25
Efficiency ratio[2]	33.3 %	31.0 %	

(1) Represents an average of the daily balances for the period.
(2) See the Glossary section on pages 124 to 127 for details on the composition of these measures.

Financial Results

In the USSF&I segment, net income totalled $548 million in fiscal 2023 compared to $557 million in fiscal 2022, as growth in total revenues was more than offset by higher non-interest expenses and higher provisions for credit losses. The segment's total revenues amounted to $1,209 million in fiscal 2023 versus $1,110 million in fiscal 2022, a 9% increase driven by a $44 million increase in Credigy's revenues and a $57 million increase in ABA Bank's revenues.

For fiscal 2023, the segment's non-interest expenses stood at $402 million compared to $344 million in fiscal 2022, a 17% increase attributable mainly to higher non-interest expenses at ABA Bank resulting from business growth.

The segment's fiscal 2023 provisions for credit losses were up $47 million year over year, with the increase being essentially attributable to Credigy.

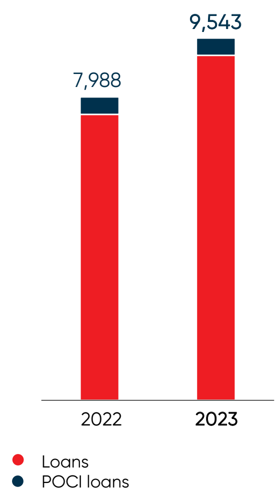
Credigy

For fiscal 2023, the Credigy subsidiary's net income totalled $207 million, a 4% year-over-year decrease that was due to significantly higher provisions for credit losses. The subsidiary's income before provisions for credit losses and income taxes totalled $343 million in fiscal 2023, up 11% year over year. Its total revenues amounted to $483 million in fiscal 2023, up from $439 million in fiscal 2022. A decrease in net interest income was more than offset by growth in non-interest income, as there was a higher unfavourable impact from fair value remeasurements of certain portfolios during fiscal 2022. For fiscal 2023, Credigy's non-interest expenses rose $9 million year over year, mainly due to compensation and employee benefits. Its provisions for credit losses increased by $46 million year over year, due to an increase in provisions for credit losses on non-impaired loans (associated with growth in the loan portfolio and a deterioration in certain risk parameters) and on impaired loans. These increases were partly offset by a decrease in provisions for credit losses on POCI loans, as there were favourable remeasurements of certain portfolios during fiscal 2023.

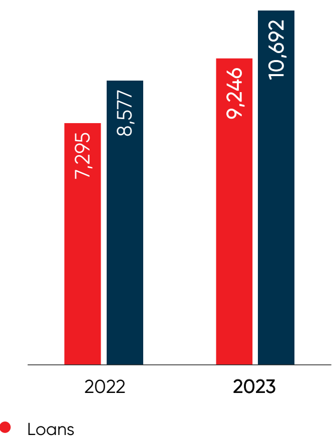
ABA Bank

For fiscal 2023, the ABA Bank subsidiary's net income totalled $343 million, up $3 million or 1% from fiscal 2022. Growth in the subsidiary's business activities, mainly sustained loan growth, drove total revenues up 9% year over year. This increase was, however, partly offset by higher interest rates on deposits and lower interest rates on loans given a competitive environment in Cambodia. ABA Bank's fiscal 2023 non-interest expenses stood at $260 million, a 23% year-over-year increase resulting from higher compensation and employee benefits (notably higher wage expense given a greater number of employees), from higher occupancy expenses given business growth and the opening of new branches, and from higher advertising expenses. Its provisions for credit losses stood at $32 million in fiscal 2023, 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.

Average Loans and Receivables – Credigy
Year ended October 31
(millions of Canadian dollars)



Average Loans and Average Deposits – ABA Bank and International
Year ended October 31
(millions of Canadian dollars)



Other

The *Other* heading reports on Treasury operations; liquidity management; Bank funding; asset and liability management; the activities of the Flinks subsidiary, a fintech company specialized in financial data aggregation and distribution; certain specified items; and the unallocated portion of corporate units. Corporate units include Technology and Operations, Risk Management, Employee Experience, and Finance. These units provide advice and guidance throughout the Bank and to its business segments in addition to expertise and support in their respective fields.

Segment Results – Other

Year ended October 31 (millions of Canadian dollars)	2023	2022[1]
Net interest income[2]	**(591)**	(536)
Non-interest income[2]	**(141)**	201
Total revenues	**(732)**	(335)
Non-interest expenses	**194**	199
Income before provisions for credit losses and income taxes	**(926)**	(534)
Provisions for credit losses	**5**	2
Income before income taxes	**(931)**	(536)
Income taxes (recovery)[2]	**(667)**	(340)
Net loss	**(264)**	(196)
Non-controlling interests	**(2)**	(1)
Net loss attributable to the Bank's shareholders and holders of other equity instruments	**(262)**	(195)
Less: Specified items after income taxes[3]	**12**	–
Net loss – Adjusted[3]	**(276)**	(196)
Average assets[4]	**69,731**	71,868

(1) For the year ended October 31, 2022, certain amounts were reclassified, notably due to a revised method for the sectoral allocation of technology investment expenses.
(2) For the year ended October 31, 2023, *Net interest income* was reduced by $332 million ($234 million in 2022), *Non-interest income* was reduced by $247 million ($48 million in 2022), and an equivalent amount was recorded 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 14 to 19 for additional information on non-GAAP financial measures. The Bank recorded a $91 million gain ($67 million net of income taxes) upon the fair value measurement of an equity interest, a $25 million expense ($18 million net of income taxes) related to the retroactive impact of changes to the *Excise Tax Act*, $12 million in impairment losses ($9 million net of income taxes) on premises and equipment and intangible assets, $6 million in charges ($4 million net of income taxes) related to penalties on onerous contracts, and a $24 million income tax expense related to the Canadian government's 2022 tax measures.
(4) Represents an average of the daily balances for the period.

Financial Results

For the *Other* heading of segment results, there was a net loss of $264 million in fiscal 2023 compared to a net loss of $196 million in fiscal 2022. The change in net loss was notably attributable to lower gains on investments in fiscal 2023, partly offset by a higher contribution from Treasury activities and a $91 million gain recorded upon the fair value measurement of an equity interest during fiscal 2023. For fiscal 2023, non-interest expenses were down slightly year over year, mainly due to variable compensation, partly offset by certain specified items recorded in fiscal 2023, notably a $25 million expense related to the retroactive impact of changes to the *Excise Tax Act*, $12 million in impairment losses on premises and equipment and intangible assets, and $6 million in charges related to penalties on onerous contracts.

The fiscal 2023 specified items had a $12 million favourable impact on net loss. As for adjusted net loss, it stood at $276 million in fiscal 2023 compared to a $196 million net loss in fiscal 2022.

Quarterly Financial Information

Several trends and factors have an impact on the Bank's quarterly net income, revenues, non-interest expenses and provisions for credit losses. The following table presents a summary of results for the past eight quarters.

Quarterly Results Summary[1]

(millions of Canadian dollars)				2023				2022
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Statement of income data								
Net interest income	735	870	882	1,099	1,207	1,419	1,313	1,332
Non-interest income	1,859	1,645	1,597	1,483	1,127	994	1,126	1,134
Total revenues	2,594	2,515	2,479	2,582	2,334	2,413	2,439	2,466
Non-interest expenses	1,607	1,417	1,374	1,403	1,346	1,305	1,299	1,280
Income before provisions for credit losses and income taxes	987	1,098	1,105	1,179	988	1,108	1,140	1,186
Provisions for credit losses	115	111	85	86	87	57	3	(2)
Income taxes	104	148	173	212	163	225	248	258
Net income	768	839	847	881	738	826	889	930

(1) For additional information about the 2023 fourth-quarter results, visit the Bank's website at nbc.ca or the SEDAR+ website at sedarplus.ca to consult the Bank's *Press Release for the Fourth Quarter of 2023,* published on December 1, 2023. Also, a summary of results for the past 12 quarters is provided in Table 1 on pages 114 and 115 of this MD&A.

The analysis of the past eight quarters reflects the sustained performance of all the business segments and helps readers identify the items that have favourably or unfavourably affected results. In the third and fourth quarters of fiscal 2023, the Bank's net income results increased year over year owing to growth in total revenues, partly offset by higher non-interest expenses and higher provisions for credit losses. Conversely, in the first two quarters of fiscal 2023, net income was down year over year due to net income decreases in the Financial Markets and USSF&I segments as well as to higher provisions for credit losses during those quarters of fiscal 2023, as there were more favourable macroeconomic conditions during the same quarters of fiscal 2022.

Year over year, net interest income was down in every quarter of fiscal 2023. These decreases were essentially due to the trading activity revenues of the Financial Markets segment. However, the fiscal 2023 net interest income generated by all the other business segments was up year over year in every quarter (except the second quarter for USSF&I). These increases were driven by loan and deposit growth in both the Personal and Commercial and Wealth Management segments, by loan portfolio growth and by the good performance of certain Credigy portfolios, and by an increase in ABA Bank's net interest income owing to sustained business growth. Moreover, the interest rate hikes that occurred in fiscal 2023 and 2022 had a favourable impact on net interest income in every quarter of fiscal 2023.

For fiscal 2023, non-interest income increased year over year in every quarter, essentially due to the trading activity revenues of the Financial Markets segment, which had a favourable impact on non-interest income in every quarter of fiscal 2023. These increases were also due to sustained business growth in the Personal and Commercial segment, particularly in the area of card revenues, where there was a notable increase in purchasing volume, as well as to revenues from bankers' acceptances. In the Wealth Management segment, non-interest income experienced notable year-over-year decreases in the first and second quarters of fiscal 2023 due to a decrease in fee-based revenues, as stock market performance was weaker compared to the same quarters of fiscal 2022, as well as to a decrease in transaction-based and other revenues. The third-quarter increase in non-interest income was notably due to a $91 million gain recorded upon a fair value remeasurement of an equity interest.

For fiscal 2023, non-interest expenses posted year-over-year increases in every quarter. These increases came from compensation and employee benefits, notably due to wage growth and a greater number of employees, as well as from investments made as part of the Bank's technological evolution. Occupancy expense was also up in every quarter of fiscal 2023, due to expansion of the ABA Bank network and to expenses arising from the Bank's new head office building. Travel and business development expenses were also up in every quarter of fiscal 2023 as activities with clients resumed. In the third quarter of fiscal 2023, non-interest expenses included a $25 million expense related to the retroactive impact of changes to the *Excise Tax Act,* and in the fourth quarter of fiscal 2023, the Bank recorded $86 million in impairment losses on premises and equipment and intangible assets, $35 million in litigation expenses, and $15 million in provisions for contracts.

Year over year, provisions for credit losses were up in every quarter of fiscal 2023. These increases were due to higher provisions for credit losses on impaired loans at Personal Banking and Commercial Banking, reflecting a normalization of credit risk, as well as to higher provisions for credit losses on Credigy's impaired loans. However, in the first quarter of fiscal 2023, provisions for credit losses on impaired loans were down year over year, as the Financial Markets segment recorded higher recoveries of credit losses in the first quarter. Year over year, provisions for credit losses on non-impaired loans were up in every quarter of fiscal 2023 due to growth in the loan portfolios, to the migration of credit risk, and to updates and revisions to the probability weightings of scenarios, reflecting uncertainties in the macroeconomic outlook. In the first and second quarters of fiscal 2022, the Bank had posted reversals of allowances for credit losses on non-impaired loans to reflect improvements in both the macroeconomic outlook and credit conditions at that time.

For fiscal 2023, the year-over-year change in effective income tax rate stems essentially 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. In addition, in the first quarter of fiscal 2023, the tax rate reflects the impact of the Canadian government's 2022 tax measures, namely, the Canada Recovery Dividend and the $24 million impact related to current and deferred taxes for fiscal 2022.

Analysis of the Consolidated Balance Sheet

Consolidated Balance Sheet Summary

As at October 31 (millions of Canadian dollars)	2023	2022	% change
Assets			
Cash and deposits with financial institutions	35,234	31,870	11
Securities	121,818	109,719	11
Securities purchased under reverse repurchase agreements and securities borrowed	11,260	26,486	(57)
Loans and acceptances, net of allowances	225,443	206,744	9
Other	29,823	28,921	3
	423,578	403,740	5
Liabilities and equity			
Deposits	288,173	266,394	8
Other	110,979	114,101	(3)
Subordinated debt	748	1,499	(50)
Equity attributable to the Bank's shareholders and holders of other equity instruments	23,676	21,744	9
Non-controlling interests	2	2	–
	423,578	403,740	5

As at October 31, 2023, the Bank had total assets of $423.6 billion, up $19.9 billion or 5% from $403.7 billion since the end of fiscal 2022.

Cash and Deposits With Financial Institutions

At $35.2 billion as at October 31, 2023, cash and deposits with financial institutions were up $3.3 billion since October 31, 2022, mainly due to an increase in deposits with the U.S. Federal Reserve, partly offset by a decrease in deposits with the Bank of Canada. The high level of cash and deposits with financial institutions is explained in part by the excess liquidity related to the accommodative monetary policies that have been applied by central banks since 2020. The Bank's liquidity and funding risk management practices are described on pages 91 to 100 of this MD&A.

Securities

Securities rose $12.1 billion since October 31, 2022, due to a $12.6 billion or 14% increase in securities at fair value through profit or loss, an increase that was essentially attributable to equity securities and securities issued or guaranteed by the Canadian government, partly offset by a decrease in securities issued or guaranteed by U.S. Treasury, other U.S. agencies, and other foreign governments. As for securities other than those measured at fair value through profit or loss, they decreased by $0.5 billion. Securities purchased under reverse repurchase agreements and securities borrowed decreased by $15.2 billion since October 31, 2022, mainly due to the activities of the Financial Markets segment and Treasury. The Bank's market risk management policies are described on pages 84 to 90 of this MD&A.

Loans and Acceptances

As at October 31, 2023, loans and acceptances, net of allowances for credit losses, accounted for 53% of total assets and totalled $225.4 billion, rising $18.7 billion or 9% since October 31, 2022.

Residential mortgage loans outstanding amounted to $86.8 billion as at October 31, 2023, rising $6.7 billion or 8% since October 31, 2022. This growth was mainly driven by sustained demand for mortgage credit in the Personal and Commercial segment as well as by the activities of the Financial Markets segment and the ABA Bank and Credigy subsidiaries. Personal loans totalled $46.4 billion at year-end 2023, rising $1.1 billion from $45.3 billion since October 31, 2022. This increase came mainly from business growth at Personal Banking and ABA Bank. At $2.6 billion, credit card receivables rose $0.2 billion since October 31, 2022.

As at October 31, 2023, loans and acceptances to business and government totalled $90.8 billion, a $10.9 billion or 14% increase since October 31, 2022 that was mainly due to business growth at Commercial Banking, in corporate financial services, and at ABA Bank.

Table 9 (page 121) shows, among other information, gross loans and acceptances by borrower category as at October 31, 2023. At $99.9 billion as at October 31, 2023, residential mortgages (including home equity lines of credit) have posted strong growth since 2019 and accounted for 44% of total loans and acceptances. The growth in residential mortgages was driven by sustained demand for mortgage credit in the Personal and Commercial segment and by the business activity at Financial Markets, ABA Bank, and Credigy. As for personal loans (including credit card receivables), they totalled $20.7 billion as at October 31, 2023, rising $2.0 billion since October 31, 2022. As for loans to businesses, the key increases were recorded in the utilities, communications, financial services, real estate and real-estate-construction, professional services, and other services categories. As at October 31, 2023, certain sectors were down year over year, notably non-real-estate construction and manufacturing. POCI loans rose since October 31, 2022, an increase that was due to portfolios acquired by Credigy and Commercial Banking during fiscal 2023.

Impaired Loans

Impaired loans include all loans classified in Stage 3 of the expected credit loss model and POCI loans.

As at October 31, 2023, gross impaired loans stood at $1,584 million compared to $1,271 million as at October 31, 2022 (Table 10, page 122). As for net impaired loans, they totalled $1,276 million as at October 31, 2023 compared to $1,030 million as at October 31, 2022. Net impaired loans excluding POCI loans amounted to $606 million, rising $127 million from $479 million as at October 31, 2022. This increase was due to an increase in the net impaired loans of the loan portfolios of Personal and Commercial Banking and of the Credigy (excluding POCI loans) and ABA Bank subsidiaries, partly offset by a decrease in the net impaired loans of the loan portfolios of the Wealth Management and Financial Markets segments. The net POCI loans stood at $670 million as at October 31, 2023 compared to $551 million as at October 31, 2022, an increase due to portfolio acquisitions conducted by Credigy and Commercial Banking during fiscal 2023.

A detailed description of the Bank's credit risk management practices is provided on pages 74 to 83 of this MD&A as well as in Note 7 to the consolidated financial statements.

Other Assets

As at October 31, 2023, other assets totalled $29.8 billion compared to $28.9 billion as at October 31, 2022, a $0.9 billion increase that was mainly due to a $1.9 billion increase in other assets, notably receivables, prepaid expenses and other items; interest and dividends receivable; and current tax assets, with these increases being partly offset by a decrease in amounts due from clients, dealers and brokers. Furthermore, derivative financial instruments were down $1.0 billion, with this result being related to the activities of the Financial Markets segment.

Deposits

As at October 31, 2023, deposits stood at $288.2 billion, rising $21.8 billion or 8% since the end of fiscal 2022. At $87.9 billion, personal deposits, as presented in Table 12 (page 123), accounted for 31% of all deposits, and had increased $9.1 billion since October 31, 2022. This increase was driven by business growth at Personal Banking, in both the Wealth Management and Financial Markets segments, and at ABA Bank.

As shown in Table 12, business and government deposits totalled $197.3 billion as at October 31, 2023, rising $13.1 billion from $184.2 billion as at October 31, 2022. This increase came from the funding activities of the Financial Markets segment and of Treasury, including $4.9 billion in deposits subject to bank recapitalization (bail-in) conversion regulations, as well as from Commercial Banking activities. Deposits from deposit-taking institutions totalled $3.0 billion as at October 31, 2023, declining $0.4 billion since the end of fiscal 2022.

Other Liabilities

Other liabilities, totalling $111.0 billion as at October 31, 2023, decreased $3.1 billion since October 31, 2022, resulting essentially from an $8.1 billion decrease in obligations related to securities sold short and a $1.3 billion decrease in liabilities related to transferred receivables. These decreases were partly offset by a $4.8 billion increase in obligations related to securities sold under repurchase agreements and securities loaned and a $1.1 billion increase in other liabilities, notably interest and dividends payable.

Subordinated Debt and Other Contractual Obligations

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. The contractual obligations are presented in detail in Note 29 to the consolidated financial statements.

Equity

As at October 31, 2023, equity attributable to the Bank's shareholders and holders of other equity instruments totalled $23.7 billion, rising $2.0 billion from $21.7 billion since October 31, 2022. This increase was due to net income net of dividends; to the issuances of common shares under the Stock Option Plan; and to accumulated other comprehensive income, notably net unrealized foreign currency translation gains on investments in foreign operations and net gains on instruments designated as cash flow hedges. These increases were partly offset by remeasurements of pension plans and other post-employment benefit plans as well as by the net fair value change attributable to the credit risk on financial liabilities designated at fair value through profit or loss.

The Consolidated Statements of Changes in Equity on page 138 of this Annual Report present the items that make up equity. In addition, an analysis of the Bank's regulatory capital is presented in the Capital Management section of this MD&A.

Related Party Transactions

In the normal course of business, the Bank provides various banking services and enters into contractual agreements and other transactions with associates, joint ventures, directors, key officers and other related parties. These agreements and transactions are entered into under conditions similar to those offered to non-related third parties.

In accordance with the *Bank Act* (Canada), the aggregate of loans granted to key officers of the Bank, excluding mortgage loans granted on their principal residence, cannot exceed twice the officer's annual salary.

Loans to eligible key officers are granted under the same conditions as those granted to any other employee of the Bank. The main conditions are as follows:

- the employee must meet the same credit requirements as a client;
- mortgage loans are offered at the preferential employee rate;
- home equity lines of credit bear interest at Canadian prime less 0.5%, but never lower than Canadian prime divided by two;
- personal loans bear interest at a risk-based regular client rate;
- credit card advances bear interest at a prescribed fixed rate in accordance with Bank policy;
- personal lines of credit bear interest at Canadian prime less 0.5%, but never lower than Canadian prime divided by two.

The Bank also offers a deferred stock unit plan to directors who are not Bank employees. For additional information, see Note 22 to the consolidated financial statements. Additional information about related parties is presented in Notes 9, 27 and 28 to the consolidated financial statements.

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".

In October 2023, the Bank filed a notice of appeal with the Tax Court of Canada, and the matter is now in litigation. 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 October 31, 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 for the year ended October 31, 2023.

Proposed Legislation

On November 28, 2023, the Government of Canada released draft legislation entitled *An Act to implement certain provisions of the fall economic statement tabled in Parliament on November 21, 2023 and certain provisions of the budget tabled in Parliament on March 28, 2023* to implement 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 (except for dividends received on "taxable preferred shares" as defined in the *Income Tax Act*), as well as the application of a 2% tax on the net value of equity repurchases occurring as of January 1, 2024.

In its March 28, 2023 budget, the Government of Canada also proposed to implement the Pillar 2 rules (global minimum tax) published by the Organisation for Economic Co-operation and Development (OECD) for fiscal years beginning as of December 31, 2023. To date, the Pillar 2 rules have not yet been included in a bill in Canada. During fiscal 2023, the Pillar 2 rules were included in a bill in certain jurisdictions where the Bank operates.

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. On June 22, 2023, Bill C-47 received royal assent. Given that the amendment to the *Excise Tax Act* had been adopted at the reporting date, an expense of $25 million was recognized in the consolidated financial statements for the year ended October 31, 2023.

Event After the Consolidated Balance Sheet Date

Repurchase of Common Shares
On November 30, 2023, the Bank's Board of Directors approved a normal course issuer bid, beginning December 12, 2023, to repurchase for cancellation up to 7,000,000 common shares (representing approximately 2.07% of its then outstanding common shares) over the 12-month period ending December 11, 2024. Any repurchase through the Toronto Stock Exchange will be done at market prices. The common shares may also be repurchased through other means authorized by the Toronto Stock Exchange and applicable regulations, including private agreements or share repurchase programs under issuer bid exemption orders issued by the securities regulators. A private purchase made under an exemption order issued by a securities regulator will be done at a discount to the prevailing market price. The amounts that are paid above the average book value of the common shares are charged to *Retained earnings*. This normal course issuer bid is subject to the approval of OSFI and the Toronto Stock Exchange (TSX).

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, the issuance of guarantees, credit instruments, and financial assets received as collateral.

Structured Entities

The Bank uses structured entities, among other means, to diversify its funding sources and to offer services to clients, in particular to help them securitize their financial assets or provide them with investment opportunities. Under IFRS, a structured entity must be consolidated if the Bank controls the entity. Note 1 to the consolidated financial statements describes the accounting policy and criteria used for consolidating structured entities. Additional information on consolidated and non-consolidated structured entities is provided in Note 27 to the consolidated financial statements.

Securitization of the Bank's Financial Assets
Mortgage Loans
The Bank participates in two Canada Mortgage and Housing Corporation (CMHC) securitization programs: the Mortgage-Backed Securities (MBS) Program under the *National Housing Act* (Canada) (NHA) and the Canada Mortgage Bond (CMB) Program. Under the first program, the Bank issues NHA securities backed by insured residential mortgage loans and, under the second, the Bank sells NHA securities to Canada Housing Trust (CHT), which finances the purchase through the issuance of mortgage bonds insured by CMHC. Moreover, these mortgage bonds feature an interest rate swap agreement under which a CMHC-certified counterparty pays CHT the interest due to investors and receives the interest on the NHA securities. As at October 31, 2023, the outstanding amount of NHA securities issued by the Bank and sold to CHT was $23.2 billion. The mortgage loans sold consist of fixed- or variable-rate residential loans that are insured against potential losses by a loan insurer. In accordance with the NHA-MBS Program, the Bank advances the funds required to cover late payments and, if necessary, obtains reimbursement from the insurer that insured the loan. The NHA-MBS and CMB programs do not use liquidity guarantee arrangements. The Bank uses these securitization programs mainly to diversify its funding sources. In accordance with IFRS, because the Bank retains substantially all of the risks and rewards of ownership of the mortgage loans transferred to CHT, the derecognition criteria are not met. Therefore, the insured mortgage loans securitized under the CMB Program continue to be recognized in *Loans* on the Bank's Consolidated Balance Sheet, and the liabilities for the considerations received from the transfer are recognized in *Liabilities related to transferred receivables* on the Consolidated Balance Sheet. For additional information, see Note 8 to the consolidated financial statements.

Credit Card Receivables
In April 2015, the Bank set up Canadian Credit Card Trust II (CCCT II) to continue its program of securitizing credit card receivables on a revolving basis. The Bank uses this entity for capital management and funding purposes. The Bank acts as the servicer of the receivables sold and maintains the client relationship. Furthermore, it administers the securitization program and ensures that all related procedures are stringently followed and that investors are paid according to the provisions of the program.

As at October 31, 2023, the credit card receivables portfolio held by CCCT II represented an amount outstanding of $2.3 billion. CCCT II issued notes to investors, $0.1 billion of which is held by third parties and $0.8 billion is held by the Bank. CCCT II also issued a bank certificate held by the Bank that stood at $1.4 billion as at October 31, 2023. New receivables are periodically sold to the structure on a revolving basis to replace the receivables reimbursed by clients.

Every series of notes is rated by the Fitch and DBRS Morningstar (DBRS) rating agencies. From this portfolio of sold receivables, the Bank retains the excess spread, i.e., the residual net interest income after all the expenses related to this structure have been paid, and thus provides first-loss protection. Furthermore, second-loss protection for issued series is provided by notes subordinated to the senior notes, representing 5.8% of the total amount of the series issued. The Bank controls CCCT II and thus consolidates it.

Securitization of Third-Party Financial Assets
The Bank administers multi-seller conduits that purchase financial assets from clients and finance those purchases by issuing commercial paper backed by the acquired assets. Clients use these multi-seller conduits to diversify their funding sources and reduce borrowing costs while continuing to service the financial assets and providing some amount of first-loss protection. Notes issued by the conduits and held by third parties provide additional credit loss protection. The Bank acts as a financial agent and provides administrative and transaction structuring services to these conduits. The Bank provides backstop liquidity and credit enhancement facilities under the commercial paper program. These facilities are presented and described in Notes 26 and 27 to the consolidated financial statements. The Bank has entered into derivative financial instrument contracts with these conduits, the fair value of which is presented on the Bank's Consolidated Balance Sheet. The Bank is not required to consolidate these conduits, as it does not control them.

Derivative Financial Instruments

The Bank uses various types of derivative financial instruments to meet its clients' needs, generate trading activity revenues, and manage its exposure to interest rate, foreign exchange, and credit risk as well as other market risks. All derivative financial instruments are accounted for at fair value on the Consolidated Balance Sheet. Transactions in derivative financial instruments are expressed as notional amounts. These amounts are not presented as assets or liabilities on the Consolidated Balance Sheet. They represent the face amount of the contract to which a rate or price is applied to determine the amount of cash flows to be exchanged. Notes 1 and 16 to the consolidated financial statements provide additional information on the types of derivative financial instruments used by the Bank and their accounting basis.

Guarantees

In the normal course of business, the Bank enters into various guarantee contracts. The principal types of guarantees are letters of guarantee, backstop liquidity and credit enhancement facilities, certain securities lending activities, and certain indemnification agreements. Note 26 to the consolidated financial statements provides detailed information on these guarantees.

Credit Instruments

In the normal course of business, the Bank enters into various off-balance-sheet credit commitments. The credit instruments used to meet the financing needs of its clients represent the maximum amount of additional credit that the Bank could be required to extend if the commitments were fully drawn. For additional information on these off-balance-sheet credit instruments and other items, see Note 26 to the consolidated financial statements.

Financial Assets Received as Collateral

In the normal course of business, the Bank receives financial assets as collateral as a result of transactions involving securities purchased under reverse repurchase agreements, securities borrowing and lending agreements, and derivative financial instrument transactions. For additional information on financial assets received as collateral, see Note 26 to the consolidated financial statements.

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.

Capital Management Framework

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 level that the Bank must maintain to pursue its business activities and accommodate unexpected losses arising from extremely adverse economic and operational conditions. The Bank has implemented a rigorous internal capital adequacy assessment process that comprises the following procedures:

- conducting an overall risk assessment;
- measuring significant risks and the capital requirements related to the Bank's financial budget for the next fiscal year and current and prospective risk profiles;
- integrating stress tests across the organization and executing sensitivity analyses to determine the capital buffer above minimum regulatory levels (for additional information on enterprise-wide stress testing, see the Risk Management section of this MD&A);
- aggregating capital and monitoring the reasonableness of internal capital compared with regulatory capital;
- comparing projected internal capital against regulatory capital levels, internal operating targets, and competing banks;
- attesting to the adequacy of the Bank's capital levels.

Assessing capital adequacy is an integral part of capital planning and strategy. The Bank sets internal operating targets that include a discretionary cushion in excess of the minimum regulatory requirements, which provides a solid financial structure and sufficient capital to meet management's business needs in accordance with its risk appetite, along with competitive returns to shareholders, under both normal market conditions and a range of severe but plausible stress testing scenarios. The internal capital adequacy assessment process is a key tool in establishing the Bank's capital strategy and is subject to quarterly reviews and periodic amendments.

Risk-adjusted return on capital and shareholder value added (SVA), which are obtained from an assessment of required economic capital, are calculated quarterly for each of the Bank's business segments. The results are then used to guide management in allocating capital among the various business segments.

Structure and Governance

Along with its partners from Risk Management, the Global Funding and Treasury Group, and Finance, the Capital Management team is responsible for maintaining integrated control methods and processes so that an overall assessment of capital adequacy may be performed.

The Board oversees the structure and development of the Bank's capital management policy and ensures that the Bank maintains sufficient capital in accordance with regulatory requirements and in consideration of market conditions. The Board delegates certain responsibilities to the Risk Management Committee (RMC), which in turn recommends capital management policies and oversees application thereof. The Board, on the recommendation of the RMC, assumes the following responsibilities:

- reviewing and approving the capital management policy;
- reviewing and approving the Bank's risk appetite, including the main capital and risk targets and the corresponding limits;
- reviewing and approving the capital plan and strategy on an annual basis, including the Bank's internal capital adequacy assessment process;
- reviewing and approving the implementation of significant measures respecting capital, including contingency measures;
- reviewing significant capital disclosures, including Basel capital adequacy ratios;
- ensuring the appropriateness of the regulatory capital adequacy assessment.

The Senior Leadership Team is responsible for defining the Bank's strategy and plays a key role in guiding capital-related measures and decisions. The Enterprise-Wide Risk Management Committee oversees capital management, which consists of reviewing the capital plan and strategy and implementing significant capital-related measures, including contingency measures, and making recommendations about these measures.

Basel Accord and Regulatory Environment

Basel Accord

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, risk-weighted assets are calculated for each credit risk, market risk, and operational risk. Some of OSFI's revision to its capital, leverage, liquidity, and disclosure rules, made as part of the Basel III reforms, took effect during the second quarter of 2023, notably the implementation of the revised Standardized Approach and IRB Approach to credit risk, the revision of the operational framework of the leverage ratio framework, and the introduction of a more risk-sensitive capital floor. The Bank uses the Internal Ratings-Based (IRB) Approaches for credit risk to determine minimum regulatory capital requirements for most 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, the 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 risk related to securitization operations, the capital treatment depends on the type of underlying exposures and on the information available about the exposures. The Bank must use the Securitization: Internal Ratings-Based Approach (SEC-IRBA) if it is able to apply an approved internal ratings-based model and has sufficient information to calculate the capital requirements for all underlying exposures in the securitization pool. Under this approach, RWA is derived from a combination of supervisory inputs and inputs specific to the securitization exposure, such as the implicit capital charge related to the underlying exposures, the credit enhancement level, the effective maturity, the number of exposures, and the weighted average LGD.

If the Bank cannot use the SEC-IRBA, it must use the Securitization: External Ratings-Based Approach (SEC-ERBA) for the securitization exposures that are externally rated. This approach assigns risk weights to exposures using external ratings. The Bank uses the ratings assigned by Moody's, Standard & Poor's (S&P), Fitch, Kroll Bond Rating Agency, or DBRS or a combination of these ratings. The Bank uses the Securitization: Internal Assessment Approach (SEC-IAA) for unrated securitization exposures relating to the asset-backed commercial paper conduits it sponsors. The SEC-IAA rating methodologies used are mainly based on criteria published by the above-mentioned credit rating agencies and consider risk factors that the Bank deems relevant to assessing the credit quality of the exposures. The Bank's SEC-IAA includes an assessment of the extent by which the credit enhancement available for loss protection provides coverage of expected losses. The levels of stressed coverage the Bank requires for each internal risk rating are consistent with the requirements published by the rating agencies for equivalent external ratings by asset class. If the Bank cannot apply the SEC-ERBA or the SEC-IAA, it must use the supervisory formula under the Securitization Standardized Approach (SEC-SA). Under this approach, RWA is derived from inputs specific to the securitization exposure, such as the implicit capital charge related to the underlying exposures calculated under the standardized credit risk approach as well as credit enhancement and delinquency levels.

If none of the above approaches can be used, the securitization exposure must be assigned a risk weight of 1,250%. The Bank can apply a reduced capital charge for securitization exposures that meet the criteria of the Simple, Transparent and Comparable (STC) framework.

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

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. Credit valuation adjustment (CVA) risk-weighted assets are determined under a prescribed Standardized Approach. In the first quarter of 2024, the Bank will implement the revised market risk and CVA frameworks in accordance with the Basel III reforms.

The Bank must also meet the requirements of an updated capital output floor that will ensure that its total calculated RWA is not below 72.5% of the total RWA as calculated under the Basel III Standardized Approaches. OSFI is allowing a three-year phase-in of the floor factor, 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 total RWA.

Capital ratios are calculated by dividing capital by RWA. Credit, market, and operational risks are factored into the RWA calculation for regulatory purposes. Basel rules apply at the consolidated level of the Bank. The assets of non-consolidated entities for regulatory purposes are therefore excluded from the RWA calculation.

The definition adopted by the Basel Committee on Banking Supervision (BCBS) distinguishes between three types of capital. Common Equity Tier 1 (CET1) capital consists of common shareholders' equity less goodwill, intangible assets, and other CET1 capital deductions. Additional Tier 1 (AT1) capital consists of eligible non-cumulative preferred shares, limited recourse capital notes (LRCN), and other AT1 capital adjustments. The sum of CET1 and AT1 capital forms what is known as Tier 1 capital. Tier 2 capital consists of eligible subordinated debts and certain allowances for credit losses. Total regulatory capital is the sum of Tier 1 and Tier 2 capital.

OSFI is responsible for applying the Basel Accord in Canada. As required under the Basel Accord, OSFI requires that recognized 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 it is in the public interest to rescue a non-viable financial institution. As at October 31, 2023, all of the Bank's regulatory capital instruments, other than common shares, have an NVCC clause. Furthermore, in the regulations of the *Canada Deposit Insurance Corporation (CDIC) Act* and the *Bank Act* (Canada), the Government of Canada has provided detailed information on conversion, issuance, and compensation regimes for bail-in instruments issued by Domestic Systemically Important Banks (D-SIBs) (collectively the Bail-In Regulations). Pursuant to the *CDIC Act,* in circumstances where OSFI has determined that the Bank has ceased, or is about to cease, to be viable, the Governor in Council may, upon a Minister of Finance recommendation indicating that he or she believes that it is in the public interest to do so, grant an order directing CDIC to convert all or a portion of certain shares and liabilities of the Bank into common shares (a "Bail-In Conversion").

The Bail-In Regulations governing the conversion and issuance of bail-in instruments came into force on September 23, 2018, and those governing compensation for holders of converted instruments came into force on March 27, 2018. Any shares and liabilities issued before the effective date of the Bail-In Regulations are not subject to a Bail-In Conversion, unless, in the case of a liability, the terms of said liability are, on or after that day, amended to increase its principal amount or to extend its term to maturity, and the liability, as amended, meets the requirements to be subject to a Bail-In Conversion.

The Bail-In Regulations prescribe the types of shares and liabilities that are subject to a Bail-In Conversion. In general, any senior debt securities with an initial or amended term-to-maturity greater than 400 days that are unsecured or partially secured and have been assigned a Committee on Uniform Securities Identification Procedures (CUSIP), an International Securities Identification Number (ISIN), or similar identification number are subject to a Bail-In Conversion. However, certain other debt obligations of the Bank, such as structured notes (as defined in the Bail-In Regulations), covered bonds, deposits, and certain derivative financial instruments, are not subject to a Bail-In Conversion.

The Bank and all other major Canadian banks have to maintain the following minimum capital ratios established by OSFI: a CET1 capital ratio of at least 11.0%, a Tier 1 capital ratio of at least 12.5%, and a Total capital ratio of at least 14.5%. All of these ratios are to include a capital conservation buffer of 2.5% established by the BCBS and OSFI, a 1.0% surcharge applicable solely to D-SIBs, and a 3.0% domestic stability buffer (DSB) established by OSFI. On December 8, 2022, OSFI expanded the DSB range, setting it at 0% to 4.0% instead of the previous range of 0% to 2.5%, and it announced that the DSB would rise from 2.5% to 3.0% effective February 1, 2023. On June 20, 2023, OSFI raised the DSB by 50 bps to 3.5% effective November 1, 2023. The DSB 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. Additionally, OSFI requires D-SIBs to meet 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. The leverage ratio is a measure independent of risk that is calculated by dividing the amount of Tier 1 capital by total exposure. Total exposure is defined as the sum of on-balance-sheet assets (including derivative financial instrument exposures and securities financing transaction exposures) and off-balance-sheet items. The assets deducted from Tier 1 capital are also deducted from total exposure.

OSFI's *Total Loss Absorbing Capacity* (TLAC) *Guideline*, which applies to all D-SIBs under the federal government's Bail-In Regulations, is to ensure that a D-SIB has sufficient loss-absorbing capacity to support its recapitalization in the unlikely event it becomes non-viable. Available TLAC includes total capital as well as certain senior unsecured debts that satisfy all of the eligibility criteria of OSFI's TLAC guideline. OSFI requires D-SIBs to maintain a risk-based TLAC ratio of at least 24.5% (including the DSB) of risk-weighted assets and a TLAC leverage ratio of at least 7.25% (increased by 0.5% effective February 1, 2023). As at October 31, 2023, outstanding liabilities of $17.7 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 October 31, 2023							
	Minimum	Capital conservation buffer	Minimum set by BCBS	D-SIB surcharge	Minimum set by OSFI[3]	Domestic stability buffer[4]	Minimum set by OSFI[3], including the domestic stability buffer	Ratios as at October 31, 2023
Capital ratios								
CET1	4.5 %	2.5 %	7.0 %	1.0 %	8.0 %	3.0 %	11.0 %	13.5 %
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 %	16.8 %
Leverage ratio	3.0 %	n.a.	3.0 %	0.5 %	3.5 %	n.a.	3.5 %	4.4 %
TLAC ratio	21.5 %	n.a.	21.5 %	n.a.	21.5 %	3.0 %	24.5 %	29.2 %
TLAC leverage ratio	6.75 %	n.a.	6.75 %	0.5 %	7.25 %	n.a.	7.25 %	8.0 %

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 DSB would rise from 2.5% to 3.0%, effective February 1, 2023. On June 20, 2023, OSFI announced that the DSB will rise from 3.0% to 3.5% effective November 1, 2023.

The Bank ensures that its capital levels are always above the minimum capital requirements set by OSFI, including the DSB. 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 Context

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 had announced a series of regulatory adjustments to support the financial and operational resilience of banks. Listed below are the OSFI measures that had an impact during fiscal 2023 but that are no longer applicable as at October 31, 2023.

- Capital floor: OSFI lowered the capital floor factor from 75% to 70% in accordance with the Basel II Standardized Approach; this factor stayed in place until the domestic implementation of the Basel III capital floor in the second quarter of 2023.
- Leverage ratio: OSFI continued to allow banks to temporarily exclude exposures from central bank reserves for leverage ratio purposes until April 1, 2023.

A brief description of ongoing regulatory projects is presented below.

Basel III Reforms

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

- a revised Standardized Approach and Internal Ratings-Based (IRB) Approach for 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 affect the market risk and CVA risk frameworks, which will take effect in the first quarter of 2024.

Other Projects

On September 12, 2023, OSFI released the final *Parental Stand-Alone (Solo) TLAC Framework for Domestic Systemically Important Banks Guideline*. This guideline focuses on the loss-absorbing capacity of Canadian parent banks rather than its consolidated operations, allowing OSFI to assess the stand-alone financial strength of the parent bank and its ability to act as a source of financial strength for its subsidiaries and branches. The framework complements OSFI's existing TLAC guideline for D-SIBs on a group consolidated basis, providing an additional layer of protection to safeguard the rights and interests of depositors, policyholders, and creditors. D-SIBs must adhere to this guideline effective November 1, 2023.

Capital Management in 2023

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 then outstanding common shares) over the 12-month period ending no later than December 11, 2023. During the year ended October 31, 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.

As at October 31, 2023, the Bank had 338,284,629 issued and outstanding common shares compared to 336,582,124 a year earlier. It also had 66,000,000 issued and outstanding preferred shares and 1,500,000 LRCN, unchanged from October 31, 2022. For additional information on capital instruments, see Notes 15 and 18 to the consolidated financial statements.

Dividends

The Bank's strategy for common share dividends is to aim for a dividend payout ratio between 40% and 50% of net income attributable to common shareholders, taking into account such factors as financial position, cash needs, regulatory requirements, and any other factor deemed relevant by the Board.

For fiscal 2023, the Bank declared $1,344 million in dividends to common shareholders, representing 42.0% of net income attributable to common shareholders (2022: 36.8%) and representing 41.1% of adjusted net income attributable to common shareholders (2022: 36.8%). The declared dividends are within the target payout range as a result of the dividend increase during the fiscal year. Given the economic conditions during fiscal 2023, the Bank has taken a prudent approach to managing regulatory capital and remains confident in its ability to increase earnings going forward.

Shares, Other Equity Instruments, and Stock Options

	As at October 31, 2023	
	Number of shares or LRCN	$ 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	338,284,629	3,294
Stock options	11,546,688	

As at November 24, 2023, there were 338,269,824 common shares and 11,534,768 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 October 31, 2023.

Regulatory Capital Ratios, Leverage Ratio, and TLAC Ratios

As at October 31, 2023, the Bank's CET1, Tier 1, and Total capital ratios were, respectively, 13.5%, 16.0% and 16.8%, 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 the credit and operational risk 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 increased due to the same factors mentioned above, but the increase was more than offset by the $750 million redemption of medium-term notes on February 1, 2023.

As at October 31, 2023, the leverage ratio was 4.4% 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 October 31, 2023, the Bank's TLAC ratio and TLAC leverage ratio were, respectively, 29.2% and 8.0%, compared with 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 instrument issuances that met the TLAC 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 year ended October 31, 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)

As at October 31	2023	2022
Capital		
CET1	16,920	14,818
Tier 1	20,068	17,961
Total	21,056	19,727
Risk-weighted assets	125,592	116,840
Total exposure	456,478	401,780
Capital ratios		
CET1	13.5 %	12.7 %
Tier 1	16.0 %	15.4 %
Total	16.8 %	16.9 %
Leverage ratio	4.4 %	4.5 %
Available TLAC	36,732	32,351
TLAC ratio	29.2 %	27.7 %
TLAC leverage ratio	8.0 %	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*.

Movement in Regulatory Capital[1]

Year ended October 31 (millions of Canadian dollars)	2023	2022
Common Equity Tier 1 (CET1) capital		
Balance at beginning	14,818	12,973
Issuance of common shares (including Stock Option Plan)	85	54
Impact of shares purchased or sold for trading	3	(1)
Repurchase of common shares	–	(245)
Other contributed surplus	22	16
Dividends on preferred and common shares and distributions on other equity instruments	(1,507)	(1,325)
Net income attributable to the Bank's shareholders and holders of other equity instruments	3,337	3,384
Removal of own credit spread net of income taxes	232	(733)
Other	(226)	448
Movements in accumulated other comprehensive income		
Translation adjustments	103	333
Debt securities at fair value through other comprehensive income	(1)	(105)
Other	1	(2)
Change in goodwill and intangible assets (net of related tax liability)	37	(67)
Other, including regulatory adjustments and transitional arrangements		
Change in defined benefit pension plan asset (net of related tax liability)	101	145
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)	(25)	(5)
Other deductions of regulatory adjustments to CET1 implemented by OSFI[2]	(60)	(52)
Change in other regulatory adjustments	–	–
Balance at end	16,920	14,818
Additional Tier 1 capital		
Balance at beginning	3,143	2,649
New Tier 1 eligible capital issuances	–	500
Redeemed capital	–	–
Other, including regulatory adjustments and transitional arrangements	5	(6)
Balance at end	3,148	3,143
Total Tier 1 capital	20,068	17,961
Tier 2 capital		
Balance at beginning	1,766	1,021
New Tier 2 eligible capital issuances	–	750
Redeemed capital	(750)	–
Tier 2 instruments issued by subsidiaries and held by third parties	–	–
Change in certain allowances for credit losses	(54)	21
Other, including regulatory adjustments and transitional arrangements	26	(26)
Balance at end	988	1,766
Total regulatory capital	21,056	19,727

(1) See the Financial Reporting Method section on pages 14 to 19 for additional information on capital management measures.
(2) As at October 31, 2022, this item included the transitional measure applicable to expected credit loss provisioning implemented by OSFI in response to the COVID-19 pandemic. This provision ceased to apply on November 1, 2022.

RWA by Key Risk Drivers

Risk-weighted assets (RWA) amounted to $125.6 billion as at October 31, 2023 compared to $116.8 billion as at October 31, 2022, an $8.8 billion increase resulting mainly from organic growth in RWA, a deterioration in the credit quality of the loan portfolio, and by foreign exchange movements, partly offset by methodology changes related to the implementation of the Basel III reforms, notably for operational risk and credit risk. Changes in the Bank's RWA by risk type are presented in the following table.

Risk-Weighted Assets Movement by Key Drivers[1]

Quarter ended (millions of Canadian dollars)	October 31, 2023	July 31, 2023	April 30, 2023	January 31, 2023	October 31, 2022
	Total	Total	Total	Total	Total
Credit risk – Risk-weighted assets at beginning	102,087	101,986	100,820	96,141	91,229
Book size	2,288	578	572	4,439	2,405
Book quality	1,045	467	951	697	93
Model updates	(107)	–	116	172	300
Methodology and policy	–	–	(1,051)	106	339
Acquisitions and disposals	–	–	–	–	–
Foreign exchange movements	1,832	(944)	578	(735)	1,775
Credit risk – Risk-weighted assets at end	107,145	102,087	101,986	100,820	96,141
Market risk – Risk-weighted assets at beginning	5,985	5,060	5,960	6,025	5,696
Movement in risk levels[2]	(323)	925	(900)	(65)	329
Model updates	–	–	–	–	–
Methodology and policy	–	–	–	–	–
Acquisitions and disposals	–	–	–	–	–
Market risk – Risk-weighted assets at end	5,662	5,985	5,060	5,960	6,025
Operational risk – Risk-weighted assets at beginning	12,490	12,065	15,033	14,674	14,452
Movement in risk levels	295	425	93	359	222
Methodology and policy	–	–	(3,061)	–	–
Acquisitions and disposals	–	–	–	–	–
Operational risk – Risk-weighted assets at end	12,785	12,490	12,065	15,033	14,674
Risk-weighted assets at end	125,592	120,562	119,111	121,813	116,840

(1) See the Financial Reporting Method section on pages 14 to 19 for additional information on capital management measures.
(2) Also includes foreign exchange rate movements that are not considered material.

The table above provides the risk-weighted assets 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 year ended October 31, 2023, the Bank updated the models used for certain retail exposures, mortgages, and 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 reform requirements related to credit risk, operational risk, and capital output floor.

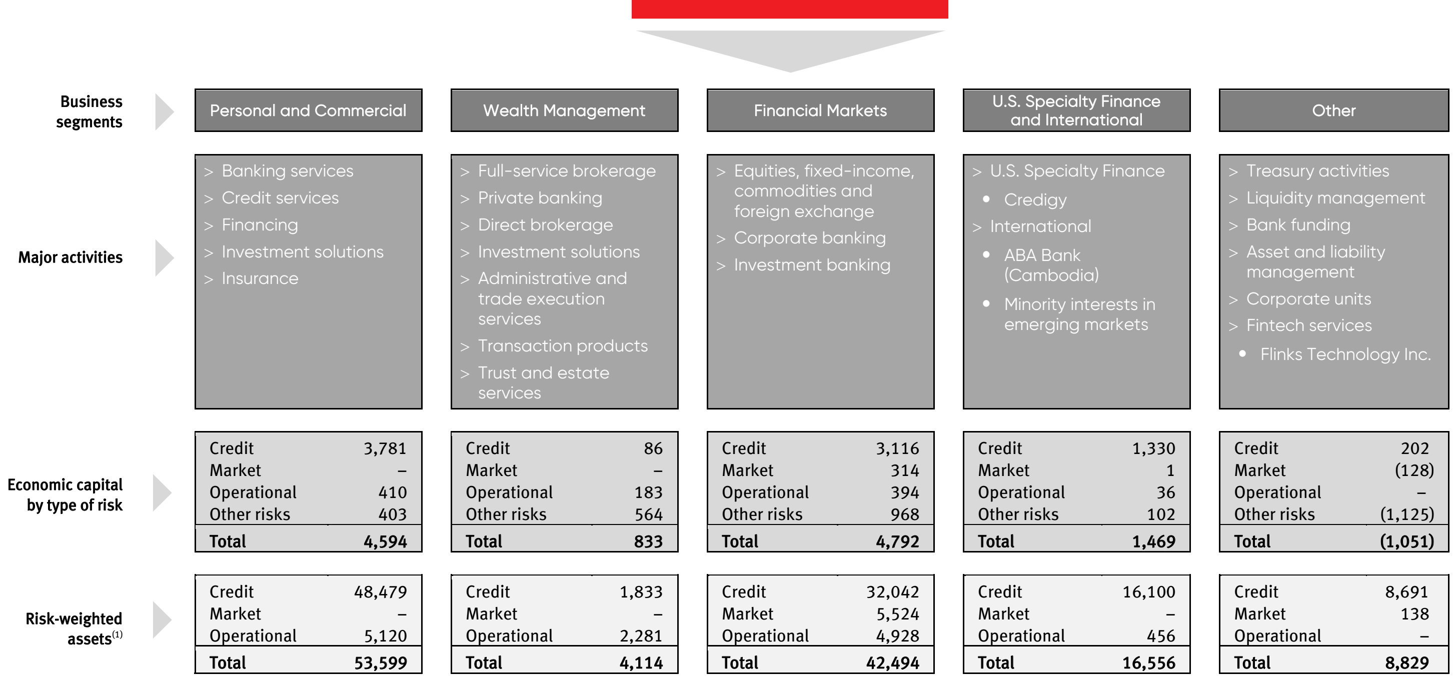
Allocation of Economic Capital and Regulatory RWA

Economic capital is an internal measure that the Bank uses to determine the capital it needs to remain solvent 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. The by-segment allocation of economic capital and regulatory RWA was carried out on a stand-alone basis before attribution of goodwill and intangible assets. The method used to assess economic capital is reviewed regularly in order to accurately quantify these risks.

The Risk Management section of this MD&A provides comprehensive information about the main types of risk. The "Other risks" presented below include risks such as business risk and structural interest rate risk in addition to the benefit of diversification among types of risk.

Allocation of Risks by Business Segment

As at October 31, 2023
(millions of Canadian dollars)



Economic capital by type of risk

	Personal and Commercial	Wealth Management	Financial Markets	U.S. Specialty Finance and International	Other
Credit	3,781	86	3,116	1,330	202
Market	–	–	314	1	(128)
Operational	410	183	394	36	–
Other risks	403	564	968	102	(1,125)
Total	**4,594**	**833**	**4,792**	**1,469**	**(1,051)**

Risk-weighted assets[(1)]

	Personal and Commercial	Wealth Management	Financial Markets	U.S. Specialty Finance and International	Other
Credit	48,479	1,833	32,042	16,100	8,691
Market	–	–	5,524	–	138
Operational	5,120	2,281	4,928	456	–
Total	**53,599**	**4,114**	**42,494**	**16,556**	**8,829**

(1) See the Financial Reporting Method section on pages 14 to 19 for additional information on capital management measures.

Risk Management

In this section of the MD&A, grey-shaded text and tables marked with an asterisk (*) are integral parts of the consolidated financial statements. They represent the Bank's objectives, its risk management policies and procedures, and the methods it applies to measure credit risk, market risk as well as liquidity and funding risk, as required by IFRS 7 – ***Financial Instruments: Disclosures.***

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. The purpose of sound and effective risk management is to provide reasonable assurance that incurred risks do not exceed acceptable thresholds, to control the volatility in the Bank's results, and to ensure that risk-taking contributes to the creation of shareholder value.

Risk Management Framework

Risk is rigorously managed. Risks are identified, measured, and controlled to achieve an appropriate balance between returns obtained and risks assumed. Decision-making is therefore guided by risk assessments that align with the Bank's risk appetite and by prudent levels of capital and liquidity. Despite the exercise of stringent risk management and existing mitigation measures, risk cannot be eliminated entirely, and residual risks may occasionally cause losses.

The Bank has developed guidelines that support sound and effective risk management and that help preserve its reputation, brand, and long-term viability:

- risk is everyone's business: the business units, the risk management and oversight functions, and Internal Audit all play an important role in ensuring a risk management framework is in place; operational transformations and simplifications are conducted without compromising rigorous risk management;
- client-centric: having quality information is key to understanding clients, effectively managing risk, and delivering excellent client service;
- enterprise-wide: a good understanding and an integrated view of risk are the basis for sound and effective risk management and decision-making by management;
- human capital: the Bank's employees are engaged, experienced, and have a high level of expertise; their curiosity supports continuous development and their rigour ensures that risk management is built into the corporate culture; incentive-based compensation programs are designed to adhere to the Bank's risk tolerance;
- fact-based: good risk management relies heavily on common sense and good judgment and on advanced systems and models.

Risk Appetite

Risk appetite represents how much risk an organization is willing to assume to achieve its business strategy. The Bank defines its risk appetite by setting tolerance thresholds, by aligning those thresholds with its business strategy, and by integrating risk management throughout its corporate culture. Risk appetite is built into decision-making processes as well as into strategic, financial, and capital planning.

The Bank's risk appetite framework consists of principles, statements, metrics as well as targets and is reinforced by policies and limits. When setting its risk appetite targets, the Bank considers regulatory constraints and the expectations of stakeholders, in particular customers, employees, the community, shareholders, regulatory agencies, governments, and rating agencies. The risk appetite framework is defined by the following principles and statements:

The Bank's reputation, brand, and long-term viability are at the centre of our decisions, which demand:

- a strong credit rating to be maintained;
- a strong capital and liquidity position;
- rigorous management of risks, including information security, regulatory compliance, and sales practices;
- attainment of environmental, social, and governance objectives.

The Bank understands the risks taken; they are aligned with our business strategy and translate into:

- a risk-reward balance;
- a stable risk profile;
- a strategic level of concentration aligned with approved targets.

The Bank's transformation and simplification plan is being carried out without compromising rigorous risk management, which is reflected in:

- a low tolerance to operational and reputation risk;
- operational and information systems stability, both under normal circumstances and in times of crisis.

The Bank's management and business units are involved in the risk appetite setting process and are responsible for adequately monitoring the chosen risk indicators. These needs are assessed by means of the enterprise strategic planning process. The risk indicators are reported on a regular basis to ensure an effective alignment between the Bank's risk profile and its risk appetite, failing which appropriate actions might be taken. Additional information on the key credit, market and liquidity risk indicators monitored by the Bank's management is presented on the following pages.

Enterprise-Wide Stress Testing
An enterprise-wide stress testing program is in place at the Bank. It is part of a more extensive process aimed at ensuring that the Bank maintains adequate capital levels commensurate with its business strategy and risk appetite. Stress testing can be defined as a risk management method that assesses the potential effects—on the Bank's financial position, capital and liquidity—of a series of specified changes in risk factors, corresponding to exceptional but plausible events. The program supports management's decision-making process by identifying potential vulnerabilities for the Bank as a whole and that are considered in setting limits as well as in longer term business planning. The scenarios and stress test results are approved by the Stress Testing Oversight Committee and are reviewed by the Global Risk Committee (GRC) and the Risk Management Committee (RMC). For additional information, see the Stress Testing section of this MD&A applicable to credit risk, market risk, and liquidity risk.

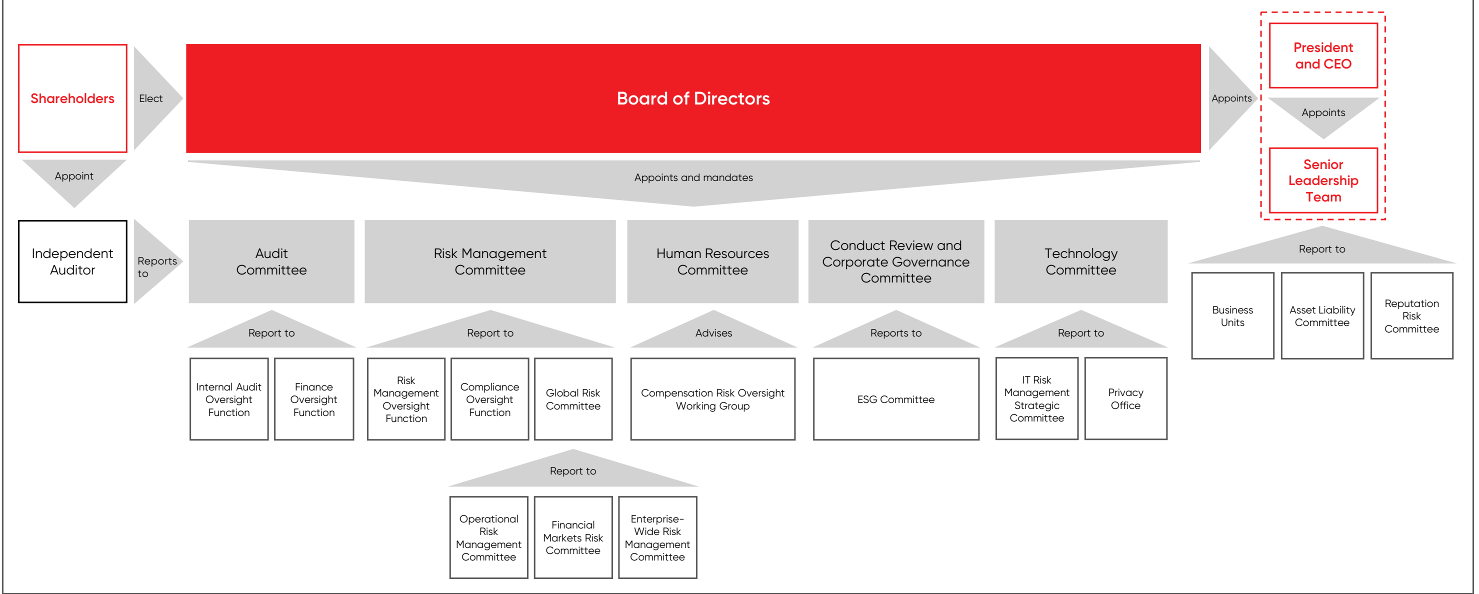
Incorporation of Risk Management Into the Corporate Culture
Risk management is supported by the Bank's cultural evolution through, notably, the following pillars:

- Tone set by management: The Bank's management continually promotes risk management through internal communications. The Bank's risk appetite is therefore known to all.
- Shared accountability: A balanced approach is advocated, whereby business development initiatives are combined with a constant focus on sound and effective risk management. In particular, risk is taken into consideration when preparing the business plans of the business segments, when analyzing strategic initiatives, and when launching new products.
- Transparency: A foundation of the business's values, transparency lets us communicate our concerns quickly without fear of reprisal. We are a learning-focused organization where employees are allowed to make mistakes.
- Behaviour: The Bank's risk management is strengthened by incentive compensation programs that are structured to reflect the Bank's risk appetite.
- Continuous development: All employees must complete mandatory annual regulatory compliance training focused on the Bank's *Code of Conduct* and on anti-money laundering and anti-terrorist financing (AML/ATF) efforts as well as cybersecurity training. Risk management training is also offered across all of the Bank's business units.

In addition to these five pillars, Internal Audit carries out an evaluation of the corporate culture as part of its mandate. Furthermore, to ensure the effectiveness of the existing risk management framework, the Bank has defined clear roles and responsibilities by reinforcing the concept of the three lines of defence. The Governance Structure section presented on the following pages defines this concept as well as the roles and responsibilities of the three lines of defence.

First Line of Defence Risk Owner	**Second Line of Defence** Independent Oversight	**Third Line of Defence** Independent Assurance
Business Units	Risk Management and Oversight Functions	Internal Audit
• Identify, manage, assess and mitigate risks in day-to-day activities. • Ensure activities are in alignment with the Bank's risk appetite and risk management policies.	• Oversee risk management by setting policies and standards. • Provide independent oversight of management practices and an independent challenge of the first line of defence. • Promote sound and effective risk management at the Bank. • Monitor and report on risk.	• Provide the Board and management with independent assurance as to the effectiveness of the main governance, risk management, and internal control processes and systems. • Provide recommendations and advice to promote the Bank's long-term financial strength.

Governance Structure[(1)]*
The following chart shows the Bank's overall governance architecture and the governance relationships established for risk management.



<u>The Board of Directors (Board)</u>
The Board is responsible for approving and overseeing management of the Bank's internal and commercial affairs, and it establishes strategic directions together with management. It also approves and oversees the Bank's overall risk philosophy and risk appetite, acknowledges and understands the main risks faced by the Bank, and makes sure appropriate systems are in place to effectively manage and control those risks. In addition, the Board ensures that the Bank operates in accordance with environmental, social and governance (ESG) practices and strategies. It carries out its mandate both directly and through its committees: the Audit Committee, the Risk Management Committee, the Human Resources Committee, the Conduct Review and Corporate Governance Committee, and the Technology Committee. In addition, the various oversight functions, the Global Risk Committee and the working groups report to the Board and advise it.

<u>The Audit Committee</u>
The Audit Committee oversees the work of the Bank's internal auditor and independent auditor; ensures the Bank's financial strength; establishes the Bank's financial reporting framework, analysis processes, and internal controls; and reviews any reports of irregularities in accounting, internal controls, or audit.

<u>The Risk Management Committee (RMC)</u>
The Risk Management Committee examines the risk appetite framework and recommends it to the Board for approval. It approves the main risk management policies and risk tolerance limits. It ensures that appropriate resources, processes, and procedures are in place to properly and effectively manage risk on an ongoing basis. Finally, it monitors the risk profile and risk trends of the Bank's activities and ensures alignment with the risk appetite.

<u>The Human Resources Committee</u>
The Human Resources Committee examines and approves the Bank's total compensation policies and programs, taking into consideration the risk appetite framework and ESG strategies, and recommends their approval to the Board. It recommends, for Board approval, the compensation of the President and Chief Executive Officer, of the members of the Senior Leadership Team, and of the heads of the oversight functions. This committee oversees all human resources practices, including employee health, safety and well-being, talent management matters such as succession planning for management and oversight functions, as well as diversity, equity and inclusion.

<u>The Conduct Review and Corporate Governance Committee</u>
The Conduct Review and Corporate Governance Committee ensures that the Bank maintains sound practices that comply with legislation and best practices, particularly in the area of ESG responsibilities, and that they align with the Bank's One Mission. It periodically reviews and approves professional conduct and ethical behaviour standards, including the *Code of Conduct.* The committee oversees the application of complaint review mechanisms and implements mechanisms that ensure compliance with consumer protection provisions, including the *Whistleblower Protection Policy*, and that prevent prohibited financial transactions between the Bank and related parties. Lastly, it ensures that the directors are qualified by evaluating the performance and effectiveness of the Board and its members and by planning director succession and the composition of the Board.

<u>The Technology Committee</u>
The Technology Committee oversees the various components of the Bank's technology program. It reviews, among other things, the Bank's technology strategy and monitors technology risks, including cyberrisks, cybercrime, and protection of personal information.

(1) Additional information about the Bank's governance structure can be found in the *Management Proxy Circular for the 2024 Annual Meeting of Holders of Common Shares*, which will soon be available on the Bank's website at nbc.ca and on SEDAR+'s website at sedarplus.ca. The mandates of the Board and of its committees are available in their entirety at nbc.ca.

Senior Leadership Team of the Bank

Composed of the President and Chief Executive Officer and the officers responsible for the Bank's main functions and business units, the Bank's Senior Leadership Team ensures that risk management is sound and effective and aligned with the Bank's pursuit of its business objectives and strategies. The Senior Leadership Team promotes the integration of risk management into its corporate culture and manages the primary risks facing the Bank.

The Internal Audit Oversight Function

The Internal Audit Oversight Function is the third line of defence in the risk management framework. It is responsible for providing the Bank's Board and management with objective, independent assurance on the effectiveness of the main governance, risk management, and internal control processes and systems and for making recommendations and providing advice to promote the Bank's long-term strength.

The Finance Oversight Function

The Finance Oversight Function is responsible for optimizing management of financial resources and ensuring sound governance of financial information. It helps the business segments and support functions with their financial performance, ensures compliance with regulatory requirements, and carries out the Bank's reporting to shareholders and the external reporting of the various units, entities, and subsidiaries of the Bank. It is responsible for capital management and actively participates in the activities of the Asset Liability Committee.

The Risk Management Oversight Function

The Risk Management service is responsible for identifying, assessing and monitoring—independently and using an integrated approach—the various risks to which the Bank and its subsidiaries are exposed and for promoting a risk management culture throughout the Bank. The Risk Management team helps the Board and management understand and monitor the main risks. This service also develops, maintains, and communicates the risk appetite framework while overseeing the integrity and reliability of risk measures.

The Compliance Oversight Function

The Compliance Oversight Function is responsible for implementing a Bank-wide regulatory compliance risk management framework by relying on an organizational structure that includes functional links to the main business segments. It also exercises independent oversight and conducts assessments of the compliance of the Bank and its subsidiaries with regulatory compliance risk standards and policies.

The Global Risk Committee (GRC)

The Global Risk Committee is the overriding governing entity of all the Bank's risk committees, and it oversees every aspect of the overall management of the Bank's risks. It sets the parameters of the policies that determine risk tolerance and the overall risk strategy, for the Bank and its subsidiaries as a whole, and sets limits as well as tolerance and intervention thresholds enabling the Bank to properly manage the main risks to which it is exposed. The committee approves and monitors all large credit facilities using the limits set out in the Credit Risk Management Policy. It reports to the Board, and recommends for Board approval, the Bank's risk philosophy, risk appetite, and risk profile management. The Operational Risk Management Committee, the Financial Markets Risk Committee, and the Enterprise-Wide Risk Management Committee presented in the governance structure chart are the primary committees reporting to the Global Risk Committee. The Global Risk Committee also carries out its mandate through the Senior Complex Valuation Committee, the Model Oversight Committee, and the Product and Activity Review Committees.

The Compensation Risk Oversight Working Group

The working group that monitors compensation-related risks supports the Human Resources Committee in its compensation risk oversight role. It is made up of at least three members, namely, the Executive Vice-President, Risk Management; the Chief Financial Officer and Executive Vice-President, Finance; and the Executive Vice-President, Employee Experience. The working group helps to ensure that compensation policies and programs do not unduly encourage senior management members, officers, material risk takers, or bank employees to take risks beyond the Bank's risk tolerance thresholds. As part of that role, it ensures that the Bank is adhering to the Corporate Governance Guidelines issued by OSFI and to the Principles for Sound Compensation Practices issued by the Financial Stability Board, for which the Canadian implementation and monitoring is conducted by OSFI. The RMC also reviews the reports presented by this working group.

The ESG Committee

Under the leadership of the Chief Financial Officer and Executive Vice-President, Finance and of the Senior Vice-President, Communications, Public Affairs and ESG, and made up of several officers from different areas of the Bank, the ESG Committee's main role is to develop and support the Bank's environmental, social and governance initiatives and strategies. The ESG Committee is responsible for implementing the recommendations made by the Task Force on Climate-related Financial Disclosures (TCFD) and by the UN Principles for Responsible Banking as well as for implementing the Bank's climate commitments. At least twice a year, the ESG Committee reports to the Conduct Review and Corporate Governance Committee on the progress made and on ongoing and upcoming ESG projects. In addition, and in a timely fashion, the ESG Committee makes presentations on topics of particular interest, such as extra-financial and climate risk disclosures, to the Audit Committee and the RMC.

The IT Risk Management Strategic Committee (ITRMSC)

The Bank's senior management entrusts the ITRMSC with overseeing the implementation of technology risk and cyberrisk management to ensure that the Bank is compliant with the regulations, policies, and protocols related to managing such risks. Under the leadership of the Executive Vice-President, Risk Management and the Executive Vice-President, Technology and Operations, this committee approves the policies related to technology risk and cyberrisk management. Among other responsibilities, it reviews the technology risk and cyberrisk posture as well as any matter requiring an alignment between the technology strategy and the associated risks.

The Privacy Office
The Privacy Office develops and implements the personal information privacy program and the Bank's strategy for ensuring privacy and protecting personal information. It oversees the development, updating, and application of appropriate documentation in support of the Bank's personal information privacy program, including policies, standards, and procedures. It also oversees the risk governance framework and the implementation of appropriate controls designed to mitigate privacy risk. Lastly, it supports the business units in their execution of the Bank's strategic directions and ensures adherence to privacy best practices.

The Business Units
As the first line of defence, the business units manage risks related to their operations within established limits and in accordance with risk management policies by identifying, analyzing, managing, and understanding the risks to which they are exposed and implementing risk mitigation mechanisms. The management of these units must ensure that employees are adhering to current policies and limits.

Asset Liability Committee
The Asset Liability Committee is composed of members of the Bank's Senior Leadership Team, Risk Management officers, and officers from the business units. It monitors and provides strategic actions on structural interest rate risk, structural foreign exchange risk, and liquidity risk. It is also charged with strategic coordination of the annual budget plan with respect to the balance sheet, capital, and funding.

Reputation Risk Committee (RRC)
The Reputation Risk Committee is the central point for sharing information on the Bank's reputation risk practices. In particular, it ensures that appropriate frameworks are in place and being applied, that higher reputation risks are being adequately monitored, and that mitigation plans are in place. It sets risk appetite levels and proposes guidance and alignments that match this risk appetite. The RRC reports to the Senior Leadership Team and the RMC.

Risk Management Policies
The risk management policies and related standards and procedures set out responsibilities, define and describe the main business-related risks, specify the requirements that business units must fulfill when assessing and managing these risks, stipulate the authorization process for risk-taking, and set the risk limits to be adhered to. They also establish the accountability reporting that must be provided to the various risk-related bodies, including the RMC. The policies cover the Bank's main risks, are reviewed regularly to ensure they are still relevant given market changes, regulatory changes and changes in the business plans of the Bank's business units, and they apply to the entire Bank and its subsidiaries, when applicable. Other policies, standards, and procedures complement the main policies and cover more specific aspects of risk management such as business continuity; the launch of new products, initiatives, or activities; or financial instrument measurement.

Governance of Model Risk Management
The Bank uses several models to guide enterprise-wide risk management, financial markets strategy, economic and regulatory capital allocation, global credit risk management, wealth management, and profitability measures. The model risk management policies as well as a rigorous model management process ensure that model usage is appropriate and effective.

The key components of the Bank's model risk management governance framework are as follows: the model risk management policies and standards, the model validation group, and the Model Oversight Committee. The policies and standards set the rules and principles applicable to the development and independent validation of models. The scope of models covered is wide, ranging from market risk pricing models and automated credit decision-making models to the business risk capital models, including models used for regulatory capital and stressed capital purposes, expected credit losses models, and financial-crime models. The framework also includes more advanced artificial intelligence models.

One of the cornerstones of the Bank's policies is the general principle that all models deemed important for the Bank or used for regulatory capital purposes require heightened lifecycle monitoring and independent validation. All models used by the Bank are therefore classified in terms of risk level (low, medium, or high). Based on this classification, the Bank applies strict guidelines regarding the requirements for model development and documentation, independent review thereof, performance monitoring thereof, and minimum review frequency. The Bank believes that the best defence against model risk is the implementation of a robust development and validation framework.

Independent Oversight by the Compliance Service
Compliance is an independent oversight function within the Bank. Its Senior Vice-President, Chief Compliance Officer and Chief Anti-Money Laundering Officer has direct access to the RMC and to the President and Chief Executive Officer and can communicate directly with officers and directors of the Bank and of its subsidiaries and foreign centres. The Senior Vice-President, Chief Compliance Officer and Chief Anti-Money Laundering Officer regularly meets with the Chair of the RMC, in the absence of management, to review matters on the relationship between the Compliance Service and the Bank's management and on access to the information required.

Business unit managers must oversee the implementation of mechanisms for the daily control of regulatory compliance risks arising from the operations under their responsibility. Compliance exercises independent oversight in order to assist managers in effectively managing these risks and to obtain reasonable assurance that the Bank is compliant with the regulatory requirements in effect where it does business, both in Canada and internationally.

Independent Assessment by Internal Audit

Internal Audit is an independent oversight function created by the Audit Committee. Its Senior Vice-President has direct access to the Chair of the Audit Committee and to the Bank's President and Chief Executive Officer and can communicate directly with officers and directors of the Bank and of its subsidiaries and foreign centres. The Senior Vice-President, Internal Audit, regularly meets with the Chair of the Audit Committee, in the absence of management, to review matters on the relationship between Internal Audit and the Bank's management.

Internal Audit provides reasonable assurance that the main governance, risk management, and internal control processes and systems are ensuring that, in all material respects, the Bank's key control procedures are effective and compliant. Internal Audit also provides recommendations and advice on how to strengthen these key control procedures. Business unit managers and senior management must ensure the effectiveness of the main governance, risk management, and internal control processes and systems, and they must implement corrective measures if needed.

Top and Emerging Risks

Managing risk requires a solid understanding of every type of risk faced by the Bank, as they could have a material adverse effect on the Bank's business, results of operations, financial position, and reputation. As part of its risk management approach, the Bank identifies, assesses, reviews and monitors the range of top and emerging risks to which it is exposed in order to proactively manage them and implement appropriate mitigation strategies. Identified top and emerging risks are presented to senior management and communicated to the RMC.

The Bank applies a risk taxonomy that categorizes, into two groups, the top risks to which the Bank is exposed in the normal course of business:

- Financial risks: Directly tied to the Bank's key business activities and are generally more quantifiable or predictable;
- Non-financial risks: Inherent to the Bank's activities and to which it does not choose to be exposed.

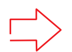
The Bank separately qualifies the risks to which it is exposed: a "top risk" is a risk that has been identified, is clearly defined, and could have a significant impact on the Bank's business, results of operations, financial position, and reputation, whereas an "emerging risk" is a risk that, while it may also have an impact on the Bank, is not yet well understood in terms of its likelihood, consequences, timing, or the magnitude of its potential impact.

In the normal course of business, the Bank is exposed to the following top risks.

Financial risks			Non-financial risks				
Credit risk	Market risk	Liquidity and funding risk	Operational risk	Regulatory compliance risk	Reputation risk	Strategic risk	Environmental and social risk

The Bank is also exposed to other new, so-called emerging or significant risks, which are defined as follows.

Risk and Trend	Description
Information security and cybersecurity ⇨	Technology, which is now omnipresent in our daily lives, is at the heart of banking services and has become the main driver of innovation in the financial sector. While this digital transformation meets the growing needs of customers by enhancing the operational efficiency of institutions, it nevertheless comes with information security and cybersecurity risks. The personal information and financial data of financial institution customers are still prime targets for criminals. These criminals, who are increasingly well organized and employing ever more sophisticated schemes, try to use technology to steal information. Faced with a resurgence of cyberthreats and the sophistication of cybercriminals, the Bank is exposed to the risks associated with data breaches, malicious software, unauthorized access, hacking, phishing, identity theft, intellectual property theft, asset theft, industrial espionage, and possible denial of service due to activities causing network failures and service interruptions. Cyberattacks, as with breaches or interruptions of systems that support the Bank and its customers, could cause client attrition; financial loss; an inability of clients to do their banking; non-compliance with privacy legislation or any other current laws; legal disputes; fines; penalties or regulatory action; reputational damage; compliance costs, corrective measures, investigative or restoration costs; and cost hikes to maintain and upgrade technological infrastructures and systems, all of which could affect the Bank's operating results or financial position, in addition to having an impact on its reputation.

<table>
<tr><th>Risk and Trend</th><th>Description</th></tr>
<tr><td>Information security and cybersecurity (continued)
</td><td>It is also possible for the Bank to be unable to implement effective preventive measures against every potential cyberthreat, as the tactics used are multiplying, change frequently, come from a wide range of sources, and are increasingly sophisticated.

Within this context, the Bank works to ensure the integrity and protection of its systems and the information they contain. The Bank reaffirms its commitment to continuous improvement in the area of information security, the ultimate goal being to protect its customers and maintain their trust. Along with its partners in the financial sector and with the regulatory authorities, the Bank is committed to making a sustained effort to mitigate technology risks. Multidisciplinary teams consisting of cybersecurity and fraud prevention specialists focus specifically on anticipating this type of threat. The Bank is also pursuing initiatives under its own cybersecurity program aimed at adapting its protection, surveillance, detection, and response capabilities according to changing threats, the aim being to continue to reduce delays in detecting any anomalies or cybersecurity incidents and limiting the impact thereof as much as possible. A governance and accountability structure has also been established to support decision-making based on sound risk management. The Technology Committee is regularly informed of the cybersecurity posture, of cybersecurity trends and developments, and of lessons learned from operational incidents that have occurred in other large organizations such that it can gain a better understanding of the risks, particularly risks related to cybersecurity and the protection of personal information.</td></tr>
<tr><td>Geopolitical risks
 </td><td>Government decisions and international relations can have a significant impact on the environment in which the Bank operates. Geopolitical events can lead to volatility, have a negative impact on at-risk assets, and cause financial conditions to deteriorate. They can also directly or indirectly affect banking activities by having repercussions on clients. The war in Ukraine, which has disrupted energy and agricultural supply chains, is a good example. The economic sanctions taken against Russia for its invasion of Ukraine and the steps taken by Russia to significantly reduce natural gas supply to Europe have led to soaring energy costs. This situation has triggered the negative economic headwinds now facing Europe and heightened the risk of a political reaction in the form of new governments taking power and social unrest. Even if the war were to end, the shattered trust suggests that Europe and Russia will continue to take measures to become less dependent on one another, notably regarding energy matters. In addition, the recent clashes between Hamas and Israel add a new risk of regional escalation in the Middle East. The greatest risk is that this conflict spreads and develops into a more direct confrontation between Iran and Israel, which could ultimately disrupt oil deliveries in the Persian Gulf.

While new risks could arise at any time, certain concerns are compelling us to monitor other situations at this time. The geopolitical power struggle that for years has pitted the United States against China is one such concern. Businesses, in particular those operating in sectors deemed strategic, run an increasing risk of finding themselves in a maze of contradictory regulations, where complying with U.S. regulations means violating Chinese law, and vice versa. These tensions could also partially undo some of the ties forged between these two superpowers in the financial markets, and Canada might get caught in the crosshairs of the two countries. Tensions between China and the United States on the subject of Taiwan is another source of disagreement between the two superpowers. While we do not believe an invasion is imminent, China will continue to exert pressure on Taiwan through a combination of unprecedented military exercises and economic sanctions. Taiwan's importance is highlighted by the fact that it is by far the leading global producer of advanced microchips (over 90% of the market share).

Closer to home, Canada is also dealing with some tensions. Until recently, India represented an alternative to China as a potential trading partner against a backdrop of persistent tensions with the Middle Kingdom (detention of two Canadians in China and Chinese interference in Canadian elections). However, Ottawa's accusations that the Indian government was involved in the murder of a Canadian citizen have soured relations with India, and the conflict could affect companies that have forged trade links or made investments there. But the potential for confrontation does not end there, as protectionism is gaining popularity, and a growing number of countries are implementing measures to both financially support domestic businesses in key sectors (high tech, health care, and food) and to protect them against global competition through business restrictions. The combined effects of supply shortages and geopolitical tensions have shifted the focus from efficiency to supply security.

In addition, the combined effect of climate change and armed conflict could lead to massive involuntary migration, which has already risen sharply in recent years. This could have economic and political repercussions, with Europe being particularly vulnerable. Lastly, with rising debt levels and interest rates, some governments could face a dilemma as they try to satisfy public demands to maintain social safety nets and respond to pressure from the financial markets to improve their fiscal balance, causing political tensions in the developed countries. We will continue to monitor all of these developments, analyze any new risks that arise, and assess the impacts that they may have on our organization.</td></tr>
</table>

<table>
<tr><th>Risk and Trend</th><th>Description</th></tr>
<tr><td>Economic risk
 </td><td>Although the economy recovered quickly during the pandemic, a number of risks still remain while others emerge. The extremely aggressive fiscal stimulus in North America at the start of the pandemic, supply chain issues, and the war in Ukraine led to a resurgence in inflation in 2022 to levels not seen since the early 1980s. The central banks, guarantors of price stability, are determined to curb inflation and have pushed interest rates to the highest levels seen in over two decades. At a time when investors are wondering about future interest rates, which could stay high for a prolonged period, financial conditions have deteriorated substantially worldwide, heightening the risk of recession. Central banks continue to show concern about inflation, while the economy has yet to feel the full impact of previous rate hikes. In an environment characterized by high interest rates, companies may be reluctant to invest, and this does not usually bode well for hiring. Corporate profit margins are under pressure in a context of rising employee compensation and interest expense, which could lead to difficult decisions about staffing levels. Consumers, on the other hand, are likely to limit spending when faced with high prices, amplifying the risks of an economic recession. The global economy could also face a situation not seen since the 1970s: stagflation. Such a period, characterized by both economic weakness and high inflation, would place central banks in a dilemma, making them reluctant to support a moribund economy.

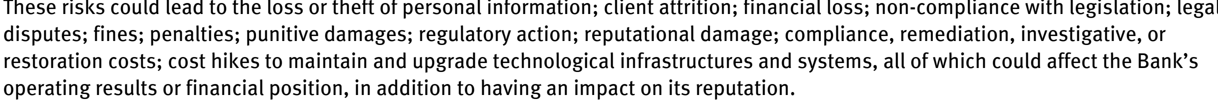
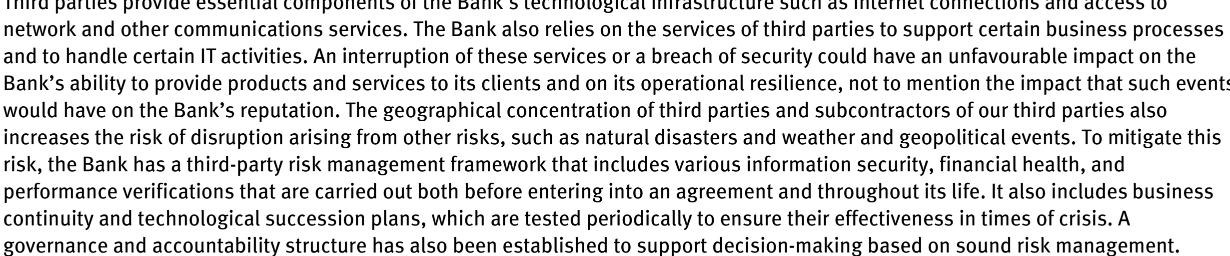
Many governments became much more indebted during the pandemic and are now facing an interest payment shock as bonds come due. Government financing needs will be considerable in the years to come, with demographic changes, the fight against climate change, and reindustrialization all risking to exacerbate the pressure on public finances. There is reason to believe that investors could demand compensation for financing more fragile governments. This could limit the power of governments to act in the event of economic weakness.

Lastly, climate issues are an added risk in the current context. If too few measures are adopted on the climate front, severe weather events will intensify and result in economic woes over the long term. Conversely, a too-swift transition could result in other risks, particularly short- and medium-term costs and rising pressure on production costs.

In short, given the ongoing uncertainties in this economic environment, the Bank remains vigilant in the face of numerous factors and will continue to rely on its strong risk management framework to identify, assess, and mitigate the negative impacts while also remaining within its risk appetite limits.</td></tr>
<tr><td>Real estate and household indebtedness
 </td><td>With interest rates up sharply and inflation still high, it is normal to wonder how these circumstances are affecting Canadian households, which have high levels of debt. Canadian household debt, when compared internationally, is high in relation to disposable income, much like other countries with strong social safety nets. In recent years, policymakers have introduced a number of financial stability measures to limit Canadian household debt. This has paid off, as shown by the debt ratio, which has been relatively unchanged since 2016. Nonetheless, indebted households are feeling the impact of the current monetary tightening. The labour market has proved resilient for now, and this has limited late payments on loans, but we are not immune to a potential recession that could make matters worse. The Bank offers variable rate/variable payment mortgage loans. This means that clients in this situation have been able to gradually adjust their budgets since the start of the multiple rate hikes and avoid overly high payment shock when they renew their mortgage term, as is the case for borrowers that have variable rate/fixed payment mortgages with other lenders.

Soaring house prices have been one of the causes of the country's high indebtedness. For the time being, property prices have been resilient in the face of rising interest rates, since their impact has been offset by record population growth over the past few quarters. But, as mentioned above, a less buoyant job market could push the real estate sector into another slump. A severe recession could cause house prices to plunge, potentially prompting some borrowers to default strategically. Quebec's lower indebtedness compared with the rest of the country, from more affordable housing, combined with the fact that the province has a higher percentage of households in which both spouses are employed, helps to limit the Bank's exposure against a significant increase in credit risk.

The Bank takes all these risks into account when establishing lending criteria and estimating credit loss allowances. It should be noted that borrowers are closely monitored on an ongoing basis, and portfolio stress tests are conducted periodically to detect any vulnerable borrowers. The Bank proactively contacts those identified and proposes appropriate solutions to enable them to continue to meet their commitments.</td></tr>
</table>

Risk and Trend	Description
Protection of personal information	 Risks related to protecting personal information exist throughout the entire lifecycle of information and arise, in particular, from new control measures and processes as well as from ever-evolving legislative requirements. Such risks could also arise from information being improperly created, collected, used, communicated, stored, or destroyed. Exposure to such risks may increase when the Bank uses external service providers to process personal information. The collection, use, and communication of personal information as well as the management and governance thereof are receiving increasing attention, and the Bank is investing in technological solutions and innovations according to the evolution of its commercial activities. These risks could lead to the loss or theft of personal information; client attrition; financial loss; non-compliance with legislation; legal disputes; fines; penalties; punitive damages; regulatory action; reputational damage; compliance, remediation, investigative, or restoration costs; cost hikes to maintain and upgrade technological infrastructures and systems, all of which could affect the Bank's operating results or financial position, in addition to having an impact on its reputation. In recent years, innovations and the proliferation of technological solutions that collect, use, and communicate personal information such as cloud computing, artificial intelligence, automated learning, and open banking, have given rise to significant legislative changes in many jurisdictions, including Canada and Quebec. The *Act to modernize legislative provisions as regards the protection of personal information,* adopted by the Government of Quebec in September 2021, is progressively coming into force until 2024. It gives new powers to regulatory agencies to impose administrative and monetary penalties. On June 16, 2022, the federal government tabled Bill C-27, entitled *Digital Charter Implementation Act, 2022,* which aims to enhance and modernize the personal information protection framework and sets out new regulatory powers and fines. The Bank continues to monitor relevant legislative developments and has bolstered its governance structure by updating its policies, standards and practices and by deploying a personal information privacy program that reflects its determination to maintain the trust of its clients.
Reliance on technology and third-party providers	The Bank's clients have high expectations regarding the accessibility to products and services on various platforms that house substantial amounts of data. In response to those client expectations, to the rapid pace of technological change, and to the growing presence of new actors in the banking sector, the Bank makes significant and ongoing investments in its technology while maintaining the operational resilience and robustness of its controls. Inadequate implementation of technological improvements or new products or services could significantly affect the Bank's ability to serve and retain clients.  Third parties provide essential components of the Bank's technological infrastructure such as Internet connections and access to network and other communications services. The Bank also relies on the services of third parties to support certain business processes and to handle certain IT activities. An interruption of these services or a breach of security could have an unfavourable impact on the Bank's ability to provide products and services to its clients and on its operational resilience, not to mention the impact that such events would have on the Bank's reputation. The geographical concentration of third parties and subcontractors of our third parties also increases the risk of disruption arising from other risks, such as natural disasters and weather and geopolitical events. To mitigate this risk, the Bank has a third-party risk management framework that includes various information security, financial health, and performance verifications that are carried out both before entering into an agreement and throughout its life. It also includes business continuity and technological succession plans, which are tested periodically to ensure their effectiveness in times of crisis. A governance and accountability structure has also been established to support decision-making based on sound risk management. Despite these preventive measures and the efforts deployed by the Bank to manage third parties, there remains a possibility that certain risks will materialize. In such cases, the Bank would rely on mitigation mechanisms developed in collaboration with the various agreement owners and third parties concerned. Faced with a greater ecosystem of third parties across the industry, in April 2023 OSFI tabled a new version of its *Third-Party Risk Management Guideline* (B-10), which will come into effect on May 1, 2024. Mindful of the significance of third-party risk, the Bank makes sure that its third-party management practices and policies evolve in collaboration with its financial sector partners and with regulatory authorities.

Risk and Trend	Description
Technological innovation and competition ⇨	Rapid changes in the technology used by financial system participants could affect the Bank's financial performance and reputation, which depend in part on its ability to develop and market new product and service offerings to satisfy changing customer needs, adopt and develop new technologies that help differentiate its products and services in the market, and generate cost savings. In addition, the Bank must adequately assess the impacts of any changes arising from the deployment of key technological systems before they are implemented and on an ongoing basis during their deployment. The transition to new digital solutions and channels has accelerated greatly in recent years, leading to major developments in the areas of digital currencies, the open banking system, and financial services from non-bank providers. The arrival of new, non-conventional players in the market has intensified competition, as they are proposing to enhance client experience with new technologies, data analysis tools, and customized solutions. These businesses are not necessarily subject to the same regulatory requirements as financial institutions and may sometimes be able to react more quickly to new consumer habits. Furthermore, to promote digital innovation and improve the client experience, the Bank continues to incorporate artificial intelligence into its business processes. It designs and continuously applies a set of practices aimed at ensuring the development of equitable solutions, in addition to rigorous monitoring during the production stage. The Bank also continues to participate in the industry's work to implement a regulatory framework for the open banking system. The Bank remains alert to the risks that could arise from the transformation of financial services and continues to invest in the development of its operational and technological capabilities. Also, the Bank maintains a strong commitment in favour of innovation through its specialized venture capital arm, *NAventures*™, which makes strategic investments in emerging technologies.
Climate change ⇗	The Bank has identified two types of direct climate-change-related risks, i.e., physical risks and transition risks. Physical risks refer to the potential impacts of more frequent and more intense extreme weather events and/or of chronic changes in weather conditions on physical assets, infrastructures, the value chain, productivity, other physical aspects, etc. Transition risks refer to the potential impacts of moving toward a low-carbon economy (such as technological changes, behavioural changes by consumers, or political or public policy shifts designed to reduce GHG emissions through taxes or incentives) as well as to regulatory changes made to manage and support such an economy. Climate risk could have an impact on the traditional risks that are inherent to a financial institution's operations, including credit risk, market risk, liquidity and funding risk, and operational risk, among others. In addition, a rapidly evolving global regulatory environment, the commitments and frameworks to which we adhere, and stakeholder expectations concerning disclosures could lead to reputation risks and regulatory compliance risk, particularly due to potential imbalances among their requirements, in addition to increasing the risk of lawsuits. The publication of many regulatory standards and projects, such as OSFI's guideline B-15, *Climate Risk Management*; the standards of the International Sustainability Standards Board (ISSB), designed to establish a financial disclosure framework addressing sustainability and climate; and the CSA's proposed *National Instrument 51-107 – Disclosure of Climate–related Matters*, are an illustration. It is possible that the Bank's or its clients' business models fail to align with a low-carbon economy or that their responses to government strategies and regulatory changes prove inadequate or fail to achieve the objectives within the predetermined deadlines. Another possibility is that events caused by physical risks prove catastrophic (extreme episodes) or that there are adaptability issues (chronic episodes). As such, these risks could result in financial losses for the Bank, affect its business activities and how they are conducted, harm its reputation and increase its regulatory compliance risk, or even affect the activities and financial position of the clients to whom it offers financial services. The actual impacts of these risks will depend on future events that are beyond the Bank's control, such as the effectiveness of targets set by government climate strategies or regulatory developments. The Bank must therefore devote special attention to reducing its exposure to these factors and, at the same time, to seizing new growth opportunities. Its strategies and policies have therefore been designed to consider climate risks while also supporting the transition to a low-carbon economy. The Bank strives to support and advise its clients in their own transition. From this perspective, we continue to deliver climate risk management training across the organization, in particular among front-line employees who have direct contact with clients.

Risk and Trend	Description
Climate change (continued)	To better understand and mitigate climate change risks, the Bank also takes part in major national and international initiatives, including TCFD, the United Nations Principles for Responsible Banking (UNPRB), the United Nations Principles for Responsible Investing (UNPRI), and others. The Bank continues to closely monitor regulatory developments, evolving frameworks, commitments, and stakeholder expectations, so that it can enhance its climate change risk management framework and further adapts its disclosures. For additional information, see the Environmental and Social Risk section of this MD&A.
Ability to recruit and retain key resources	The Bank's future performance depends greatly on its ability to recruit, develop, and retain key resources. In the financial services sector, there is strong competition, partly supported by a relatively low unemployment rate, in terms of attracting and retaining the most qualified people, notably with the arrival of new players in certain sectors and the emergence of the global workforce concept. In addition, inflationary pressures are amplifying wage expectations, which have already been affected by competitive pressures. As a result, reports are periodically presented to the Board through the governance mechanisms of the Human Resources Committee, the aim being to deploy appropriate strategies to implement conditions favourable to the Bank's competitiveness as an employer. In particular, the Bank monitors, on a quarterly basis, critical workforce segments where the attraction and retention challenges are greatest. This work also covers the associated action plans. The Bank has also made improvements to its recruitment platform, offering a simplified experience to candidates. There is no assurance that the Bank or a business acquired by the Bank will be able to continue recruiting or retaining people with specific expertise.

Other Factors That Can Affect the Bank's Business, Operating Results, Financial Position, and Reputation

International Risks

Through the operations of some of the Bank's units (mainly its New York and London offices) and subsidiaries in Canada and abroad (in particular, Credigy Ltd., NBC Global Finance Limited, and Advanced Bank of Asia Limited), the Bank is exposed to risks arising from its presence in international markets and foreign jurisdictions. While these risks do not affect a significant proportion of the Bank's portfolios, their impact must not be overlooked, especially those that are of a legal or regulatory nature. International risks can be particularly high in territories where the enforceability of agreements signed by the Bank is uncertain, in countries and regions facing political or socioeconomic disturbances, or in countries that may be subject to international sanctions. Generally speaking, there are many ways in which the Bank may be exposed to the risks posed by other countries, not the least of which being foreign laws and regulations. In all such situations, it is important to consider what is referred to as "country risk." Country risk affects not only the activities that the Bank carries out abroad but also the business that it conducts with non-resident clients as well as the services it provides to clients doing business abroad, such as electronic funds transfers, international products, and transactions made from Canada in foreign currencies.

As part of its activities, the Bank must adhere to anti-money laundering and anti-terrorist financing (AML/ATF) regulatory requirements in effect in each jurisdiction where it conducts business. It must also comply with the requirements pertaining to current international sanctions in these various jurisdictions. Money laundering and terrorist financing is a financial, regulatory, and reputation risk. For additional information, see the Regulatory Compliance Risk Management section of this MD&A.

The Bank is exposed to financial risks outside Canada and the United States, primarily through its interbank transactions on international financial markets or through international trade finance activities. This geographic exposure represents a moderate proportion of the Bank's total risk. The geographic exposure of loans is disclosed in the quarterly *Supplementary Financial Information* report available on the Bank's website at nbc.ca. To control country risk, the Bank sets credit concentration limits by country and reviews and submits them to the Board for approval upon renewal of the Credit Risk Management Policy. These limits are based on a percentage of the Bank's regulatory capital, in line with the level of risk represented by each country, particularly emerging countries. The risk is rated using a classification mechanism similar to the one used for credit default risk. In addition to the country limits, authorization caps and limits are established, as a percentage of capital, for the world's high-risk regions, i.e., essentially all regions except for North America, Western European countries, and the developed countries of Asia.

Acquisitions

The Bank's ability to successfully complete an acquisition is often conditional on regulatory approval, and the Bank cannot be certain of the timing or conditions of regulatory decisions. Acquisitions could affect future results should the Bank experience difficulty integrating the acquired business. If the Bank does encounter difficulty integrating an acquired business, maintaining an appropriate governance level over the acquired business, or retaining key officers within the acquired business, these factors could prevent the Bank from realizing expected revenue growth, cost savings, market share gains, and other projected benefits of the acquisition.

Intellectual Property
The Bank adopts various strategies to protect its intellectual property rights. However, the protection measures that it may obtain or implement do not guarantee that it will be able to dissuade or prevent anyone from infringing on its rights or to obtain compensation when infringement occurs. Moreover, the goods and services developed by the Bank are provided in a competitive market where third parties could hold intellectual property rights prior to those held by the Bank. In addition, financial technologies are the subject of numerous developments in intellectual property and patent applications, both in Canada and internationally. Therefore, in certain situations, the Bank could be limited in its ability to acquire intellectual property rights, develop tools, or market certain products and services. It could also infringe on the rights of third parties. In such situations, one of the risks could be an out-of-court claim or legal action brought against the Bank.

Judicial and Regulatory Proceedings
The Bank takes reasonable measures to comply with the laws and regulations in effect in the jurisdictions where it operates. Still, the Bank could be subject to judicial or regulatory decisions resulting in fines, damages, or other costs or to restrictions likely to adversely affect its operating results or its reputation. The Bank may also be subject to litigation in the normal course of business. Although the Bank establishes provisions for the measures it is subject to under accounting requirements, actual losses resulting from such litigation could differ significantly from the recognized amounts, and unfavourable outcomes in such cases could have a significant adverse effect on the Bank's operating results. The resulting reputational damage could also affect the Bank's future business prospects. For additional information, see Note 26 to the consolidated financial statements.

Tax Risk
The tax laws applicable to the Bank are numerous, complex, and subject to amendment at any time. This complexity can result in differing legal interpretations between the Bank and the respective tax authorities with which it deals. In addition, legislative changes and changes in tax policy, including the interpretation thereof by tax authorities and courts, could affect the Bank's earnings. International and domestic initiatives may also result in changes to tax laws and policies, including international efforts by the G20 and the Organisation for Economic Co-operation and Development to broaden the tax base and domestic proposals to increase the taxes payable by banks and insurance companies. For additional information on income taxes, see the Income Taxes section on page 50 of this MD&A, the Critical Accounting Policies and Estimates section on page 111 of this MD&A, and Note 24 to the consolidated financial statements.

Accounting Policies, Methods and Estimates Used by the Bank
The accounting policies and methods used by the Bank determine how the Bank reports its financial position and operating results and require management to make estimates or rely on assumptions about matters that are inherently uncertain. Any changes to these estimates and assumptions may have a significant impact on the Bank's operating results and financial position.

Additional Factors
Other factors that could affect the Bank's business, operating results, and reputation include unexpected changes in consumer spending and saving habits; the timely development and launch of new products and services; the ability to successfully align its organizational structure, resources, and processes; the ability to activate a business continuity plan within a reasonable time; the potential impact of international conflicts, natural disasters or public health emergencies such as pandemics; and the Bank's ability to foresee and effectively manage the risks resulting from these factors through rigorous risk management.

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 its business. The Bank is exposed to credit risk not only through its direct lending activities and transactions but also through commitments to extend credit and through letters of guarantee, letters of credit, over-the-counter derivatives trading, debt securities, securities purchased under reverse repurchase agreements, deposits with financial institutions, brokerage activities, and transactions carrying a settlement risk for the Bank such as irrevocable fund transfers to third parties via electronic payment systems.

Governance

A policy framework centralizes the governance of activities that generate credit risk for the Bank and its subsidiaries and is supplemented by a series of subordinate internal policies and standards. These policies and standards address specific management issues such as concentration limits by borrower group and sector, credit limits, collateral requirements, and risk quantification or issues that provide more thorough guidance for given business segments.

For example, the institutional activities of the Bank and its subsidiaries on financial markets and international commercial transactions are governed by business unit directives that set out standards adapted to the specific environment of these activities. This also applies to retail brokerage subsidiaries. In isolated cases, a business unit or subsidiary may have its own credit policy, and that policy must always fall within the spirit of the Bank's policy framework. Risk Management's leadership team defines the scope of the universe of subsidiaries carrying significant credit risks and the magnitude of the risks incurred.

Credit risk is controlled through a rigorous process that comprises the following elements:

- credit risk rating and assessment;
- economic capital assessment;
- stress testing;
- credit granting process;
- revision and renewal process;
- risk mitigation;
- follow-up of monitored accounts and recovery;
- counterparty risk assessment;
- settlement risk assessment;
- environmental risk assessment.

Concentration Limits

The risk appetite is allocated based on the setting of concentration limits. The Bank sets credit concentration and settlement limits by obligor group, by industry sector, by country, and by region. These limits are subject to the approval of the RMC. Certain types of financing or financing programs are also subject to specific limits. Breaches of concentration limits by obligor group or by region are reported to the RMC each quarter. Furthermore, every industry sector, country, and region whose exposure equals a predetermined percentage of the corresponding authorized limit are reported to the Bank's Risk Management leadership team. At least once a year, the Bank revises these exposures by industry sector, by country, and by region in order to determine the appropriateness of the corresponding concentration limits.

Reporting

Every quarter, an integrated risk management report is presented to senior management and the RMC. It presents changes in the credit portfolio and highlights on the following matters:

- credit portfolio volume growth by business segment;
- a breakdown of the credit portfolio according to various criteria for which concentration limits have been set;
- changes in provisions and allowances for credit losses;
- changes in impaired loans;
- follow-up of monitored accounts.

Credit Risk Rating and Assessment

Before a sound and prudent credit decision can be made, an obligor's or counterparty's credit risk must be accurately assessed. This is the first step in processing credit applications. Using a credit risk rating system developed by the Bank, each application is analyzed and assigned one of 19 grades on a scale of 1 to 10 for all portfolios exposed to credit risk. As each grade corresponds to a debtor's, counterparty's, or third party's probability of default, the Bank can estimate the credit risk. The credit risk assessment method varies according to portfolio type. There are two main methods for assessing credit risk to determine minimum regulatory capital requirements for most of its portfolios, the Internal Ratings-Based (IRB) Approach and the revised Standardized Approach, as defined by the Basel Accord. The IRB Approach applies to most of its credit portfolios. Since the implementation of the Basel III reforms in April 2023, the Bank must use the Foundation Internal Ratings-Based (FIRB) Approach for certain specific exposure types such as financial institutions, including insurance companies, or large corporations that belong to a group whose consolidated annual sales exceed $750 million. For all other exposure types treated under an IRB Approach, the Bank uses the Advanced Internal Ratings-Based (AIRB) Approach.

The main parameters used to measure credit risk in accordance with the IRB Approach are as follows:

- probability of default (PD), which is the probability of through-the-cycle 12-month default by the obligor, calibrated on a long-run average PD throughout a full economic cycle;
- loss given default (LGD), which represents the magnitude of the loss from the obligor's default that would be expected in an economic downturn and subject to certain regulatory floors, expressed as a percentage of exposure at default;
- exposure at default (EAD), which is an estimate of the amount drawn and of the expected use of any undrawn portion prior to default, and cannot be lower than the current balance.

Under the FIRB approach, the Bank provides its own estimates of PD and applies OSFI's estimates for LGD and EAD. Under both IRB Approaches, risk parameters are subject to specific input floors.

The methodology as well as the data and the downturn periods used to estimate LGD under the AIRB Approach are described in the table below.

AIRB APPROACH	DATA[(1)]	DOWNTURN PERIOD[(1)]	METHODOLOGY FOR CALCULATING LGD
Retail	The Bank's internal historical data from 1996 to 2022	1996-1998 and 2008-2009	LGD based on the Bank's historical internal data on recoveries and losses
Corporate	The Bank's internal historical data from 2000 to 2022 Benchmarking results using: • Moody's observed default price of bonds, from 1983 to 2021 • Global Credit Data Consortium historical loss and recovery database from 1998 to 2021	2000-2003, 2008-2009 and 2020	LGD based on the Bank's historical recoveries and losses internal data and on Moody's data
Sovereign	Moody's observed default price of bonds, from 1983 to 2015 S&P rating history from 1975 to 2016	1999-2001 and 2008-2012	Based on implied market LGD using observed bond price decreases following the issuer's default
Financial institutions	Global Credit Data Consortium historical loss and recovery database from 1991 to 2013	1991-1992, 1994, 1997-1998, 2001-2002, and 2008-2009	Model for predicting LGD based on different issue- and issuer-related risk drivers

(1) The performance of the models resulting from the AIRB Approach is measured quarterly, and the methodologies are validated by an independent third party annually. A report on model performance under the AIRB Approach is presented annually to the RMC. According to the most recent performance report, the models continue to perform well and do not require the addition of new data.

Personal Credit Portfolios
This category comprises portfolios of residential mortgage loans, consumer loans, and loans to certain small businesses. To assess credit risk, AIRB models are in place for the main portfolios, particularly mortgage loans, home equity lines of credit, credit cards, budget loans, lines of credit, and SME retail. A risk analysis based on loan grouping in pools of homogeneous obligor and product profiles is used for overall management of personal credit portfolios. This personal credit assessment approach, which has proven particularly effective for estimating credit defaults and losses, takes a number of factors into account, namely:

- attributes from credit rating agencies (scoring) related to behaviour;
- loan product characteristics;
- collateral provided;
- the length of time on the Bank's balance sheet;
- loan status (active, delinquent, or defaulted).

This mechanism provides adequate risk measurement inasmuch as it effectively differentiates risk levels by pool. Therefore, the results are periodically reviewed and, if necessary, adjustments are made to the models. Obligor migrations between pools are among the factors considered when assessing credit risk.

Loan pools are also established based on PD, LGD, and EAD, which are measured based on the characteristics of the obligor and the transaction itself. The credit risk of these portfolios is estimated using credit scoring models that determine the obligor's PD. LGD is estimated based on transaction-specific factors such as loan product characteristics (for example, a line of credit versus a term loan), loan-to-value ratio, and types of collateral.

Credit scoring models are also used to grant credit. These models use proven statistical methods that measure an obligor's demand characteristics and history based on internal and external historical information to estimate the obligor's future credit behaviour and assign a probability of default. The underlying data include obligor information such as current and past employment, historical loan data in the Bank's management systems, and information from external sources such as credit rating agencies.

The Bank also uses behaviour scoring models to manage and monitor current commitments. The risk assessment is based on statistical analyses of the past behaviour of obligors with which the Bank has a long-term relationship in an effort to predict their future behaviour. The underlying information includes the obligor's cash flows and borrowing trends. Information on characteristics that determine behaviour in these models also comes from both internal sources on current commitments and external sources. The table on the following page presents the PD categories and credit quality of the associated personal credit portfolio.

Mortgage Loan Underwriting
To mitigate the impact of an economic slowdown and ensure the long-term quality of its portfolio, the Bank uses sound risk management when granting residential mortgages to confirm: (i) the obligor's intention to meet its financial obligations, (ii) the obligor's ability to repay its debts, and (iii) the quality of the collateral. In addition, in accordance with the applicable rules, the Bank takes a prudent approach to client qualification by using, for example, a higher interest rate to mitigate the risk of short- or medium-term rate hikes.

Nonetheless, the risk of economic slowdown could adversely affect the profitability of the mortgage portfolio. In stress test analyses, the Bank considers a variety of scenarios to measure the impact of adverse market conditions. In such circumstances, our analyses show significantly higher credit losses, which would decrease profitability and reduce the Bank's capital ratios.

Between March 2, 2022 and July 12, 2023, the Bank of Canada raised its policy rate ten times; the rate has thus risen from 0.25% to 5%. During the September 6 and October 25, 2023 announcements, the central bank opted for a pause, holding the policy rate steady. 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 with variable-rate mortgages or for whom the mortgage term is up for renewal.

New Regulatory Developments
On June 28, 2022, OSFI published a new advisory that complements the expectations set out in guideline B-20. This advisory addresses combined loan plans (CLPs). CLPs are an innovative product that have become the main uninsured real estate secured lending offering. The most significant concern with these products is the re-advanceability of credit above the 65% loan-to-value ratio. To satisfy OSFI's regulatory expectations, on August 27, 2023 the Bank made changes to its All-In-One (AIO) line of credit for circumstances where the authorized credit limit exceeds 65% of the value of the financed property at the time of granting. Holders of certain AIO products can no longer access, on a revolving credit basis, the full principal paid on their mortgage loan.

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. The 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 building.

In January 2023, OSFI launched a public consultation on *Guideline B-20 – Residential Mortgage Underwriting Practices and Procedures,* starting with an initial consultation on debt servicing measures in order to mitigate the risk arising from the high consumer debt levels. As a follow-up to the public consultation, an industry response coordinated by the Canadian Bankers Association was submitted to OSFI on April 14, 2023.

Business and Government Credit Portfolios
This category comprises business (other than some small businesses that are classified in personal credit portfolios), government, and financial institution credit portfolios.

These credit portfolios are assigned a risk rating that is based on a detailed individual analysis of the financial and non-financial aspects of the obligor, including the obligor's financial strength, sector of economic activity, competitive ability, access to funds, and number of years in business. The Bank uses risk-rating tools and models to specifically assess the risk represented by an obligor in relation to its industry and peers. The models used are adapted to the obligor's broad sector of activity. Models are in place for ten sectors: business/commercial, large business, financial institutions, sovereigns, investment funds, energy, real estate, agriculture, insurance, and public-private partnership project financing.

This risk assessment method assigns a default risk rating to an obligor that reflects its credit quality. To each default credit risk rating corresponds a PD (see the table below). Using this classification of obligor credit risk, the Bank can differentiate appropriately between the various assessments of an obligor's capacity to meet its contractual obligations. Default risk ratings are assigned according to an assessment of an obligor's commercial and financial risks based on a solvency review. Various risk quantification models, described below, are used to perform this assessment.

The business and government default risk rating scale used by the Bank is similar to the systems used by major external rating agencies. The following table presents a grouping of the ratings by major risk category and compares them with the ratings of two major rating agencies.

Internal Default Risk Ratings*

Description[(1)]	Personal credit portfolios	Description[(1)]					Business and government credit portfolios
	PD (%) – Retail		Ratings	PD (%) – Corporate and financial institutions	PD (%) – Sovereign	Standard & Poor's	Moody's
Excellent	0.000–0.144	Excellent	1–2.5	0.000–0.111	0.000–0.059	AAA to A-	Aaa to A3
Good	0.145–0.506	Good	3–4	0.112–0.383	0.060–0.330	BBB+ to BBB-	Baa1 to Baa3
Satisfactory	0.507–2.681	Satisfactory	4.5–6.5	0.384–4.234	0.331–5.737	BB+ to B	Ba1 to B2
Special mention	2.682–9.348	Special mention	7–7.5	4.235–10.181	5.738–17.963	B- to CCC+	B3 to Caa1
Substandard	9.349–99.999	Substandard	8–8.5	10.182–99.999	17.964–99.999	CCC & CCC-	Caa2 & Caa3
Default	100	Default	9–10	100	100	CC, C & D	Ca, C & D

(1) Additional information is provided in Note 7 – *Loans and Allowances for Credit Losses* to the consolidated financial statements.

The Bank also uses individual assessment models by industry to assign a risk rating to the credit facility based on the collateral that the obligor is able to provide and, in some cases, based on other factors. The Bank consequently has a bi-dimensional risk-rating system that, using models and internal and external historical data, establishes a default risk rating for each obligor. In addition, the models assign, to each credit facility, an LGD risk rating that is independent of the default risk rating assigned to the obligor.

The Bank's default risk ratings and LGD risk ratings as well as the related risk parameters contribute directly to informed credit-granting, renewal, and monitoring decisions. They are also used to determine and analyze risk-based pricing. In addition, from a credit portfolio management perspective, they are used to establish counterparty credit concentration limits and segment concentration limits as well as limits to decision-making power and to determine the credit risk appetite of these portfolios. Moreover, they represent an important component in estimating expected and unexpected losses, measuring minimum required economic capital, and measuring the minimum level of capital required, as prescribed by the regulatory authorities.

The credit risk of obligors and of their facilities is assessed with the PD and LGD parameters at least once a year or more often if significant changes (triggers) are observed when updating financial information or if another qualitative indicator of a deterioration in the obligor's solvency or in the collateral associated with the obligor's facilities is noted. The Bank also uses a watchlist to more actively monitor the financial position of obligors whose default-risk rating is greater than or equal to 7.0. This process seeks to minimize an obligor's default risk and allows for proactive credit risk management.

Validation

The Risk Management Group monitors the effectiveness of the risk-rating systems and associated parameters, which are also reviewed regularly in accordance with the Bank's policies. Backtesting is performed at regular intervals to validate the effectiveness of the models used to estimate PD, LGD, and EAD. For PD in particular, this backtesting takes the form of sequentially applied measures designed to assess the following criteria:

- the model's discriminatory power;
- the proportion of overrides;
- model calibration;
- the stability of the model's inputs and outputs.

The credit risk quantification models are developed and tested by a team of specialists with model performance being monitored by the applicable business units and related credit risk management services. Models are validated by a unit that is independent of both the specialists who developed the model and the concerned business units. Approvals of new models or changes to existing models are subject to an escalation process established by the model risk management policy. Furthermore, new models or changes to existing models that markedly impact regulatory capital must be approved by the Board before being submitted to the regulatory agencies.

The facility and default risk-rating systems, methods, and models are also subject to periodic validation, which is a responsibility shared between the development and validation teams, the frequency of which depends on the model's risk level. Models that have a significant impact on regulatory capital must be reviewed regularly, thereby further raising the certainty that these quantification mechanisms are working as expected.

The key aspects to be validated are risk factors allowing for accurate classification of default risk by level, adequate quantification of exposure, use of assessment techniques that consider external factors such as economic conditions and credit status and, lastly, compliance with internal policies and regulatory provisions.

The Bank's credit risk assessment and rating systems are overseen by the Model Oversight Committee, the GRC, and the RMC, and these systems constitute an integral part of a comprehensive Bank-wide credit risk oversight framework. Along with the above-mentioned elements, the Bank documents and periodically reviews the policies, definitions of responsibilities, resource allocation, and existing processes.

Assessment of Economic Capital

The assessment of the Bank's minimum required economic capital is based on the credit risk assessments of obligors. These two activities are therefore interlinked. The different models used to assess the credit risk of a given portfolio type also enable the Bank to determine the default correlation among obligors. This information is a critical component in the evaluation of potential losses for all portfolios carrying credit risk. Estimates of potential losses, whether expected or not, are based on historical loss experience, portfolio monitoring, market data, and statistical modelling. Expected and unexpected losses are factors used in assessing the minimum required economic capital for all of the Bank's credit portfolios. The assessment of economic capital also considers the anticipated potential migrations of the default risk ratings of obligors during the remaining term of their credit commitments. The main risk factors that have an impact on economic capital are as follows:

- the obligor's PD;
- the obligor's EAD;
- the obligor's LGD;
- the default correlation among various obligors;
- the residual term of credit commitments;
- the impact of economic and sector-based cycles on asset quality.

Stress Testing

The Bank carries out stress tests to evaluate its sensitivity to crisis situations in certain activity sectors and key portfolios. A global stress test methodology covers most business, government, and personal credit portfolios to provide the Bank with an overview of the situation. By simulating specific scenarios, these tests enable the Bank to measure allowances for credit losses according to IFRS 9 – *Financial Instruments* (IFRS 9), to assess the level of regulatory capital needed to absorb potential losses, and to determine the impact on its solvency. In addition, these tests contribute to portfolio management as they influence the determination of concentration limits by obligor, product, or business sector. During fiscal years 2022 and 2023, several simulations were carried out to assess the impact of rising interest rates and inflation on the financial positions of borrowers. Based on these simulations, the Bank was able to test the resilience of customers, and, in turn, the resilience of the Bank's loan portfolio.

Credit-Granting Process

Credit-granting decisions are based first and foremost on the results of the risk assessment. Aside from an obligor's solvency, credit-granting decisions are also influenced by factors such as available collateral and guarantees, transaction compliance with policies, standards and procedures, and the Bank's overall risk-adjusted return objective. Each credit-granting decision is made by various authorities within the risk management teams and management, who are independent of the business units and are at a reporting level commensurate with the size of the proposed credit transaction and the associated risk. Decision-making authority is determined in compliance with the delegation of authority set out in the Credit Risk Management Policy. A person in a senior position in the organization approves credit facilities that are substantial or carry a higher risk for the Bank. The GRC approves and monitors all substantial credit facilities. Credit applications that exceed management's latitudes are submitted to the Board for approval. The credit-granting process demands a high level of accountability from managers, who must proactively manage the credit portfolio.

Review and Renewal Processes

The Bank periodically reviews credit files. The review process enables the Bank to update information on the quality of the facilities and covers, among other things, risk ratings, compliance with credit conditions, collateral, and obligor behaviour. In the specific case of business credit portfolios, the credit risk of all obligors is reviewed at least once per year. After this periodic review, for on-demand or unused credit, the Bank decides whether to pursue its business relationship with the obligor and, if so, revises the credit conditions. For personal credit portfolios, the credit risk of all obligors is reviewed on a continual basis.

Risk Mitigation
The Bank also controls credit risk using various risk mitigation techniques. In addition to the standard practice of requiring collateral to guarantee repayment of the credit it grants, the Bank also uses protection mechanisms such as credit derivative financial instruments, syndication, and loan assignments as well as an orderly reduction in the amount of credit granted.

The most common method used to mitigate credit risk is obtaining quality collateral from obligors. Obtaining collateral cannot replace a rigorous assessment of an obligor's ability to meet its financial obligations, but, beyond a certain risk threshold, it is an essential complement. The obtaining of collateral depends on the level of risk presented by the obligor and the type of loan granted. The legal validity and enforceability of any collateral obtained and the Bank's ability to regularly and correctly measure the collateral's value are critical for this mechanism to play its proper role in risk mitigation.

In its internal policies and standards, the Bank has established specific requirements regarding the appropriate legal documentation and assessment for the kinds of collateral that business units may require to guarantee the loans granted. The categories of eligible collateral and the lending value of the collateralized assets have also been defined by the Bank. For the most part, they include the following asset categories as well as guarantees (whether secured by collateral or unsecured) and government and bank guarantees:

- accounts receivable;
- inventories;
- machinery and equipment and rolling stock;
- residential and commercial real estate, office buildings and industrial facilities;
- cash and marketable securities.

Portfolio Diversification and Management
The Bank is exposed to credit risk, not only through outstanding loans and undrawn amounts of commitments to a particular obligor but also through the sectoral distribution of the outstanding loans and undrawn amounts and through the exposure of its various credit portfolios to geographical, concentration, and settlement risks.

The Bank's approach to controlling these diverse risks begins with a diversification of exposures. Measures designed to maintain a healthy degree of credit risk diversification in its portfolios are set out in the Bank's policies, standards, and procedures. These instructions are mainly reflected in the application of various exposure limits: credit concentration limits by counterparty and credit concentration limits by business sector, country, region, product, and type of financial instrument. These limits are determined based on the Bank's credit risk appetite framework and are reviewed periodically. Compliance with these limits, particularly exceptions, is monitored through periodic reports submitted by the Risk Management Group's officers to the Board.

Continuous analyses are performed in order to anticipate problems with a sector or obligor before they materialize, notably as defaulted payments.

Other Risk Mitigation Methods
Credit risk mitigation measures for transactions in derivative financial instruments, which are regularly used by the Bank, are described in detail in the Counterparty Risk section.

Credit Derivative Financial Instruments and Financial Guarantee Contracts
The Bank also reduces credit risk by using the protection provided by credit derivative financial instruments such as credit default swaps. When the Bank acquires credit protection, it pays a premium on the swap to the counterparty in exchange for the counterparty's commitment to pay if the underlying entity defaults or another event involving the counterparty and covered by the legal agreement occurs. Since, like obligors, providers of credit protection must receive a default risk rating, the Bank's standards set out all the criteria under which a counterparty may be judged eligible to mitigate the Bank's credit risk. The Bank may also reduce its credit risk by entering into financial guarantee contracts whereby a guarantor indemnifies the Bank for a loss resulting from an obligor failing to make a payment when due in accordance with the contractual terms of a debt instrument.

Loan Syndication
The Bank has developed specific instructions on the appropriate objectives, responsibilities, and documentation requirements for loan syndication.

Follow-Up of Monitored Accounts and Recovery
Credit granted and obligors are monitored on an ongoing basis and in a manner commensurate with the degree of risk. Loan portfolio managers use an array of intervention methods to conduct a particularly rigorous follow-up on files that show a high risk of default, and they submit comments to credit risk management groups about each identified borrower on the watchlist for whom they are responsible. When loans continue to deteriorate and there is an increase in risk to the point where monitoring has to be increased, a group specialized in managing problem accounts (Work Out units) steps in to maximize collection of the disbursed amounts and tailor strategies to these accounts.

The Work Out units produce a quarterly monitoring report that is submitted to the management of the Credit Risk Management groups. For larger accounts, a monitoring report is also submitted to a monitoring committee that tracks the status of at-risk obligors and the corrective measures undertaken. At the request of the monitoring committee, some of the files will be the subject of a presentation. The authority to approve allowances for credit losses is attributed using limits delegated on the basis of hierarchical level presented in the Credit Risk Management Policy.

Information on the recognition of impaired loans and allowances for credit losses is presented in Notes 1 and 7 to the consolidated financial statements.

Forbearance and Restructuring
Situations where a business or retail obligor begins showing clear signs of potential insolvency are managed on a case-by-case basis and require the use of judgment. The Loan Work Out Policy sets out the principles applicable in such situations to guide loan restructuring decisions and identify situations where distressed restructuring applies. A distressed restructuring situation occurs when the Bank, for economic or legal reasons related to the obligor's financial difficulties, grants the obligor a special concession that is contrary to the Bank's policies. Such concessions could include a lower interest rate, waiver of principal, and extension of the maturity date.

The Bank has established a management framework for commercial and corporate obligors that represent higher-than-normal risk of default. It outlines the roles and responsibilities of loan portfolio managers with respect to managing high-risk accounts and the responsibilities of the Work Out units and other participants in the process. Lastly, the Credit Risk Management Policy and a management framework are used to determine the authorization limits for distressed restructuring situations. During fiscal years 2023 and 2022, the amount of distressed loan restructurings was not significant.

Counterparty Risk Assessment
Counterparty risk is a credit risk that the Bank incurs on various types of transactions involving financial instruments. The most significant risks are those it faces when it trades derivative financial instruments with counterparties on the over-the-counter market or when it purchases securities under reverse repurchase agreements or sells securities under repurchase agreements. Securities lending transactions and securities brokerage activities involving derivative financial instruments are also sources of counterparty risk. Note 16 to the consolidated financial statements provides a complete description of the credit risk for derivative financial instruments by type of traded product.

The Risk Management Group has developed models by type of counterparty through which it applies an advanced methodology for calculating the Bank's credit risk exposure and economic capital. The exposures are subject to limits. These limits are established based on the counterparty's internal default risk rating and on the potential volatility of the underlying assets until expiration of the contract.

Counterparty obligations related to the trading of contracts on derivative financial instruments, securities lending transactions, and reverse repurchase agreements are frequently subject to credit risk mitigation measures. The mitigation techniques are somewhat different from those used for loans and advances and depend on the nature of the instrument or the type of contract traded. The most widely used measure is the signing of master agreements: the International Swaps & Derivatives Association, Inc. (ISDA) master agreement, the Global Master Repurchase Agreement (GMRA), and the Global Master Securities Lending Agreement (GMSLA). These agreements make it possible, in the event of default, insolvency, or bankruptcy of one of the contracting parties, to apply full netting of the gross amounts of the market values for each of the transactions covered by the agreement in force at the time of default. The amount of the final settlement is therefore the net balance of gains and losses on each transaction, which reduces exposure when a counterparty defaults. The Bank's policies require that an ISDA, GMRA, or GMSLA agreement be signed with its trading counterparties to derivatives, foreign exchange forward contracts, securities lending transactions, and reverse repurchase agreements.

Another mechanism for reducing credit risk on derivatives and foreign exchange forward contracts complements the ISDA master agreement in many cases and provides the Bank and its counterparty (or either of the parties, if need be) with the right to request collateral from the counterparty when the net balance of gains and losses on each transaction exceeds a threshold defined in the agreement. These agreements on initial margins and variation margins are a regulatory requirement when financial institutions trade with each other or with governments and central banks on international financial markets because they limit the extent of credit risk and reduce the idiosyncratic risk associated with trading derivative financial instruments and foreign exchange forwards, while giving traders additional leeway to continue trading with the counterparty. When required by regulation (notably, by OSFI), the Bank always uses this type of legal documentation in transactions with financial institutions. For business transactions, the Bank prefers to use internal mechanisms, notably involving collateral and mortgages, set out in the credit agreements. The Bank's internal policies set the conditions governing the implementation of such mitigation methods.

Requiring collateral as part of a securities lending transaction or reverse repurchase agreement is not solely the result of an internal credit decision. In fact, it is a mandatory market practice imposed by self-regulating organizations in the financial services sector such as the Canadian Investment Regulatory Organization (CIRO).

The Bank has identified circumstances in which it is likely to be exposed to wrong-way risk. There are two types of wrong-way risk: general wrong-way risk and specific wrong-way risk. General wrong-way risk occurs when the probability of default of the counterparties is positively correlated to general market risk factors. Specific wrong-way risk occurs when the exposure to a specific counterparty is positively correlated to the probability of default of the counterparty due to the nature of the transactions with this counterparty.

Assessment of Settlement Risk

Settlement risk potentially arises from transactions that feature reciprocal delivery of cash or securities between the Bank and a counterparty. Foreign exchange contracts are an example of transactions that can generate significant levels of settlement risk. However, the implementation of multilateral settlement systems that allow settlement netting among participating institutions has contributed greatly to reducing the risks associated with the settlement of foreign exchange transactions among banks. The Bank also uses financial intermediaries to gain access to established clearing houses in order to minimize settlement risk for certain financial derivative transactions. In some cases, the Bank may have direct access to established clearing houses for settling financial transactions such as repurchase agreements or reverse repurchase agreements. In addition, certain derivative financial instruments traded over the counter are settled directly or indirectly by central counterparties. For additional information, see the table that presents notional amounts in Note 16 to the consolidated financial statements.

There are several other types of transactions that may generate settlement risk, in particular the use of certain electronic fund transfer services. This risk refers to the possibility that the Bank may make a payment or settlement on a transaction without receiving the amount owed by the counterparty, and with no opportunity to recover the funds delivered (irrevocable settlement).

The ultimate means for completely eliminating such a risk is for the Bank to complete no payments or settlements before receiving the funds due from the counterparty. Such an approach cannot, however, be used systematically. For several electronic payment services, the Bank is able to implement mechanisms that allow it to make its transfers revocable or to debit the counterparty in the amount of the settlements before it makes its own transfer. On the other hand, the nature of transactions in financial instruments makes it impossible for such practices to be widely used. For example, on foreign exchange transactions involving a currency other than the U.S. dollar, time zone differentials impose strict payment schedules on the parties. The Bank cannot unduly postpone a settlement without facing penalties, due to the large size of the amounts involved.

The most effective way for the Bank to control settlement risks, both for financial market transactions and irrevocable transfers, is to impose internal risk limits based on the counterparty's ability to pay.

Assessment of Environmental Risk

Environmental risk refers to the impacts on credit risk that may lead to reduced repayment capacity, or a lower value of the asset pledged as collateral due to environmental events, such as soil contamination, waste management, or a spill of materials considered hazardous, to the energy transition, or to extreme weather events. Ultimately, environmental risk can lead to both a higher probability of default and higher credit loss in cases of default among counterparties. In addition to the measures and guidelines adopted by the various levels of government, the Bank has a set of protective measures to follow in order to identify and reduce the potential, current, or future environmental risks to which it is exposed when it grants credit to clients. In recent years, the risk management framework has been expanded to include new measures for identifying, assessing, controlling, and monitoring climate risk. In addition, the Bank has developed and is gradually deploying a process used to assess and quantify the impacts of climate change on its strategy and results. For clients operating in specific industries, the risk analysis framework involves the collection of information on carbon footprint, a classification of climate risks (physical and transitional) according to business sector and industry, their strategic positioning, and the existence of an energy transition plan (commitments, reduction targets, diversification of activities). These various subjects are addressed, at least once a year, as part of the credit granting, review, and renewal processes.

The Bank also assesses its exposure to environment-related credit risk using a variety of control and monitoring mechanisms. For example, analyses are performed on vulnerabilities to physical risks and on loan portfolio transition risks; these analyses are applied to all financing activities. Moreover, for several years the Bank has been carrying out climate risk impact analyses using the scenarios recommended by the Network for Greening the Financial System (NGFS). In doing so, the Bank is able to quantify expected losses related to its loan portfolio. In addition, the Bank periodically assesses the impact of environmental risk on the loan portfolio concentration risk to ensure that there is no significant impact on this risk. Furthermore, a loan portfolio industry sector matrix has been developed to provide the Risk Management Group with a clearer vision of the sectors that are most affected by climate-related risks. These initiatives allow the Bank to take concrete steps in the process used to review sectoral limits, as each business sector or industry now has an ESG section describing its environmental risk.

Maximum Credit Risk Exposure

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 October 31, 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 mortgage	77,073	9,094	–	–	–	86,167	12 %	88 %
Qualifying revolving retail	3,183	12,052	–	–	–	15,235	– %	100 %
Other retail	16,078	2,692	–	–	33	18,803	13 %	87 %
	96,334	23,838	–	–	33	120,205		
Non-retail								
Corporate	91,994	27,846	38,549	385	6,915	165,689	18 %	82 %
Sovereign	61,438	5,921	61,580	–	267	129,206	3 %	97 %
Financial institutions	6,719	1,002	98,222	3,013	1,506	110,462	23 %	77 %
	160,151	34,769	198,351	3,398	8,688	405,357		
Trading portfolio	–	–	–	13,778	–	13,778	2 %	98 %
Securitization	4,351	–	–	–	5,318	9,669	92 %	8 %
Total – Gross credit risk	260,836	58,607	198,351	17,176	14,039	549,009	15 %	85 %
Standardized Approach[(5)]	35,461	1,260	34,717	3,211	5,568	80,217		
IRB Approach	225,375	57,347	163,634	13,965	8,471	468,792		
Total – Gross credit risk	260,836	58,607	198,351	17,176	14,039	549,009	15 %	85 %

(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 mortgage	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 14 to 19 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).

Market Risk

Market risk is the risk of losses arising from movements in market prices. Market risk comes from a number of factors, particularly changes to market variables such as interest rates, credit spreads, exchange rates, equity prices, commodity prices, and implied volatilities. The Bank is exposed to market risk through its participation in trading, investment, and asset/liability management activities. Trading activities involve taking positions on various instruments such as bonds, shares, currencies, commodities, or derivative financial instruments. The Bank is exposed to non-trading market risk through its asset/liability management and investment portfolios.

The trading portfolios include positions in financial instruments and commodities held either with trading intent or to hedge other elements of the trading book. Positions held with trading intent are those held for short-term resale and/or with the intent of taking advantage of actual or expected short-term price movements or to lock in arbitrage profits. These portfolios target one of the following objectives: market making, liquidating positions for clients, or selling financial products to clients.

Non-trading portfolios include financial instruments intended to be held to maturity as well as those held for daily cash management or for the purpose of maintaining targeted returns or ensuring asset and liability management.

Governance

A market risk management policy governs global market risk management across the Bank's units and subsidiaries that are exposed to this type of risk. It is approved by the GRC. The policy sets out the principles for managing market risk and the framework that defines risk measures, control and monitoring activities; sets market risk limits; and reports on breaches.

The Financial Markets Risk Committee oversees all Financial Markets segment risks that could adversely affect the Bank's results, liquidity, or capital. This committee also oversees the Financial Markets segment's risk framework to ensure that controls are in place to contain risk in accordance with the Bank's risk appetite framework.

Market risk limits ensure the link and coherence between the Bank's market risk appetite targets and the day-to-day market risk management by all parties involved, notably senior management, the business units, and the market risk teams in their independent control function. The Bank's monitoring and reporting process consists of comparing market risk exposure to alert levels and to the market risk limits established for all limit authorization and approval levels.

Assessment of Market Risk

The Risk Management Group uses a variety of risk measures to estimate the size of potential losses under more or less severe scenarios, and using both short-term and long-term time horizons. For short-term horizons, the Bank's risk measures include Value-at-Risk (VaR), Stressed VaR (SVaR), and sensitivity metrics. For long-term horizons or sudden significant market moves, including those due to a lack of market liquidity, the risk measures include stress testing across an extensive range of scenarios.

VaR and SVaR Models

VaR is a statistical measure of risk that is used to quantify market risks by activity and by risk type. 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.

For VaR, the Bank uses a historical price distribution to compute the probable loss levels at a 99% confidence level, using a two-year history of daily time series of risk factor changes. VaR is the maximum daily loss that the Bank could incur, in 99 out of 100 cases, in a given portfolio. In other words, the loss could exceed that amount in only one out of 100 cases.

The trading VaR is measured by assuming a holding period of one day for ongoing market risk management and a 10-day holding period for regulatory capital purposes. VaR is calculated on a daily basis both for major classes of financial instruments (including derivative financial instruments) and for all trading portfolios in the Financial Markets segment and the Bank's Global Funding and Treasury Group.

In addition to the one-day trading VaR, the Bank calculates a trading SVaR, which 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.

VaR methodology techniques are well suited to measuring risks under normal market conditions. VaR metrics are most appropriate as a risk measure for trading positions in liquid financial markets. However, there are limitations in measuring risks with this method when extreme and sudden market risk events occur, since they are likely to underestimate the Bank's market risk. VaR methodology limitations include the following:

- past changes in market risk factors may not always produce accurate predictions of the distribution and correlations of future market movements;
- a VaR with a daily time horizon does not fully capture the market risk of positions that cannot be liquidated or hedged within one day;
- the market risk factor historical database used for VaR calculation may not reflect potential losses that could occur under unusual market conditions (e.g., periods of extreme illiquidity) relative to the historical period used for VaR estimates;
- the use of a 99% VaR confidence level does not reflect the extent of potential losses beyond that percentile.

Given the limitations of VaR, this measure represents only one component of the Bank's risk management oversight, which also incorporates, among other measures, stress testing, sensitivity analysis, and concentration and liquidity limits and analysis.

The Bank also conducts backtesting of the VaR model. It consists of comparing the profits and losses to the statistical VaR measure. Backtesting is essential to verifying the VaR model's capacity to adequately forecast the maximum risk of market losses and thus validate, retroactively, the quality and accuracy of the results obtained using the model. If the backtesting results present material discrepancies, the VaR model could be revised in accordance with the Bank's model risk management framework. All market risk models and their performance are subject to periodic independent validation by the model validation group.

Controlling Market Risk

A comprehensive set of limits is applied to market risk measures, and these limits are monitored and reported on a regular basis. Instances when limits are exceeded are reported to the appropriate management level. The risk profiles of the Bank's operations remain consistent with its risk appetite and the resulting limits, and are monitored and reported to traders, management of the applicable business unit, senior executives, and Board committees.

The Bank also uses economic capital for market risk as an indicator for risk appetite and limit setting. This indicator measures the amount of capital that is required to absorb unexpected losses due to market risk events over a one-year horizon and with a determined confidence level. For additional information on economic capital, see the Capital Management section of this MD&A.

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 VaR and 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 October 31, 2023
		Market risk measures			
	Balance sheet	Trading[1]	Non-Trading[2]	Not subject to market risk	Non-traded risk primary risk sensitivity
Assets					
Cash and deposits with financial institutions	35,234	685	24,950	9,599	Interest rate[3]
Securities					
At fair value through profit or loss	99,994	98,559	1,435	–	Interest rate[3] and equity[4]
At fair value through other comprehensive income	9,242	–	9,242	–	Interest rate[3] and equity[5]
At amortized cost	12,582	–	12,582	–	Interest rate[3]
Securities purchased under reverse repurchase agreements and securities borrowed	11,260	–	11,260	–	Interest rate[3][6]
Loans and acceptances, net of allowances	225,443	12,739	212,704	–	Interest rate[3]
Derivative financial instruments	17,516	16,349	1,167	–	Interest rate[7] and exchange rate[7]
Defined benefit asset	356	–	356	–	Other[8]
Other	11,951	544	–	11,407	
	423,578	128,876	273,696	21,006	
Liabilities					
Deposits	288,173	18,126	270,047	–	Interest rate[3]
Acceptances	6,627	–	6,627	–	Interest rate[3]
Obligations related to securities sold short	13,660	13,660	–	–	
Obligations related to securities sold under repurchase agreements and securities loaned	38,347	–	38,347	–	Interest rate[3][6]
Derivative financial instruments	19,888	19,145	743	–	Interest rate[7] and exchange rate[7]
Liabilities related to transferred receivables	25,034	9,507	15,527	–	Interest rate[3]
Defined benefit liability	94	–	94	–	Other[8]
Other	7,329	–	49	7,280	Interest rate[3]
Subordinated debt	748	–	748	–	Interest rate[3]
	399,900	60,438	332,182	7,280	

(1) Trading positions whose risk measures are VaR as well as total SVaR. For additional information, see the table in the pages ahead that shows the VaR distribution of the trading portfolios by risk category, their diversification effect, and total trading SVaR.
(2) Non-trading positions that use other risk measures.
(3) For additional information, see the tables in the pages ahead, namely, the table that shows the VaR distribution of the trading portfolios by risk category, their diversification effect, and total trading SVaR as well as the table that shows the interest rate sensitivity.
(4) For additional information, see Note 6 to the consolidated financial statements.
(5) The fair value of equity securities designated at fair value through other comprehensive income is presented in Notes 3 and 6 to the 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 consolidated financial statements.
(8) For additional information, see Note 23 to the consolidated financial statements.

(millions of Canadian dollars)					As at October 31, 2022
		Market risk measures			
	Balance sheet	Trading[1]	Non-trading[2]	Not subject to market risk	Non-traded risk primary risk sensitivity
Assets					
Cash and deposits with financial institutions	31,870	837	20,269	10,764	Interest rate[3]
Securities					
At fair value through profit or loss	87,375	85,805	1,570	–	Interest rate[3] and equity[4]
At fair value through other comprehensive income	8,828	–	8,828	–	Interest rate[3] and equity[5]
At 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 that shows the VaR distribution of the trading portfolios by risk category, their diversification effect, and total trading SVaR.
(2) Non-trading positions that use other risk measures.
(3) For additional information, see the tables in the pages ahead, namely, the table that shows the VaR distribution of the trading portfolios by risk category, their diversification effect, and total trading SVaR as well as the table that shows the interest rate sensitivity.
(4) For additional information, see Note 6 to the consolidated financial statements.
(5) The fair value of equity securities designated at fair value through other comprehensive income is presented in Notes 3 and 6 to the 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 consolidated financial statements.
(8) For additional information, see Note 23 to the consolidated financial statements.

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 the calibration of risk factors over a 12-month stress period.

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

Year ended October 31 (millions of Canadian dollars)				2023				2022
	Low	High	Average	Period end	Low	High	Average	Period end
Interest rate	(5.2)	(11.3)	(7.4)	(8.7)	(3.9)	(11.3)	(5.8)	(5.2)
Foreign exchange	(0.9)	(5.9)	(2.7)	(5.0)	(0.4)	(6.9)	(2.1)	(2.1)
Equity	(5.1)	(10.8)	(7.6)	(6.5)	(4.0)	(10.6)	(7.2)	(7.1)
Commodity	(0.6)	(1.6)	(1.2)	(1.6)	(0.5)	(1.6)	(0.9)	(1.2)
Diversification effect(3)	n.m.	n.m.	9.4	10.4	n.m.	n.m.	8.1	7.3
Total trading VaR	(6.7)	(12.4)	(9.5)	(11.4)	(4.6)	(11.4)	(7.9)	(8.3)
Total trading SVaR	(10.3)	(25.1)	(17.2)	(17.1)	(5.1)	(26.2)	(14.6)	(18.8)

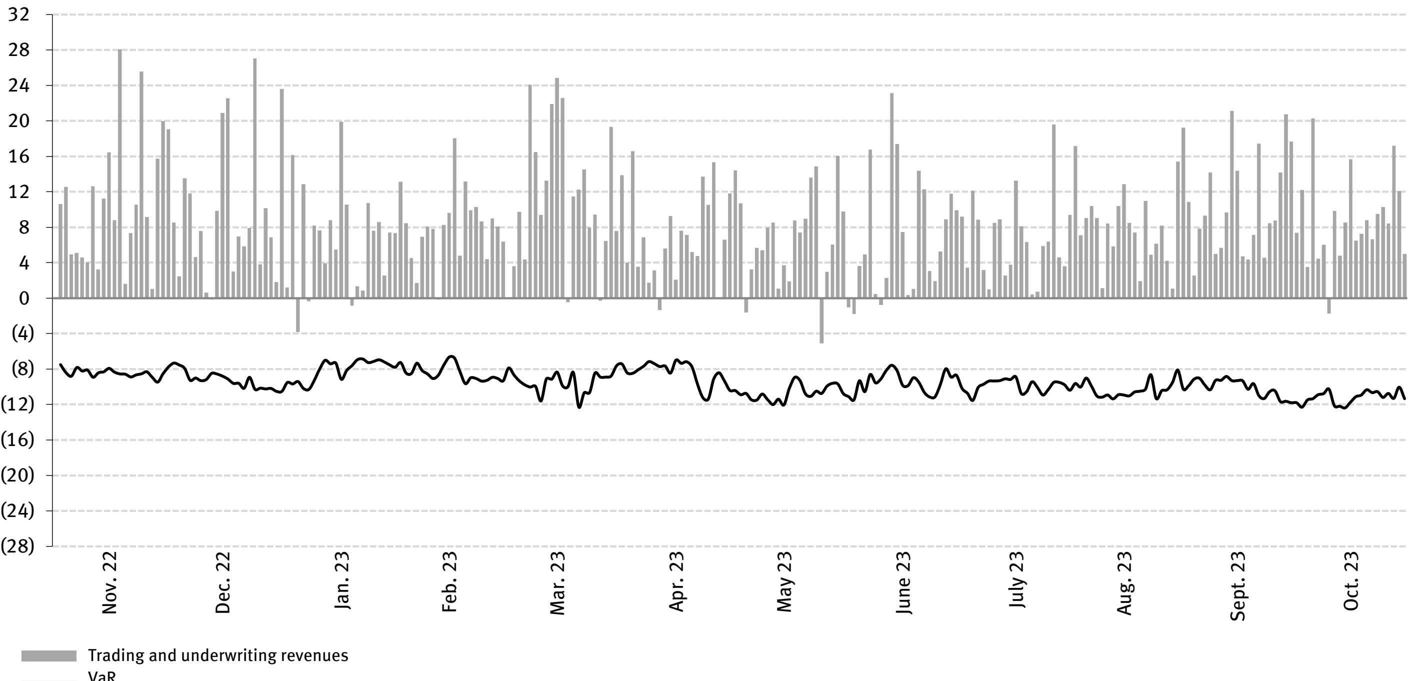
n.m. Computation of a diversification effect for the high and low is not meaningful, as highs and lows may occur on different days and be attributable to different types of risk.
(1) See the Glossary section on pages 124 to 127 for details on the composition of these measures.
(2) Amounts are presented 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 stood at $9.5 million for fiscal 2023, up from $7.9 million in fiscal 2022. The average total trading SVaR was also up, increasing from $14.6 million in fiscal 2022 to $17.2 million in fiscal 2023. These increases were mainly driven by higher equity risk and higher interest rate risk.

The revenues generated by trading activities are compared with VaR as a backtesting assessment of the appropriateness of this risk measure as well as the financial performance of trading activities relative to the risk undertaken.

The chart below shows daily trading and underwriting revenues and VaR. Daily trading and underwriting revenues were positive on 94% of the days for the year ended October 31, 2023. Net daily trading and underwriting losses in excess of $1 million were recorded on seven days. None of these losses exceeded the VaR.

Daily Trading and Underwriting Revenues
Year ended October 31, 2023
(millions of Canadian dollars)



Stress Testing
Stress testing is a risk management technique that consists of estimating potential losses under abnormal market conditions and risk factor movements. This technique enhances transparency by exploring a range of severe but plausible scenarios.

These stress tests simulate the results that the portfolios would generate if the extreme scenarios in question were to occur. The Bank's stress testing framework, which is applied to all positions generating market risk, currently comprises the following categories of stress test scenarios:

- Historical scenarios based on past major disruption situations;
- Hypothetical scenarios designed to be forward-looking in the face of potential market stresses;
- Scenarios specific to asset classes, including:
  - sharp parallel increases/decreases in interest rates; non-parallel movements of interest rates (flattening and steepening) and increases/decreases in credit spreads;
  - sharp stock market crash coupled with a significant increase in volatility of the term structure; increase in stock prices combined with less volatility;
  - significant increases/decreases in commodity prices coupled with increases/decreases in volatility; short-term and long-term increases/decreases in commodity prices;
  - depreciation/appreciation of the U.S. dollar and of other currencies relative to the Canadian dollar.

Structural Interest Rate Risk
As part of its core banking activities, such as lending and deposit taking, the Bank is exposed to interest rate risk. Structural interest rate risk is the potential negative impact of interest rate fluctuations on the Bank's annual net interest income and the economic value of its equity. Activities related to hedging, investments, and term funding are also exposed to structural interest rate risk. The Bank's main exposure to interest rate risk stems from a variety of sources:

- yield curve risk, which refers to changes in the level, slope, and shape of the yield curve;
- repricing risk, which arises from timing differences in the maturity and repricing of on- and off-balance-sheet items;
- options risk, either implicit (e.g., prepayment of mortgage loans) or explicit (e.g., capped mortgages and rate guarantees) in balance sheet products;
- basis risk that is caused by an imperfect correlation between different yield curves.

The Bank's exposure to structural interest rate risk is assessed and controlled mostly through the impact of stress scenarios and market shocks on the economic value of the Bank's equity and on 12-month net interest income projections. These two metrics are calculated daily. They are based on cash flow projections prepared using a number of assumptions. Specifically, the Bank has developed key assumptions on loan prepayment levels, deposit redemptions, and the behaviour of customers that were granted rate guarantees as well as the rate and duration profile of non-maturity deposits. These specific assumptions were developed based on historical analyses and are regularly reviewed.

Funds transfer pricing is a process by which the Bank's business units are charged or paid according to their use or supply of funding. Through this mechanism, all funding activities as well as the interest rate risk and liquidity risk associated with those activities are centralized in the Global Funding and Treasury Group.

Active management of structural interest rate risk can significantly enhance the Bank's profitability and add to shareholder value. The Bank's goal is to maximize the economic value of its equity and its annual net interest income considering its risk appetite. This goal must be achieved within prescribed risk limits and is accomplished primarily by implementing a policy framework, approved by the GRC and submitted for information purposes to the RMC, that sets a risk tolerance threshold, monitoring structures controlled by the various committees, risk indicators, reporting procedures, delegation of responsibilities, and segregation of duties. The Bank also prepares an annual funding plan that includes the expected growth of assets and liabilities.

Governance
Management of the Bank's structural interest rate risk is mandated to the Global Funding and Treasury Group. In this role, the executives and personnel of this group are responsible for the day-to-day management of the risks inherent to structural interest rate risk hedging decisions and operations. They act as the primary effective challenge function with respect to the execution of these activities. The GRC approves and endorses the structural interest rate exposure and strategies. The Asset Liability Committee and the Financial Markets Risk Committee ensure that senior management monitors structural interest rate risk on an ongoing basis. The Risk Management Group is responsible for assessing structural interest rate risk, monitoring activities, and ensuring compliance with the structural interest rate risk management policy. The Risk Management Group ensures that an appropriate risk management framework is in place and ensures compliance with the risk appetite framework and policy. Structural interest rate risk supervision is mainly provided by the Financial Markets Risk Committee. This committee reviews exposure to structural interest rate risk, the use of limits, and changes made to assumptions.

Stress Testing

Stress tests are performed on a regular basis to assess the impact of various scenarios on annual net interest income and on the economic value of equity in order to guide the management of structural interest rate risk. Stress test scenarios are performed where the yield curve level, slope, and shape are shocked. Yield curve basis and volatility scenarios are also performed. All risk factors mentioned above are covered by specific scenarios and have Board-approved or GRC-approved risk limits.

Dynamic simulation is also used to project the Bank's future net interest income, future economic value, and future exposure to structural interest rate risk. These simulations project cash flows of assets, liabilities, and off-balance-sheet products over a given investment horizon. Given their dynamic nature, they encompass assumptions pertaining to changes in volume, client term preference, prepayments of deposits and loans, and the yield curve.

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.

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

As at October 31 (millions of Canadian dollars)			2023			2022
	Canadian dollar	Other currencies	Total	Canadian dollar	Other currencies	Total
Impact on equity						
100-basis-point increase in the interest rate	(297)	2	(295)	(191)	(24)	(215)
100-basis-point decrease in the interest rate	272	7	279	179	27	206
Impact on net interest income						
100-basis-point increase in the interest rate	73	1	74	128	2	130
100-basis-point decrease in the interest rate	(103)	1	(102)	(141)	(2)	(143)

Investment Governance

The Bank has created securities portfolios in liquid and less liquid securities for strategic, long-term investment, and liquidity management purposes. These investments carry market risk, credit risk, liquidity risk, and concentration risk.

The investment governance framework sets out the guiding principles and general management standards that must be followed by all those who manage portfolios of these securities included in the portfolios of the Bank and its subsidiaries. Under this investment governance framework, business units that are active in managing these types of portfolios adopt internal investment policies that set, among other things, targets and limits for the allocation of assets in the portfolios concerned and internal approval mechanisms. The primary objective is to reduce concentration risk by industry, issuer, country, type of financial instrument, and credit quality.

Overall limits in value and in proportion to the Bank's equity are set on the outstanding amount of liquid preferred shares, liquid equity securities excluding preferred shares, and instruments classified as illiquid securities in the securities portfolios. The overall exposure to common shares with respect to an individual issuer and the total outstanding amount invested in private equity funds, for investment banking services, are also subject to limits. Restrictions are also set on investments defined as special. Lastly, the Bank has a specific policy, approved by the RMC, applicable to investments in debt and equity securities, including strategic investments. Strategic investments are defined as purchases of business assets or acquisitions of significant interests in an entity for purposes of acquiring control or creating a long-term relationship.

Structural Foreign Exchange Risk

The Bank's structural foreign exchange risk arises from investments in foreign operations denominated in currencies other than the Canadian dollar. This risk, predominantly in U.S. dollars, is measured by assessing the impact of currency fluctuations on retained earnings. The Bank uses financial instruments (derivative and non-derivative) to hedge this risk. An adverse change in foreign exchange rates can also impact the Bank's capital ratios due to the amount of RWA denominated in a foreign currency. When the Canadian dollar depreciates relative to other currencies, unrealized translation gains on the Bank's net investments in foreign operations, as well as the impact on hedging transactions, are reported in other comprehensive income in shareholders' equity. In addition, the Canadian-dollar equivalent of U.S.-dollar-denominated RWA and regulatory capital deductions increases. The reverse is true when the Canadian dollar appreciates relative to the U.S. dollar. The structural foreign exchange risk is managed to ensure that the potential impacts on the capital ratios and net income are within tolerable limits set by risk policies.

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.

The Bank's primary objective as a financial institution is to manage liquidity such that it supports the Bank's business strategy and allows it to honour its commitments when they come due, even in extreme conditions. This is done primarily by implementing a policy framework approved by the RMC, which establishes a risk appetite, monitoring structures controlled by various committees, risk indicators, reporting procedures, delegation of responsibilities, and segregation of duties. The Bank also prepares an annual funding plan that incorporates the expected growth of assets and liabilities.

Regulatory Environment

The Bank works closely with national and international regulators to implement regulatory liquidity standards. The Bank adapts its processes and policies to reflect its liquidity risk appetite towards these new requirements.

The *Liquidity Adequacy Requirements* (LAR) are reviewed annually to reflect domestic and international regulatory changes. They constitute OSFI's proposed liquidity framework and include seven chapters:

- overview;
- liquidity coverage ratio (LCR);
- net stable funding ratio (NSFR);
- net cumulative cash flow (NCCF);
- operating cash flow statement;
- liquidity monitoring tools;
- intraday liquidity monitoring tools.

LCR is used to ensure that banks can overcome severe short-term stress, while the NSFR is a structural ratio over a one-year horizon. The NCCF metric is defined as a monitoring tool that calculates a survival period. It is based on the assumptions of a stress scenario prescribed by OSFI that aims to represent a combined systemic and bank-specific crisis. The Bank publishes LCR and NSFR on a quarterly basis, whereas NCCF is produced monthly and communicated to OSFI.

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 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 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 effective dates. For D-SIBs, the internal audit assurance requirements regarding the capital, leverage and liquidity returns commence as of fiscal 2023, the senior management attestation and internal review requirements apply as of fiscal 2024, and the external audit assurance requirements apply as of fiscal 2025.

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 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.

On October 31, 2023, OSFI announced its decision on reviewing the *Liquidity Adequacy Requirements* (LAR) *Guideline* with respect to wholesale funding sources with retail-like characteristics, specifically high-interest savings account exchange-traded funds (HISA ETFs). OSFI determined these sources to be unsecure wholesale funding provided by other legal entities. Despite some retail-like characteristics and term agreements with depositors, the fact that these products are held directly by fund managers led OSFI to conclude that a 100% run-off factor for these products was appropriate. As a result, deposit-taking institutions exposed to such funding must hold sufficient high-quality liquid assets to support all HISA ETF balances that can be withdrawn within 30 days. By January 31, 2024, all deposit-taking institutions will be required to transition the measurement and related reporting to the run-off treatment specified in the LAR. Moreover, changes for reporting the LCR must be calculated retrospectively to the start of the quarter to account for daily fluctuations in the ratio (November 1, 2023 for the Bank).

The Bank continues to closely monitor regulatory developments and actively participates in various consultation processes.

Governance

The Global Funding and Treasury Group is responsible for managing liquidity and funding risk. Although the day-to-day and strategic management of risks associated with liquidity, funding, and pledging activities is assumed by the Global Funding and Treasury Group, the Risk Management Group is responsible for assessing liquidity risk and overseeing compliance with the resulting policy. The Risk Management Group ensures that an appropriate risk management framework is in place and ensures compliance with the risk appetite framework. This structure provides an independent oversight and effective challenge for liquidity, funding, and pledging decisions, strategy, and exposure.

The Bank's *Liquidity, Funding and Pledging Governance Policy* requires review and approval by the RMC, based on recommendations from the GRC. The Bank has established three levels of limits. The first two levels involve the Bank's overall cash position and are respectively approved by the Board and the GRC, whereas the third level of limits focuses more on specific aspects of liquidity risk and is approved by the Financial Markets Risk Committee. The Board not only approves the supervision of day-to-day risk management and governance but also backup plans in anticipation of emergency and liquidity crisis situations. If a limit has to be revised, the Risk Management Group with the support of the Global Funding and Treasury Group, submits the proposed revision to the approving committee.

Oversight of liquidity risk is entrusted mainly to the Financial Markets Risk Committee, whose members include representatives of the Financial Markets segment, the Global Funding and Treasury Group, and the Risk Management Group. In addition, the Asset Liability Committee ensures that senior management monitors liquidity and funding risk on an ongoing basis.

The Bank also has policies and guidelines governing its own collateral pledged to counterparties, given the potential impact of such asset transfers on its liquidity. In accordance with its Liquidity, Funding and Pledging Governance Policy, the Bank conducts simulations of potential counterparty collateral claims in the event of a Bank downgrade or other unlikely occurrences, such as large market fluctuations.

Through the Financial Markets Risk Committee, the Risk Management Group regularly reports changes in liquidity, funding, and pledging indicators and compliance with regulatory-, Board-, and GRC-approved limits. If control reports indicate non-compliance with the limits and a general deterioration of liquidity indicators, the Global Funding and Treasury Group takes remedial action. According to an escalation process, problematic situations are reported to management and to the GRC and the RMC. An executive report on the Bank's liquidity and funding risk management is submitted quarterly to the RMC; this report describes the Bank's liquidity position and informs the Board of non-compliance with the limits and other rules observed during the reference period as well as remedial action taken.

Liquidity Management

The Bank performs liquidity management, funding, and pledging operations not only from its head office and regional offices in Canada, but also through certain foreign centres. Although the volume of such operations abroad represents a sizable portion of global liquidity management, the Bank's liquidity management is centralized. By organizing liquidity management, funding, and pledging activities within the Global Funding and Treasury Group, the Bank can better coordinate enterprise-wide funding and risk monitoring activities. All internal funding transactions between Bank entities are controlled by the Global Funding and Treasury Group.

This centralized structure streamlines the allocation and control of liquidity management, funding, and pledging limits. Nonetheless, the *Liquidity, Funding and Pledging Governance Policy* contains special provisions for financial centres whose size and/or strategic importance makes them more likely to contribute to the Bank's liquidity risk. Consequently, a liquidity and funding risk management structure exists at each financial centre. This structure imposes a set of limits of varying levels, up to the limits approved by the RMC, on diverse liquidity parameters, including liquidity stress tests as well as simple concentration measures.

The Bank's funds transfer pricing system prices liquidity by allocating the cost or income to the various business segments. Liquidity costs are allocated to liquidity-intensive activities, mainly long-term loans, and commitments to extend credit and less liquid securities as well as strategic investments. The liquidity compensation is credited to the suppliers of funds, primarily funding in the form of stable deposits from the Bank's distribution network.

Short-term day-to-day funding decisions are based on a daily cumulative net cash position, which is controlled using liquidity ratio limits. Among these ratios and parameters, the Bank pays particular attention to the funds obtained on the wholesale market and to cumulative cash flows over various time horizons.

Moreover, the Bank's collateral pledging activities are monitored in relation to the different limits set by the Bank and are subject to monthly stress tests. In particular, the Bank uses various scenarios to estimate the potential amounts of additional collateral that would be required in the event of a downgrade to the Bank's credit rating.

Liquidity risk can be assessed in many different ways using different liquidity indicators. One of the key liquidity risk monitoring tools is the result over a three-month stress testing period, which is based on contractual maturity and behavioural assumptions applied to balance sheet items and off-balance-sheet commitments.

Stress Testing

The results over a three-month stress test period measure the Bank's liquidity profile by checking not only its ability to survive a three-month crisis but also the liquidity buffer it can generate with its liquid assets. This result is measured on a weekly basis using three scenarios that are designed to assess sensitivity to a crisis specific to the Bank and/or of a systemic nature. Among the assumptions behind these scenarios, deposit loss simulations are carried out based on their degree of stability, while the value of certain assets is encumbered by an amount reflecting their readiness for liquidation in a crisis. Appropriate scenarios and limits are included in the Bank's Liquidity, Funding and Pledging Governance Policy.

The Bank maintains an up-to-date, comprehensive financial contingency and crisis recovery plan that describes the measures to be taken in the event of a critical liquidity situation. This plan is reviewed and approved annually by the Board as part of business continuity and recovery planning. For additional information, see the Regulatory Compliance Risk section of this MD&A.

Liquidity Risk Appetite

The Bank monitors and manages its risk appetite through liquidity limits, ratios, and stress tests. The Bank's liquidity risk appetite is based on the following three principles:

- ensure the Bank has a sufficient amount of unencumbered liquid assets to cover its financial requirements, in both normal and stressed conditions;
- ensure the Bank keeps a liquidity buffer above the minimum regulatory requirement;
- ensure the Bank maintains diversified and stable sources of funding.

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]*

As at October 31 (millions of Canadian dollars)					2023	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	35,234	–	35,234	9,290	25,944	24,180
Securities						
Issued or guaranteed by the Canadian government, U.S. Treasury, other U.S. agencies and other foreign governments	34,292	35,181	69,473	40,411	29,062	25,894
Issued or guaranteed by Canadian provincial and municipal governments	12,130	7,128	19,258	12,855	6,403	8,421
Other debt securities	8,679	4,078	12,757	2,662	10,095	9,809
Equity securities	66,717	41,532	108,249	80,996	27,253	27,291
Loans						
Securities backed by insured residential mortgages	12,836	–	12,836	6,696	6,140	5,582
As at October 31, 2023	169,888	87,919	257,807	152,910	104,897	
As at October 31, 2022	153,384	92,257	245,641	144,464		101,177

As at October 31 (millions of Canadian dollars)	2023	2022
Unencumbered liquid assets by entity		
National Bank (parent)	55,626	52,544
Domestic subsidiaries	10,013	14,576
Foreign subsidiaries and branches	39,258	34,057
	104,897	101,177

As at October 31 (millions of Canadian dollars)	2023	2022
Unencumbered liquid assets by currency		
Canadian dollar	51,882	49,466
U.S. dollar	35,243	24,871
Other currencies	17,772	26,840
	104,897	101,177

Liquid Asset Portfolio[1]* – Average[5]

Year ended October 31 (millions of Canadian dollars)					2023	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	40,728	–	40,728	8,128	32,600	31,369
Securities						
Issued or guaranteed by the Canadian government, U.S. Treasury, other U.S. agencies and other foreign governments	36,786	37,074	73,860	50,472	23,388	23,701
Issued or guaranteed by Canadian provincial and municipal governments	14,067	7,940	22,007	14,771	7,236	6,276
Other debt securities	10,653	3,728	14,381	3,116	11,265	8,771
Equity securities	64,439	47,099	111,538	82,542	28,996	24,427
Loans						
Securities backed by insured residential mortgages	12,381	–	12,381	7,136	5,245	4,218
As at October 31, 2023	179,054	95,841	274,895	166,165	108,730	
As at October 31, 2022	160,463	85,847	246,310	147,548		98,762

(1) See the Financial Reporting Method section on pages 14 to 19 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 12 months of the year divided by 12.

Summary of Encumbered and Unencumbered Assets[1]*

(millions of Canadian dollars)						As at October 31, 2023
		Encumbered assets[2]		Unencumbered assets	Total	Encumbered assets as % of total assets
	Pledged as collateral	Other[3]	Available as collateral	Other[4]		
Cash and deposits with financial institutions	449	8,841	25,944	–	35,234	2.2
Securities	49,005	–	72,813	–	121,818	11.6
Securities purchased under reverse repurchase agreements and securities borrowed	–	11,260	–	–	11,260	2.6
Loans and acceptances, net of allowances	36,705	–	6,140	182,598	225,443	8.7
Derivative financial instruments	–	–	–	17,516	17,516	–
Investments in associates and joint ventures	–	–	–	49	49	–
Premises and equipment	–	–	–	1,592	1,592	–
Goodwill	–	–	–	1,521	1,521	–
Intangible assets	–	–	–	1,256	1,256	–
Other assets	–	–	–	7,889	7,889	–
	86,159	20,101	104,897	212,421	423,578	25.1

(millions of Canadian dollars)						As at October 31, 2022
		Encumbered assets[2]		Unencumbered assets	Total	Encumbered assets as % 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 14 to 19 for additional information on capital management measures.
(2) In the normal course of its funding activities, the Bank pledges assets as collateral in accordance with standard terms. Encumbered assets include assets used to cover short sales, obligations related to securities sold under repurchase agreements and securities loaned, guarantees related to security-backed loans and borrowings, collateral related to derivative financial instrument transactions, asset-backed securities, residential mortgage loans securitized and transferred under the Canada Mortgage Bond program, assets held in consolidated trusts supporting the Bank's funding activities, and mortgage loans transferred under the covered bond program.
(3) Other encumbered assets include assets for which there are restrictions and that cannot therefore be used for collateral or funding purposes as well as assets used to cover short sales.
(4) Other unencumbered assets are assets that cannot be used for collateral or funding purposes in their current form. This category includes assets that are potentially eligible as funding program collateral (e.g., mortgages insured by the Canada Mortgage and Housing Corporation that can be securitized into mortgage-backed securities under the *National Housing Act* (Canada)).

Liquidity Coverage Ratio

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

The following table provides average LCR data calculated using the daily figures in the quarter. For the quarter ended October 31, 2023, the Bank's average LCR was 155%, well above the 100% regulatory requirement and demonstrating the Bank's solid liquidity position.

LCR Disclosure Requirements[1][2]*

(millions of Canadian dollars)			For the quarter ended
		October 31, 2023	July 31, 2023
	Total unweighted value[3] (average)	Total weighted value[4] (average)	Total weighted value[4] (average)
High-quality liquid assets (HQLA)			
Total HQLA	n.a.	74,177	73,834
Cash outflows			
Retail deposits and deposits from small business customers, of which:	74,934	10,934	10,515
Stable deposits	27,706	831	839
Less stable deposits	47,228	10,103	9,676
Unsecured wholesale funding, of which:	97,158	51,528	53,485
Operational deposits (all counterparties) and deposits in networks of cooperative banks	30,433	7,417	7,314
Non-operational deposits (all counterparties)	57,366	34,752	35,640
Unsecured debt	9,359	9,359	10,531
Secured wholesale funding	n.a.	24,716	22,390
Additional requirements, of which:	65,937	16,774	16,327
Outflows related to derivative exposures and other collateral requirements	21,681	8,912	8,510
Outflows related to loss of funding on secured debt securities	1,949	1,949	1,805
Backstop liquidity and credit enhancement facilities and commitments to extend credit	42,307	5,913	6,012
Other contractual commitments to extend credit	2,149	760	769
Other contingent commitments to extend credit	134,225	1,968	1,941
Total cash outflows	n.a.	106,680	105,427
Cash inflows			
Secured lending (e.g., reverse repos)	113,802	27,660	26,779
Inflows from fully performing exposures	10,243	6,669	6,634
Other cash inflows	23,574	23,574	21,324
Total cash inflows	147,619	57,903	54,737
		Total adjusted value[5]	Total adjusted value[5]
Total HQLA		74,177	73,834
Total net cash outflows		48,777	50,690
Liquidity coverage ratio (%)[6]		155 %	146 %

n.a. Not applicable
(1) See the Financial Reporting Method section on pages 14 to 19 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 has been calculated using averages of the daily figures in the quarter.

As at October 31, 2023, Level 1 liquid assets represented 84% 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 October 31, 2023 and the preceding quarter is 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.

Intraday Liquidity

The Bank manages its intraday liquidity in such a way that the amount of available liquidity exceeds its maximum intraday liquidity requirements. The Bank monitors its intraday liquidity on an hourly basis, and the evolution thereof is presented monthly to the Financial Markets Risk Committee.

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 the required stable funding in accordance with OSFI's *Liquidity Adequacy Requirements Guideline*. As at October 31, 2023, the Bank's NSFR was 118%, well above the 100% regulatory requirement and demonstrating the Bank's solid liquidity in a long-term position.

NSFR Disclosure Requirements[1][2]*

(millions of Canadian dollars)					As at October 31, 2023	As at July 31, 2023
	Unweighted value by residual maturity					
	No maturity	6 months or less	Over 6 months to 1 year	Over 1 year	Weighted value[3]	Weighted value[3]
Available Stable Funding (ASF) Items						
Capital:	23,678	–	–	748	24,425	23,772
Regulatory capital	23,678	–	–	748	24,425	23,772
Other capital instruments	–	–	–	–	–	–
Retail deposits and deposits from small business customers:	67,049	17,292	7,913	23,768	103,077	101,196
Stable deposits	25,263	5,053	3,957	8,015	40,575	40,032
Less stable deposits	41,786	12,239	3,956	15,753	62,502	61,164
Wholesale funding:	60,916	92,294	10,338	45,691	99,442	101,485
Operational deposits	31,441	–	–	–	15,721	15,257
Other wholesale funding	29,475	92,294	10,338	45,691	83,721	86,228
Liabilities with matching interdependent assets[4]	–	2,755	2,673	19,606	–	–
Other liabilities[5]:	17,450		16,672		674	674
NSFR derivative liabilities[5]	n.a.		4,868		n.a.	n.a.
All other liabilities and equity not included in the above categories	17,450	2,836	150	8,818	674	674
Total ASF	n.a.	n.a.	n.a.	n.a.	227,618	227,127
Required Stable Funding (RSF) Items						
Total NSFR high-quality liquid assets (HQLA)	n.a.	n.a.	n.a.	n.a.	9,004	10,714
Deposits held at other financial institutions for operational purposes	–	–	–	–	–	–
Performing loans and securities:	61,863	64,837	24,092	104,639	159,117	154,770
Performing loans to financial institutions secured by Level 1 HQLA	96	262	–	–	18	36
Performing loans to financial institutions secured by non-Level 1 HQLA and unsecured performing loans to financial institutions	6,697	35,275	1,781	889	6,408	6,295
Performing loans to non-financial corporate clients, loans to retail and small business customers, and loans to sovereigns, central banks and public sector entities, of which:	30,036	23,152	14,633	39,535	79,695	76,011
With a risk weight of less than or equal to 35% under the Basel II Standardized Approach for credit risk	172	1,473	449	742	1,556	1,826
Performing residential mortgages, of which:	9,115	5,322	6,421	59,334	54,184	53,591
With a risk weight of less than or equal to 35% under the Basel II Standardized Approach for credit risk	9,115	5,322	6,421	59,334	54,184	53,533
Securities that are not in default and do not qualify as HQLA, including exchange-traded equities	15,919	826	1,257	4,881	18,812	18,837
Assets with matching interdependent liabilities[4]	–	2,755	2,673	19,606	–	–
Other assets[5]:	6,082		32,272		20,922	23,089
Physical traded commodities, including gold	449	n.a.	n.a.	n.a.	449	423
Assets posted as initial margin for derivative contracts and contributions to default funds of central counterparties[5]	n.a.		9,096		7,732	10,092
NSFR derivative assets[4][5]	n.a.		1,605		–	–
NSFR derivative liabilities before deduction of the variation margin posted[5]	n.a.		14,658		733	631
All other assets not included in the above categories	5,633	3,562	1,757	1,594	12,008	11,943
Off-balance-sheet items[5]	n.a.		112,954		4,259	4,175
Total RSF	n.a.	n.a.	n.a.	n.a.	193,302	192,748
Net Stable Funding Ratio (%)	n.a.	n.a.	n.a.	n.a.	118 %	118 %

n.a. Not applicable
(1) See the Financial Reporting Method section on pages 14 to 19 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 maturity.

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 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 Risk

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 Bank maintains a good balance of its funding through appropriate diversification of its unsecured funding vehicles, securitization programs, and secured funding. The Bank also diversifies its funding by currency, geography, and maturity. 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.

Liquidity and funding levels remained sound and robust over the year, and the Bank does not foresee any event, commitment, or demand that might have a significant impact on its liquidity and funding risk position. For additional information, see the table entitled Residual Contractual Maturities of Balance Sheet Items and Off-Balance-Sheet Commitments in Note 29 to the consolidated financial statements.

Credit Ratings

The credit ratings assigned by ratings agencies represent their assessment of the Bank's credit quality based on qualitative and quantitative information provided to them. Credit ratings may be revised at any time based on various factors, including macroeconomic factors, the methodologies used by ratings agencies, or the current and projected financial condition of the Bank. Credit ratings are one of the main factors that influence the Bank's ability to access financial markets at a reasonable cost. A downgrade in the Bank's credit ratings could adversely affect the cost, size, and term of future funding and could also result in increased requirement to pledge collateral or decreased capacity to engage in certain collateralized business activities at a reasonable cost, including hedging and derivative financial instrument transactions.

Liquidity and funding levels remain sound and robust, and the Bank continues to enjoy excellent access to the market for its funding needs. The Bank received favourable credit ratings from all the agencies, reflecting the high quality of its debt instruments, and the Bank's objective is to maintain these strong credit ratings. As at October 31, 2023, the outlooks of the ratings agencies remained unchanged at "Stable". The following table presents the Bank's credit ratings according to four rating agencies as at October 31, 2023.

The Bank's Credit Ratings

				As at October 31, 2023
	Moody's	S&P	DBRS	Fitch
Short-term senior debt	P-1	A-1	R-1 (high)	F1+
Canadian commercial paper		A-1 (mid)		
Long-term deposits	Aa3		AA	AA-
Long-term non-bail-inable senior debt[1]	Aa3	A	AA	AA-
Long term senior debt[2]	A3	BBB+	AA (low)	A+
NVCC subordinated debt	Baa2 (hyb)	BBB	A (low)	
NVCC limited recourse capital notes	Ba1 (hyb)	BB+	BBB (high)	BBB
NVCC preferred shares	Ba1 (hyb)	P-3 (high)	Pfd-2	
Counterparty risk[3]	Aa3/P-1			AA-
Covered bonds program	Aaa		AAA	AAA
Rating outlook	Stable[4]	Stable	Stable	Stable

(1) Includes senior debt issued before September 23, 2018 and senior debt issued on or after September 23, 2018, which is excluded from the Bank Recapitalization (Bail-In) Regime.
(2) Subject to conversion under the Bank Recapitalization (Bail-In) Regime.
(3) Moody's uses the term Counterparty Risk Rating while Fitch uses the term Derivative Counterparty Rating.
(4) On November 6, 2023, Moody's changed the rating trends for the Bank and its related entities to "Positive" from "Stable". This change reflects Moody's recognition of the Bank's solid performance in recent years.

Guarantees

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-, two-, or three-notch downgrade. These additional collateral requirements are presented in the table below.

(millions of Canadian dollars)			As at October 31, 2023
	One-notch downgrade	Two-notch downgrade	Three-notch downgrade
Derivatives[1]	31	120	125

(1) Contractual requirements related to agreements known as initial margins and variation margins.

Funding Strategy

The main objective of the funding strategy is to support the Bank's organic growth while also enabling it to survive potentially severe and prolonged crises and to meet its regulatory obligations and financial targets.

The Bank's funding framework is summarized as follows:

- pursue a diversified deposit strategy to fund core banking activities through stable deposits coming from the networks of each of the Bank's major business segments;
- maintain sound liquidity risk management through centralized expertise and management of liquidity metrics within a predefined risk appetite;
- maintain active access to various markets to ensure a diversification of institutional funding in terms of source, geographic location, currency, instrument, and maturity, whether or not funding is secured.

The funding strategy is implemented in support of the Bank's overall objectives of strengthening its franchise among market participants and reinforcing its excellent reputation. 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 Bank actively monitors and controls liquidity risk exposures and funding needs within and across entities, business segments, and currencies. The process involves evaluating the liquidity position of individual business segments in addition to that of the Bank as a whole as well as the liquidity risk from raising unsecured and secured funding in foreign currencies. The funding strategy is implemented through the funding plan and deposit strategy, which are monitored, updated to reflect actual results, and regularly evaluated.

Diversified Funding Sources

The primary purpose of diversifying by source, geographic location, currency, instrument, maturity, and depositor is to mitigate liquidity and funding risk by ensuring that the Bank maintains alternative sources of funds that strengthen its capacity to withstand a variety of severe yet plausible institution-specific and market-wide shocks. To meet this objective, the Bank:

- takes funding diversification into account in the business planning process;
- maintains a variety of funding programs to access different markets;
- sets limits on funding concentration;
- maintains strong relationships with fund providers;
- is active in various funding markets of all tenors and for various instruments;
- identifies and monitors the main factors that affect the ability to raise funds.

The Bank is active in the following funding and securitization platforms:

- Canadian dollar Senior Unsecured Debt;
- U.S. dollar Senior Unsecured Debt programs;
- Canadian Medium-Term Note Shelf;
- U.S. dollar Commercial Paper programs;
- U.S. dollar Certificates of Deposit;
- Euro Medium-Term Note program;
- Canada Mortgage and Housing Corporation securitization programs;
- Canadian Credit Card Trust II;
- Legislative Covered Bond program.

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 October 31, 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]	24	–	–	–	24	–	861	885
Certificates of deposit and commercial paper[3]	1,966	3,356	11,685	513	17,520	–	–	17,520
Senior unsecured medium-term notes[4][5]	1,347	400	2,686	3,595	8,028	6,539	6,385	20,952
Senior unsecured structured notes	–	–	–	–	–	40	2,613	2,653
Covered bonds and asset-backed securities								
Mortgage securitization	–	1,760	829	2,760	5,349	3,915	15,770	25,034
Covered bonds	–	1,100	–	–	1,100	1,805	7,993	10,898
Securitization of credit card receivables	–	–	–	–	–	48	–	48
Subordinated liabilities[6]	–	–	–	–	–	–	748	748
	3,337	6,616	15,200	6,868	32,021	12,347	34,370	78,738
Secured funding	–	2,860	829	2,760	6,449	5,768	23,763	35,980
Unsecured funding	3,337	3,756	14,371	4,108	25,572	6,579	10,607	42,758
	3,337	6,616	15,200	6,868	32,021	12,347	34,370	78,738
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 debts 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.

Operational Risk

Operational risk is the risk of loss resulting from an inadequacy or a failure ascribable to human resources, equipment, processes, technology, or external events. Operational risk exists for every Bank activity. Theft, fraud, cyberattacks, unauthorized transactions, system errors, human error, misinterpretation of laws and regulations, litigation or disputes with clients, inappropriate sales practice behaviour, or property damage are just a few examples of events likely to cause financial loss, harm the Bank's reputation, or lead to regulatory penalties or sanctions.

Although operational risk cannot be eliminated entirely, it can be managed in a thorough and transparent manner to keep it at an acceptable level. The Bank's operational risk management framework is built on the concept of three lines of defence and provides a clear allocation of responsibilities to all levels of the organization, as mentioned below.

Operational Risk Management Framework
The operational risk management framework is described in the Operational Risk Management Policy, which is derived from the Risk Management Policy. The operational risk management framework is aligned with the Bank's risk appetite and is made up of policies, standards, and procedures specific to each operational risk, which fall under the responsibility of specialized groups.

The Operational Risk Management Committee (ORMC), a subcommittee of the GRC, is the main governance committee overseeing operational risk matters. Its mission is to provide oversight of the operational risk level across the organization to ensure it aligns with the Bank's established risk appetite targets. It implements effective frameworks for managing operational risk, including policies and standards, and monitors the application thereof.

The segments use several operational risk management tools and methods to identify, assess, manage and monitor their operational risks and control measures. With these tools and methods, the segments can:

- recognize and understand the inherent and residual risks to which their activities and operations are exposed;
- identify how to manage and monitor the identified risks to keep them at an acceptable level;
- proactively and continuously manage risks;
- obtain an integrated view of operational risks by combining the results of these various tools in the risk profile.

Operational Risk Management Tools and Methods
Operational Risk Taxonomy
With the aim of developing a common language for the Bank's operational risk universe, an operational risk taxonomy has been established. It is comparable to the Basel taxonomy and based on eight risk categories and two risk themes.

Collection and Analysis of Data on Internal Operational Events

The Operational Risk Unit applies a process, across the Bank and its subsidiaries, for identifying, collecting, and analyzing data on internal operational events. This process helps determine the Bank's exposure to the operational risks and operational losses incurred and assess the effectiveness of internal controls. It also helps limit operational events, keep losses at an acceptable level and, as a result, reduce potential capital charges and lower the likelihood of damage to the Bank's reputation. These data are processed and saved in a centralized database and are periodically the subject of a quality assurance exercise.

Analysis and Lessons Learned from Operational Events Observed in Other Large Businesses

By collecting and analyzing media-reported information about significant operational incidents, in particular incidents related to fraud, information security, and theft of personal information experienced by other organizations, the Bank can assess the effectiveness of its own operational risk management practices and reinforce them, if necessary.

Operational Risk Self-Assessment Program

The operational risk self-assessment program gives each business unit and corporate unit the means to proactively and periodically identify and assess the new or major operational risks to which they are exposed, evaluate the effectiveness of monitoring and mitigating controls, and develop action plans to keep such risks at acceptable levels. As such, the program helps in anticipating factors that could hinder performance or the achievement of objectives.

Key Risk Indicators

Key risk indicators are used to monitor the main operational risk exposure factors and track how risks are evolving in order to proactively manage them. The business units and corporate units define the key indicators associated with their main operational risks and assign tolerance thresholds to them. These indicators are monitored periodically and, when they show a significant increase in risk or when a tolerance threshold is exceeded, they are sent to an appropriate level in the hierarchy and action plans are implemented as required.

Scenario Analysis

Scenario analysis, which is part of a Bank-wide stress testing program, is an important and useful tool for assessing the impacts related to potentially serious events. It is used to define the risk appetite, set risk exposure limits, and engage in business planning. More specifically, scenario analysis provides management with a better understanding of the risks faced by the Bank and helps it make appropriate management decisions to mitigate potential operational risks that are inconsistent with the Bank's risk appetite.

Insurance Program

To protect itself against any material losses arising from unforeseeable operational risk exposure, the Bank also has adequate insurance, the nature and amount of which meet its coverage requirements.

Operational Risk Reports and Disclosures

Operational events for which the financial impact exceeds tolerance thresholds or that have a significant non-financial impact are submitted to appropriate decision-making levels. Management is obligated to report on its management process and to remain alert to current and future issues. Reports on the Bank's risk profile, highlights, and emerging risks are periodically submitted, on a timely basis, to the ORMC, the GRC, and the RMC. This reporting enhances the transparency and proactive management of the main operational risk factors.

Regulatory Compliance Risk

Regulatory compliance risk is the risk of the Bank or of one of its employees or business partners failing to comply with the regulatory requirements in effect where it does business, both in Canada and internationally. Regulatory compliance risk is present in all of the daily operations of each Bank segment. A situation of regulatory non-compliance can adversely affect the Bank's reputation and result in penalties and sanctions or increased oversight by regulators.

Organizational Structure of Compliance

Compliance is an independent oversight function within the Bank. The Senior Vice-President, Chief Compliance Officer and Chief Anti-Money Laundering Officer serves as both chief compliance officer (CCO) and chief anti-money laundering officer (CAMLO) for the Bank and its subsidiaries and foreign centres. She is responsible for implementing and updating the Bank's programs for regulatory compliance management, regulatory requirements related to AML/ATF, international sanctions, and the fight against corruption. The CCO and CAMLO has a direct relationship with the Chair of the RMC and meets with her at least once every quarter. She can also communicate directly with senior management, officers, and directors of the Bank and of its subsidiaries and foreign centres.

Regulatory Compliance Framework

The Bank operates in a highly regulated industry. To ensure sound management of regulatory compliance, the Bank favours proactive approaches and incorporates regulatory requirements into its day-to-day operations.

Such proactive management also provides reasonable assurance that the Bank is in compliance, in all material respects, with the regulatory requirements in effect where it does business, both in Canada and internationally.

The implementation of a regulatory compliance risk management framework across the Bank is entrusted to the Compliance Service, which has the following mandate:

- implement policies and standards that ensure compliance with current regulatory requirements, including those related to AML/ATF, to international sanctions, and to the fight against corruption;
- develop compliance and AML/ATF training programs for Bank employees, officers, and directors;
- exercise independent oversight and monitoring of the programs, policies, and procedures implemented by the management of the Bank, its subsidiaries, and its foreign centres to ensure that the control mechanisms are sufficient, respected, and effective;
- report relevant compliance and AML/ATF matters to the Bank's Board and inform it of any significant changes in the effectiveness of the risk management framework.

The Bank holds itself to high regulatory compliance risk management standards in order to earn the trust of its clients, its shareholders, the market, and the general public.

Described below are the main regulatory developments that have been monitored over the past year.

Reform of the Official Languages Act (federal law)
The purpose of Bill C-13, *An Act to amend the Official Languages Act, to enact the Use of French in Federally Regulated Private Businesses Act and to make related amendments to other Acts* is to provide a new legal framework and support the official languages of Canada. It modernizes the *Official Languages Act* by giving new powers to the Commissioner (compliance agreements, orders, penalties, etc.) to protect the language rights of Canadians. It also introduces a new law that confers rights and obligations on federal businesses regarding language of service (consumers) and language of work in Quebec and in other regions of Canada with a strong francophone presence. The bill was assented to on June 20, 2023. The amendments to the *Official Languages Act* then came into effect (the new Act will come into effect by order-in-council at a later date).

Amendments to the *Charter of the French Language* (Quebec)
Bill 96, *An Act respecting French, the official and common language of Québec*, made amendments to the *Charter of the French Language* and other legislation. The objectives consist mainly of strengthening the presence and use of the French language in Quebec and affirming that French is the only official language of Quebec. Among the major themes addressed were the language of work, the language of commerce and business (including new requirements for contracts of adhesion and commercial advertising), the francization committees of businesses, and procedures for publishing rights and disputes. Bill 96 was assented to on June 1, 2022, when several provisions entered into effect. Other provisions entered into effect on September 1, 2022 (publication of rights and disputes) and on June 1, 2023 (contracts of adhesion), while certain provisions relating to commercial advertising will come into effect on June 1, 2025.

Guideline on Existing Consumer Mortgage Loans in Exceptional Circumstances (Guideline)
On July 5, 2023, the Financial Consumer Agency of Canada (FCAC) published, with immediate effect, its *Guideline on Existing Consumer Mortgage Loans in Exceptional Circumstances*. This guideline sets out the FCAC's expectations for federally regulated financial institutions (FRFIs) to contribute to the protection of consumers of financial products and services by providing tailored support to natural persons with an existing residential mortgage loan on their principal residence who are experiencing severe financial stress, as a result of exceptional circumstances, and are at risk of mortgage default. These exceptional circumstances include the current combined effects of high household indebtedness, the rapid rise in interest rates, and the increased cost of living. The FCAC expects FRFIs to consider all available mortgage relief measures and to adopt an approach that reflects the personal circumstances of consumers and their financial needs.

Bill C-30 Addressing Unclaimed Bank Balances, Among Other Matters
Bill C-30 makes an amendment to the *Bank Act*. Unclaimed balances refer in particular to a deposit in an inactive bank account and will now include deposits and instruments in foreign currencies. This plan notably requires financial institutions to send letters to clients to inform them of the existence of unclaimed balances. Additional information about clients who have an unclaimed balance will also have to be sent to the Bank of Canada. The bill came into effect on June 30, 2023, but the first notices are expected to be issued by January 1, 2024.

Anti-Money Laundering and Anti-Terrorist Financing (AML/ATF) Activities
Amendments made to the regulations set out in the *Proceeds of Crime (Money Laundering) and Terrorist Financing Act* took effect on June 1, 2021. The new reporting requirements are expected to take effect in 2023-2024 such that the Financial Transactions and Reports Analysis Centre of Canada (FINTRAC) can prepare the new reporting forms.

In addition, the federal government's budget of March 28, 2023 proposed changes to Canada's AML/ATF regime (creation of an agency that will become the main organization for applying the law against financial crimes in Canada, modernizing oversight of the financial sector, strengthening investigative tools, application of the law, and information sharing), some of which will be implemented through Bill C-47.

Protection of Personal Information

Given changing technologies and societal behaviours, privacy and the protection of personal information is a topical issue in Canada. Recent regulatory measures (such as the *General Data Protection Regulation* (GDPR) in Europe in 2018 and the *California Consumer Privacy Act* in the United States in 2020) reflect a desire to implement a stronger legislative framework in the areas of confidentiality and use of personal information. In Quebec, most of the obligations of the new Act 25, *An Act to modernize legislative provisions as regards the protection of personal information*, came into effect in September 2023, which has introduced substantial changes regarding the protection of personal information. Essentially, the Act promotes transparency, raises the confidentiality level of data, and provides a framework for the collection, use, and sharing of personal information. At the federal level, Bill C-27, tabled in June 2022, enacts three new laws: the *Consumer Privacy Protection Act*, the *Personal Information and Data Protection Tribunal Act*, the *Artificial Intelligence and Data Act*. The latter act is the first bill designed to regulate artificial intelligence in Canada. Still at the federal level, members of industry, regulatory agencies, and consumer advocates were consulted to help design and establish the pillars of an open banking system, which aims to enable consumers to transfer their financial data between financial institutions and accredited third parties in a secure and user-friendly manner.

Employment Equity Act

Amendments to the *Employment Equity Regulations* introduced new pay transparency reporting obligations, among other things, under the *Employment Equity Act*. The amendments came into effect on January 1, 2021 and created new pay gap reporting obligations for affected employers, which were required to be included in employer annual reports (which were due by June 1, 2022). The aggregate wage gap data for each employer will be publicly posted in the winter of 2023 (and updated annually thereafter). The purpose of the *Employment Equity Act* is to achieve equality in the workplace so that no person shall be denied employment opportunities or benefits for reasons unrelated to ability and, in the fulfilment of that goal, to correct the conditions of disadvantage in employment experienced by women, Indigenous Peoples, persons with disabilities, and members of visible minorities by giving effect to the principle that employment equity means more than treating persons in the same way but also requires special measures and the accommodation of differences.

Pay Equity Act

Under the federal *Pay Equity Act*, which came into effect on August 31, 2021, employers with more than ten employees are required to develop a pay equity plan that identifies and corrects gender-based wage gaps within three years (i.e., by September 3, 2024). The purpose of the Act is to achieve pay equity through proactive means by redressing the systemic gender-based discrimination in the compensation practices and systems of employers that is experienced by employees who occupy positions in predominantly female job classes. This Act seeks to ensure that employees receive equal compensation for work of equal value, while taking into account the diverse needs of employers and then to maintain pay equity through proactive means. Employers with over 100 employees must prepare (and maintain) their pay equity plan in a joint employer-employee pay equity committee.

Recovery and Resolution Planning

As part of the regulatory measures used to manage systemic risks, D-SIBs are required to prepare recovery and resolution plans. A recovery plan is essentially a roadmap that guides the recovery of a bank in the event of severe financial stress; conversely, a resolution plan guides its orderly wind-down in the event of failure when recovery is no longer an option. The Bank improves and periodically updates its recovery and resolution plans to prepare for these high-risk, but low-probability, events. In addition, the Bank and other D-SIBs continue to work with the CDIC to maintain a comprehensive resolution plan that would ensure an orderly winding down of the Bank's operations. These plans are approved by the Board and submitted to the national regulatory agencies.

Section 871(m) – Dividend Equivalent Payments

Section 871(m) of the U.S. Internal Revenue Code (IRC) aims to ensure that non-U.S. persons pay tax on payments that can be considered dividends on U.S. shares when these payments are made on certain derivative instruments. The derivative instruments for which the underlyings are U.S. shares (including U.S. exchange-traded funds) or "non-qualified indices" are therefore subject to the withholding and reporting requirements. The effective date of certain aspects of these regulations, as well as some of the obligations of Qualified Derivatives Dealers under section 871(m) of the IRC and the Qualified Intermediary Agreement, have been postponed until January 1, 2025. Given that the Internal Revenue Service (IRS) is still expected to issue clarifications to enable institutions to comply with these requirements, the industry will be making efforts to have the effective date postponed further.

U.S. Foreign Account Tax Compliance Act and Common Reporting Standard

The U.S. law addressing foreign account tax compliance (*Foreign Account Tax Compliance Act* or FATCA) and the international regulation Common Reporting Standard (CRS), incorporated into the *Income Tax Act* (Canada), are intended to counter tax evasion by taxpayers through the international exchange of tax information reported annually by Canadian financial institutions to the Canada Revenue Agency. On August 23, 2023, clarifications were provided regarding the application of certain guidelines in these regulations.

Publicly Traded Partnership (PTP)

On October 7, 2020, the IRS and the U.S. Department of the Treasury issued new regulations under section 1446(f) of the IRC regarding the application of withholding tax to non-U.S. persons (individuals and corporations) holding interests in a publicly traded partnership (PTP) related to a trade, business, or activity in the United States and generating income effectively connected to a U.S. business (US ECI). Under these new rules, which came into effect on January 1, 2023, a broker carrying out a distribution of a PTP must collect withholding tax on any distribution of US ECI paid to non-U.S. investors as well as on the proceeds of disposition upon sale or transfer.

Proposed Rules on Sales and Exchanges of Digital Assets by Brokers
In August 2023, the U.S. Department of the Treasury published proposed regulations on broker sales and exchanges of digital assets. Brokers will be required to report the gross proceeds from sales of digital assets effected on or after January 1, 2025. Reporting on an adjusted basis will be required for sales effected on or after January 1, 2026.

Reform of Interest Rate Benchmarks
The reform of interest rate benchmarks is a global initiative that is being coordinated and led by central banks, industry groups, and governments around the world, including Canada. The objective is to improve benchmarks by ensuring that they meet robust international standards. LIBOR (London Interbank Offered Rates) was discontinued, and risk-free rates such as SOFR (Secured Overnight Financing Rate), ESTR (Euro Short-Term Rate), SONIA (Sterling Over Night Index Average), SARON (Swiss Average Rate Overnight), and TONAR (Tokyo Overnight Average Rate) replaced LIBOR. 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 were discontinued as of June 30, 2023. The LIBOR rate administrator (ICE Benchmark Administration Ltd.) will continue to publish a "synthetic" version of LIBOR in British currency for three-month maturities until March 28, 2024, and in U.S. currency for 1-month, 3-month and 6-month maturities until September 30, 2024, for certain contracts that could not be remedied (commonly known as tough legacy contracts). In Canada, publication of CDOR (Canadian Dollar Offered Rate) will be discontinued on June 28, 2024 and replaced by the risk-free rate CORRA (Canadian Overnight Repo Rate Average). A forward-looking rate, the 1-month and 3-month Term CORRA has also been available for certain financial products since September 5, 2023. For additional information, see the Basis of Presentation section in Note 1 to the consolidated financial statements.

One-Day Settlement Cycle
Canada and the United States have agreed to shorten the standard securities settlement cycle from two days to one day after the trade date (from T+2 to T+1). The U.S. Securities and Exchange Commission (SEC) has set Tuesday, May 28, 2024 as the transition date to T+1 for U.S. participants. Given the interconnectedness of North American markets and the scope of interlisted securities traded on the Canadian and U.S. markets, Canadian stakeholders have chosen Monday, May 27, 2024 as the transition date to T+1 in Canada.

In December 2022, the CSA published for comment proposed amendments to *National Instrument 24-101 – Institutional Trade Matching and Settlement* (NI 24-101) to support the transition to T+1. The goal of the proposed amendments is to shorten the standard settlement cycle and, in particular, permanently repeal the exception reporting requirements set out in Part 4 of NI 24-101. To this end, in June 2023, the CSA published *Coordinated Blanket Order 24-930, Exemption from Certain Filing Requirements of National Instrument 24-101.* In August 2023, the CSA published *Staff Notice 24-319 – Regarding National Instrument 24-101 Institutional Trade Matching and Settlements – Update and Staff Recommendation.* The Staff intends to recommend that the respective decision-makers of the member jurisdictions adopt a revised version of the proposed amendments that would include a trade-matching deadline of 3:59 a.m. Eastern Time on the day after the trade. The CSA also published Staff Notice 81-335 – *Investment Fund Settlement Cycles,* in which it announced that it does not propose to amend *National Instrument 81-102 – Investment Funds* to shorten the settlement cycle so that investment funds will have the flexibility to determine whether such a cycle is suitable for them. In April 2023, the Canadian Investment Regulatory Organization also published amendments to support the securities industry's transition to the T+1 settlement cycle.

Canadian Investment Regulatory Organization (CIRO)
The CSA created a new self-regulatory organization that, among other things, combines the functions of the Investment Industry Regulatory Organization of Canada and the Mutual Fund Dealers Association of Canada. This new organization has been operating since January 1, 2023. The new organization officially changed its name to the Canadian Investment Regulatory Organization (CIRO) on June 1, 2023.

Accessible Canada Act
The Act was adopted in June 2019. The purpose of the Act is to make Canada a barrier-free country by January 1, 2040. The Bank published its accessibility plan on nbc.ca on May 31, 2023.

Client Relationship Model (Phase 3) – Amendments to National Instrument 31-103
In April 2023, the CSA published the final version of changes designed to enhance disclosure requirements on the cost of investment funds and to impose new disclosure requirements on the cost and performance of individual variable insurance contracts (segregated fund contracts). All dealers, advisers, registered investment fund managers, and insurers offering segregated fund contracts are affected by these new requirements, which will come into effect on January 1, 2026.

Reputation Risk

Reputation risk is the risk that the Bank's operations or practices will be judged negatively by the public, whether that judgment is with or without basis, thereby adversely affecting the perception, image, or trademarks of the Bank and potentially resulting in costly litigation or loss of income. Reputation risk generally arises from a deficiency in managing another risk. The Bank's reputation may, for example, be adversely affected by non-compliance with laws and regulations or by process failures. All risks must therefore be managed effectively in order to protect the Bank's reputation.

The Bank's corporate culture continually promotes the behaviours and values to be adopted by employees. Ethics are at the heart of everything we do. To fulfill our mission, put people first, and continue to build a strong bank, we must maintain the highest degree of work ethic. Our Code of Conduct outlines what is expected from each employee in terms of ethical behaviour and rules to be followed as they carry out their duties.

Reputation Risk Management Policy
Approved by the GRC, the reputation risk policy covers all of the Bank's practices and activities. It sets out the principles and rules for managing reputation risk within our risk appetite limits along the following five focal points: clients, employees, community, shareholders and governance, all of which represent Bank stakeholders. The policy is supplemented by specific provisions of several policies and standards, such as the policy on new products and activities, the business continuity and crisis management policy, and the investment governance policy.

Strategic Risk

Strategic risk is the risk of a financial loss or of reputational harm arising from inappropriate strategic orientations, improper execution, or ineffective response to economic, financial, or regulatory changes. The corporate strategic plan is developed by the Senior Leadership Team, in alignment with the Bank's overall risk appetite, and approved by the Board. Once approved, the initiatives of the strategic plan are monitored regularly to ensure that they are progressing. If not, strategies could be reviewed or adjusted if deemed appropriate.

In addition, the Bank has a specific Board-approved policy for strategic investments, which are defined as purchases of business assets or acquisitions of significant interests in an entity for the purposes of acquiring control or creating a long-term relationship. As such, acquisition projects and other strategic investments are analyzed through a due diligence process to ensure that these investments are aligned with the corporate strategic plan and the Bank's risk appetite.

Environmental and Social Risk

Environmental and social risk is the possibility that environmental and social matters would result in a financial loss for the Bank or affect its business activities. Environmental risk consists of many aspects, including the use of energy, water, and other resources; climate change; and biodiversity. Social risk includes, for example, considerations relating to human rights, including those of Indigenous Peoples, accessibility, diversity, equity and inclusion, our human capital management practices, including work conditions and the health, safety and well-being of our employees.

A rapidly changing global regulatory environment, the commitments and frameworks to which we adhere, and potential imbalances among their requirements represent challenges, as do the expectations and differing views among stakeholders about the Bank's environmental and social priorities. These considerations can affect assessments of our exposure to environmental and social risks. An inadequate assessment of the risks and opportunities could affect our ability to set and achieve our objectives, priorities, and targets. The Bank's reputation could also be affected by its action or inaction or by a perception of inaction or inadequate action on environmental and social matters, particularly regarding the progress made. Furthermore, the Bank is mindful about the accuracy of the information it provides in a context of heightened disclosure and the presence of greenwashing and socialwashing risks. All these factors can lead to greater exposure to reputation risk, regulatory compliance risk, and strategic risk. We monitor the evolution of these factors, analyze them, and update our procedures on an ongoing basis.

Governance
Our ESG governance structure is based on all levels of the organization being involved in achieving our objectives and meeting our commitments, including the Board, which exercises an ESG oversight role. Together with management, the Board, through its committees, oversees the execution of the Bank's ESG strategy, which is structured around nine ESG principles that are approved by the Board. These ESG principles have been incorporated into the Bank's strategic priorities. In addition, the Board ensures that ESG criteria are incorporated into the Bank's long-term strategic objectives, and it monitors the development and integration of ESG initiatives and principles into our day-to-day activities. Furthermore, the Board's various committees monitor environmental and social risks in accordance with their respective mandates. They are supported by management in the performance of their duties. Environmental and social issues are now central to the Bank's decision-making process. ESG factors continue to be incorporated into the Bank's processes, in line with its strategy and the principles approved by the Board. ESG indicators have been added to the various monitoring dashboards and are gradually being integrated into the Bank's risk appetite framework. Reports on the ESG indicators and on the Bank's ESG commitments are being periodically presented to the internal committees and to the Board committees tasked with overseeing them.

The Bank's *Code of Conduct* outlines what is expected from each employee in their professional, business, and community interactions. It also provides guidance on adhering to the Bank's values, on the day-to-day conduct of the Bank's affairs, and on relationships with third parties, employees, and clients to create an environment conducive to achieving the Bank's One Mission, namely, to have a positive impact on people's lives. In addition, our *Human Rights Statement* sets out our guiding principles, commitments, and expectations. This statement outlines how the Bank applies its principles in its activities and relationships with stakeholders, in every role it plays in society.

Risk Management
Assessing and mitigating environmental and social risks are integral parts of the Bank's risk management framework and risk appetite framework. The Bank has implemented an environmental policy that expresses its determination to protect the environment from human activities, both in terms of our own operations and the benefits to the community. Effective management of environmental and social risks can create business opportunities for both us and our clients.

As a key player in the financial industry, the Bank has demonstrated its commitment to environmental and social groups and associations such as the United Nations Principles for Responsible Banking, the Partnership for Carbon Accounting Financials (PCAF), and the Net-Zero Banking Alliance (NZBA).

The frameworks and methodologies developed by these groups may evolve, which could lead the Bank to reconsider its membership therein. In addition, their efforts to develop such frameworks and objectives could raise competition-related concerns.

The Bank works, along with various industry partners, to identify and implement sound management practices to support the transition to a low-carbon economy. As part of its PCAF and NZBA commitments, the Bank has continued to quantify its financed GHG emissions and to define interim reduction targets for the commercial property and energy production sectors. However, it should be remembered that the need to make an orderly and fair transition to a low-carbon economy means that the Bank's decarbonization efforts must be gradual. The Bank takes concrete steps to meet its commitments and to move its plan forward, notably by quantifying the financial impacts of environmental and social risk. Furthermore, the Bank is committed to transparently communicating information about its progress and its signatory commitments by periodically publishing performance reports.

With respect to its own activities, the Bank is pursuing its commitment to carbon neutrality by reducing the carbon footprint and by offsetting its GHG emissions. Responsible procurement criteria have been incorporated into the procurement and supplier selection practices for the construction of the Bank's new head office building. The new head office is, in fact, aiming to achieve LEED v4[(1)] Gold certification in addition to WELL[(2)] certification. We are continuing to work on the implementation of a global responsible procurement strategy. Moreover, the Bank has adopted a *Supplier Code of Conduct* that describes its expectations of suppliers to uphold responsible business practices. By adopting this code, the Bank is manifesting its intention to do business with suppliers that incorporate environmental, social and governance issues into their operations and throughout their supply chains. Before entering into a relationship with a third party, the business segment conducts due diligence to assess the risk.

Our ability to achieve our environmental and social objectives, priorities, and targets depends on several assumptions and factors, many of which are beyond the Bank's control and whose effects are difficult to predict. In addition, we may need to redefine certain objectives, priorities, or targets or revise data to reflect changes in methodologies or the quality of the available data. It is also possible that the Bank's predictions, targets, or projections prove to be inaccurate, that its assumptions may not be confirmed, and that its strategic objectives and performance targets will not be achieved within the deadlines.

These past few years also saw the emergence of a new environmental risk issue, i.e., the potential financial repercussions of climate change on biodiversity, ecosystems, and ecosystemic services. Financial system participants were called upon by the PRB Biodiversity Community initiative of the United Nations Environment Programme Finance Initiative (UNEP-FI), of which the Bank is a member. As this environmental risk issue begins to emerge, the Bank will continue to closely monitor the various initiatives and contribute to deliberations about potentially incorporating this issue into both investment and credit-granting decisions. The Risk Management Group closely monitors changes in trends and calculation methods and actively participates in various industry discussion groups.

This integration of ESG factors into the credit-granting process is conducted with due diligence, starting with the corporate credit portfolio and prioritizing activity sectors with high GHG emissions. For this clientele, ESG risk is being analyzed using a collection of carbon footprint information and a climate risk classification (transition and physical risks) based on industry as well as scores assigned by ESG-rating agencies. Several other criteria are also being considered, notably waste management, labour standards, corporate governance, product liability, and human rights policies. The Bank plans to gradually extend the collection of such information to clients in other portfolios by adapting the current process. For more information on how climate is integrated into credit risk management, refer to the Assessment of Environmental Risk heading in the Credit Risk section.

To proactively ensure the strategic positioning of its entire portfolio, the Bank continues to support the transition to a low-carbon economy while closely monitoring the related developments and implications. Doing so involves ongoing and stronger adaptation efforts as well as additional mitigation measures for instances of business interruptions or disruptions caused by major incidents such as natural disasters or health crises. Such measures include the business continuity plan, the operational risk management program, and the disaster risk management program.

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, to reflect the requirements of IFRS S2 – *Climate-related Disclosures* published by the International Sustainability Standards Board (ISSB).

On June 26, 2023, the ISSB published IFRS S1 – *General Requirements for Disclosure of Sustainability-related Financial Information* and IFRS S2 – *Climate-related Disclosures*. IFRS S1 provides a set of disclosure requirements designed to enable companies to communicate to investors the sustainability-related risks and opportunities they face over the short-, medium- and long-term. IFRS S2 sets out specific climate-related disclosures and has to be used with IFRS S1. These standards will be applicable for fiscal years beginning on or after January 1, 2024, and certain relief measures will be available, to be done on a voluntary basis or according to the requirements of the regulatory agencies.

(1) Criteria of the LEED (Leadership in Energy and Environmental Design) certification system. LEED certification involves satisfying climate criteria and adaptation characteristics that will help limit potential physical climate risks.
(2) The WELL Standard, administered by the International WELL Building Institute, recognizes environments that support the health and well-being of the occupants.

Critical Accounting Policies and Estimates

A summary of the significant accounting policies used by the Bank is presented in Note 1 to the consolidated financial statements of this *Annual Report*. The accounting policies discussed below 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 geopolitical landscape (notably the Russia-Ukraine war and the recent clashes between Hamas and Israel), inflation, climate change, and higher interest rates 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 consolidated financial statements for a summary of the most significant estimation processes used to prepare the consolidated financial statements in accordance with IFRS and the valuation techniques used to determine carrying values and fair values of assets and liabilities. The uncertainty regarding certain key inputs used in measuring ECLs is described in Note 7 to the consolidated financial statements.

Classification of Financial Instruments

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

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

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

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

Fair Value of Financial Instruments

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

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

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

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

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

IFRS establishes a fair value measurement hierarchy that classifies the inputs used in financial instrument fair value measurement techniques according to three levels. The fair value measurement hierarchy has the following levels:

Level 1
Inputs corresponding to unadjusted quoted prices in active markets for identical assets and liabilities and accessible to the Bank at the measurement date. These instruments consist primarily of equity securities, derivative financial instruments traded in active markets, and certain highly liquid debt securities actively traded in over-the-counter markets.

Level 2
Valuation techniques based on inputs, other than the quoted prices included in Level 1 inputs, that are directly or indirectly observable in the market for the asset or liability. These inputs are quoted prices of similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; inputs other than quoted prices used in a valuation model that are observable for that instrument; and inputs that are derived principally from or corroborated by observable market inputs by correlation or other means. These instruments consist primarily of certain loans, certain deposits, derivative financial instruments traded in over-the-counter markets, certain debt securities, certain equity securities whose value is not directly observable in an active market, liabilities related to transferred receivables, and certain other liabilities.

Level 3
Valuation techniques based on one or more significant inputs that are not observable in the market for the asset or liability. The Bank classifies financial instruments in Level 3 when the valuation technique is based on at least one significant input that is not observable in the markets. The valuation technique may also be partly based on observable market inputs. Financial instruments whose fair values are classified in Level 3 consist of investments in hedge funds, certain derivative financial instruments, equity and debt securities of private companies, certain loans, certain deposits (structured deposit notes), and certain other assets (receivables).

Establishing fair value is an accounting estimate and has an impact on the following items: *Securities at fair value through profit or loss*, certain *Loans*, *Securities at fair value through other comprehensive income*, *Obligations related to securities sold short*, *Derivative financial instruments*, financial instruments designated at fair value through profit or loss, and financial instruments designated at fair value through other comprehensive income on the Consolidated Balance Sheet. This estimate also has an impact on *Non-interest income* in the Consolidated Statement of Income of the Financial Markets segment and of the *Other* heading. Lastly, this estimate has an impact on *Other comprehensive income* in the Consolidated Statement of Comprehensive Income. For additional information on the fair value determination of financial instruments, see Notes 3 and 6 to the consolidated financial statements.

Impairment of Financial Assets

At the end of each reporting period, the Bank applies a three-stage impairment approach to measure the expected credit losses (ECL) on all debt instruments measured at amortized cost or at fair value through other comprehensive income and on loan commitments and financial guarantees that are not measured at fair value. ECLs are a probability-weighted estimate of credit losses over the remaining expected life of the financial instrument. The ECL model is forward looking. Measurement of ECLs at each reporting period reflects reasonable and supportable information about past events, current conditions, and forecasts of future events and economic conditions. Judgment is required in making assumptions and estimates, determining movements between the three stages, and applying forward-looking information. Any changes in assumptions and estimates, as well as the use of different, but equally reasonable, estimates and assumptions, could have an impact on the allowances for credit losses and the provisions for credit losses for the year. All business segments are affected by this accounting estimate. For additional information, see Note 7 to the consolidated financial statements.

Determining the Stage

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

Assessment of Significant Increase in Credit Risk

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

Measurement of Expected Credit Losses

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

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

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

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

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

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

Impairment of Non-Financial Assets

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

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

An asset's recoverable amount is the higher of fair value less costs to sell and the value in use of the asset or CGU. Value in use is the present value of expected future cash flows from the asset or CGU. The recoverable amount of the asset or CGU is determined using valuation models that consider various factors such as projected future cash flows, discount rates, and growth rates. The use of different estimates and assumptions in applying the impairment tests could have a significant impact on income. If the recoverable amount of an asset or a CGU is less than its carrying amount, the carrying amount is reduced to its recoverable amount and an impairment loss is recognized in *Non-interest expenses* in the Consolidated Statement of Income.

Management exercises judgment when determining whether there is objective evidence that premises and equipment or intangible assets with finite useful lives may be impaired. It also uses judgment in determining to which CGU or group of CGUs an asset or goodwill is to be allocated. Moreover, for impairment assessment purposes, management must make estimates and assumptions regarding the recoverable amount of non-financial assets, CGUs, or a group of CGUs. For additional information on the estimates and assumptions used to calculate the recoverable amount of an asset or CGU, see Note 11 to the consolidated financial statements.

Any changes to these estimates and assumptions may have an impact on the recoverable amount of a non-financial asset and, consequently, on impairment testing results. These accounting estimates have an impact on *Premises and equipment*, *Intangible assets* and *Goodwill* reported on the Consolidated Balance Sheet. The aggregate impairment loss, if any, is recognized as a non-interest expense for the corresponding segment and presented in the *Other* item.

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

The expense and obligation of the defined benefit component of the pension plans and other post-employment benefit plans are actuarially determined using the projected benefit method prorated on service. The calculations incorporate management's best estimates of various actuarial assumptions such as discount rates, rates of compensation increase, health care cost trend rates, mortality rates, and retirement age.

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

The use of different assumptions could have a significant impact on the defined benefit asset (liability) presented in *Other assets (Other liabilities)* on the Consolidated Balance Sheet, on the pension plan and other post-employment benefit plan expenses presented in *Compensation and employee benefits* in the Consolidated Statement of Income, as well as on *Remeasurements of pension plans and other post-employment benefit plans* presented in *Other comprehensive income*. All business segments are affected by this accounting estimate. For additional information, including the significant assumptions used to determine the Bank's pension plan and other post-employment benefit plan expenses and the sensitivity analysis for significant plan assumptions, see Note 23 to the consolidated financial statements.

Income Taxes

The Bank makes assumptions to estimate income taxes as well as deferred tax assets and liabilities. This process involves estimating the actual amount of current taxes and evaluating tax loss carryforwards and temporary differences arising from differences between the values of items reported for accounting and for income tax purposes. Deferred tax assets and liabilities, presented in *Other assets* and *Other liabilities* on the Consolidated Balance Sheet, are calculated according to the tax rates to be applied in future periods. Previously recorded deferred tax assets and liabilities must be adjusted when the date of the future event is revised based on current information. The Bank periodically evaluates deferred tax assets to assess recoverability. In the Bank's opinion, based on the information at its disposal, it is probable that all deferred tax assets will be realized before they expire.

This accounting estimate affects *Income taxes* in the Consolidated Statement of Income for all business segments. For additional information on income taxes, see Notes 1 and 24 to the consolidated financial statements.

Litigation

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

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

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

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

Provisions are liabilities for which the timing or amount are uncertain. A provision is recognized when the Bank has a present obligation (legal or constructive) arising from a past event, when it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and when the amount of the obligation can be reliably estimated. The recognition of a litigation provision requires the judgment of the Bank's management in assessing the existence of an obligation, the timing and probability of loss, and estimates of potential monetary impact. Provisions are based on the Bank's best estimates of the economic resources required to settle the present obligation, given all available information and relevant risks and uncertainties, and, when it is significant, the effect of the time value of money. However, the actual amount required to settle litigation could be significantly higher or lower than the amounts recognized, as the actual amounts depend on a variety of factors and risks, notably the degree to which proceedings have advanced when the amount is determined, the presence of multiple defendants whose share of responsibility is undetermined, including that of the Bank, the types of matters or allegations in question, including some that may involve new legal frameworks or regulations or that set forth new legal interpretations and theories.

The Bank regularly assesses all litigation provisions by considering the development of each case, the Bank's past experience in similar transactions, and the opinion of its legal counsel. Each new piece of information can alter the Bank's assessment as to the probability and estimated amount of loss and therefore the extent to which it adjusts the recorded provision.

Structured Entities

In the normal course of business, the Bank enters into arrangements and transactions with structured entities. Structured entities are entities designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, such as when voting rights relate solely to administrative tasks and the relevant activities are directed by means of contractual arrangements. A structured entity is consolidated when the Bank concludes, after evaluating the substance of the relationship and its right or exposure to variable returns, that it controls that entity. Management must exercise judgment in determining whether the Bank controls an entity. Additional information is provided in the Securitization and Off-Balance-Sheet Arrangements section of this MD&A and in Note 27 to the consolidated financial statements.

Accounting Policy Changes

Amendments to IAS 12 – *Income Taxes*
On May 23, 2023, the IASB issued *International Tax Reform – Pillar Two Model Rules,* which amends IAS 12 – *Income Taxes.* These amendments apply to income taxes arising from tax law enacted or substantively enacted to implement the Pillar 2 model rules of the OECD. The amendments also introduce a temporary exception to the accounting of deferred tax assets and liabilities arising from the implementation of these rules as well as related disclosures. These amendments apply immediately upon issuance and retrospectively in accordance with IAS 8 – *Accounting Policies, Changes in Accounting Estimates and Errors*. Additional disclosures of current tax expense (recovery) and other information related to income tax exposures will be provided annually for periods beginning on or after November 1, 2023. During the year ended October 31, 2023, the Bank applied the exception to the recognition and disclosure of information about deferred tax assets and liabilities arising from the Pillar 2 rules in the jurisdictions where they have been adopted. To date, these amendments have had no impact on the Bank's consolidated results.

Future Accounting Policy Changes

The Bank closely monitors both new accounting standards and amendments to existing accounting standards issued by the IASB. The following standard has been issued but is not yet in effect. The Bank is currently assessing the impacts of applying this standard on the consolidated financial statements.

Effective Date – November 1, 2023
IFRS 17 – *Insurance Contracts*
In May 2017, the IASB published IFRS 17 – *Insurance Contracts* (IFRS 17), which replaces IFRS 4, the current insurance contract accounting standard. IFRS 17 introduces a new accounting framework that improves the comparability and quality of financial information. IFRS 17 provides guidance on the recognition, measurement, presentation, and disclosure of insurance contracts. IFRS 17 must be applied retrospectively for annual periods beginning on or after January 1, 2023. If full retrospective application to a group of insurance contracts is impracticable, the modified retrospective approach or the fair value approach may be used.

IFRS 17 affects how an entity accounts for its insurance contracts and how it reports financial performance in the consolidated income statement, in particular the timing of revenue recognition for insurance contracts. The current consolidated balance sheet presentation, whereby the items are included and reported in *Other assets* and *Other liabilities,* respectively, will change.

IFRS 17 introduces three approaches to measure insurance contracts: the general model approach, the premium allocation approach, and the variable fee approach. The general model approach, which is primarily used by the Bank, measures insurance contracts based on the present value of estimates of the expected future cash flows necessary to fulfill the contracts, including an adjustment for non-financial risk as well as the contractual service margin (CSM), which represents the unearned profits that are recognized as services are provided in the future. The premium allocation approach is applied to short-term contracts, and insurance revenues are recognized systematically over the coverage period. For all measurement approaches, if contracts are expected to be onerous, losses are recognized immediately.

The Bank is finalizing its analysis of the IFRS 17 adoption impacts on its consolidated financial statements for the annual period beginning on or after November 1, 2023. At the transition date, November 1, 2022, the Bank applied two of the three transition approaches available under IFRS 17: the full retrospective approach and the fair value approach. For most groups of contracts, the fair value approach has been applied considering that the full retrospective approach is impracticable, since reasonable and supportable information for applying this approach is not available without undue cost or effort.

As at October 31, 2023, the Bank's best estimate of the impact of transitioning to IFRS 17 is a decrease of $48 million, net of income taxes, in equity as at November 1, 2022, related to the new recognition and measurement principles of insurance and reinsurance contract assets and liabilities, including a net amount of CSM established at approximately $89 million. The impact on the Common Equity Tier 1 (CET1) capital ratio is not expected to be material.

The estimated impact of applying the new measurement approaches for insurance and reinsurance contracts is not significant. The Bank continues to refine and validate the new measurement approaches leading up to the disclosure of its 2024 first-quarter results.

Additional Financial Information

Table 1 – Quarterly Results

(millions of Canadian dollars, except per share amounts)					2023
	Total	Q4	Q3	Q2	Q1
Statement of income data					
Net interest income	3,586	735	870	882	1,099
Non-interest income[1]	6,584	1,859	1,645	1,597	1,483
Total revenues	10,170	2,594	2,515	2,479	2,582
Non-interest expenses[2]	5,801	1,607	1,417	1,374	1,403
Income before provisions for credit losses and income taxes	4,369	987	1,098	1,105	1,179
Provisions for credit losses	397	115	111	85	86
Income taxes[3]	637	104	148	173	212
Net income	3,335	768	839	847	881
Non-controlling interests	(2)	–	(1)	(1)	–
Net income attributable to the Bank's shareholders and holders of other equity instruments	3,337	768	840	848	881
Earnings per common share					
Basic	$ 9.47	$ 2.16	$ 2.38	$ 2.41	$ 2.51
Diluted	9.38	2.14	2.36	2.38	2.49
Dividends (per share)					
Common	$ 3.98	$ 1.02	$ 1.02	$ 0.97	$ 0.97
Preferred					
Series 30	1.0063	0.2516	0.2516	0.2515	0.2516
Series 32	0.9598	0.2400	0.2399	0.2400	0.2399
Series 34	–	–	–	–	–
Series 36	–	–	–	–	–
Series 38	1.7568	0.4392	0.4392	0.4392	0.4392
Series 40	1.3023	0.3637	0.3636	0.2875	0.2875
Series 42	1.2375	0.3094	0.3093	0.3094	0.3094
Return on common shareholders' equity[4]	16.5 %	14.4 %	16.2 %	17.5 %	17.9 %
Total assets		423,578	426,015	417,684	418,342
Subordinated debt[5]		748	748	748	1,497
Net impaired loans excluding POCI loans[4]		606	537	477	476
Number of common shares outstanding *(thousands)*					
Average – Basic	337,660	338,229	337,916	337,497	336,993
Average – Diluted	340,768	341,143	341,210	340,971	340,443
End of period		338,285	338,228	337,720	337,318
Per common share					
Book value[4]		$ 60.68	$ 58.75	$ 57.65	$ 55.92
Share price					
High	$ 103.58	103.58	103.28	103.45	99.95
Low	84.97	84.97	94.62	92.67	91.02
Number of employees – Worldwide (full-time equivalent)		28,916	28,901	28,170	27,674
Number of branches in Canada		368	372	374	378

(1) For fiscal 2023, *Non-interest income* included a $91 million gain recorded to reflect a fair value remeasurement of the equity interest in TMX (2021: $33 million gain following a remeasurement of the previously held equity interest in Flinks and a $30 million loss related to the fair value remeasurement of the Bank's equity interest in AfrAsia).
(2) For fiscal 2023, *Non-interest expenses* included $86 million in impairment losses on premises and equipment and on intangible assets (2021: $9 million), $35 million in litigation expenses, a $25 million expense related to changes to the *Excise Tax Act* and $15 million in provisions for contracts.
(3) *Income taxes* in fiscal 2023 included an amount of $24 million related to the Canadian government's 2022 tax measures.
(4) See the Glossary section on pages 124 to 127 for details on the composition of these measures.
(5) Long-term financial liabilities.

				2022					2021
Total	Q4	Q3	Q2	Q1	Total	Q4	Q3	Q2	Q1
5,271	1,207	1,419	1,313	1,332	4,783	1,190	1,230	1,156	1,207
4,381	1,127	994	1,126	1,134	4,144	1,021	1,024	1,082	1,017
9,652	2,334	2,413	2,439	2,466	8,927	2,211	2,254	2,238	2,224
5,230	1,346	1,305	1,299	1,280	4,903	1,268	1,224	1,217	1,194
4,422	988	1,108	1,140	1,186	4,024	943	1,030	1,021	1,030
145	87	57	3	(2)	2	(41)	(43)	5	81
894	163	225	248	258	882	215	240	228	199
3,383	738	826	889	930	3,140	769	833	788	750
(1)	–	–	(1)	–	–	–	–	–	–
3,384	738	826	890	930	3,140	769	833	788	750
$ 9.72	$ 2.10	$ 2.38	$ 2.56	$ 2.67	$ 8.95	$ 2.20	$ 2.38	$ 2.24	$ 2.13
9.61	2.08	2.35	2.53	2.64	8.85	2.17	2.35	2.21	2.12
$ 3.58	$ 0.92	$ 0.92	$ 0.87	$ 0.87	$ 2.84	$ 0.71	$ 0.71	$ 0.71	$ 0.71
1.0063	0.2516	0.2516	0.2515	0.2516	1.0063	0.2516	0.2516	0.2515	0.2516
0.9598	0.2400	0.2399	0.2400	0.2399	0.9598	0.2400	0.2399	0.2400	0.2399
–	–	–	–	–	0.7000	–	–	0.3500	0.3500
–	–	–	–	–	1.0125	–	0.3375	0.3375	0.3375
1.1125	0.2781	0.2781	0.2782	0.2781	1.1125	0.2781	0.2781	0.2782	0.2781
1.1500	0.2875	0.2875	0.2875	0.2875	1.1500	0.2875	0.2875	0.2875	0.2875
1.2375	0.3094	0.3093	0.3094	0.3094	1.2375	0.3094	0.3093	0.3094	0.3094
18.8 %	15.3 %	17.9 %	20.7 %	21.9 %	20.7 %	18.7 %	21.4 %	21.8 %	21.1 %
	403,740	386,833	369,570	366,680		355,621	353,873	350,581	343,489
	1,499	1,510	764	766		768	769	771	773
	479	301	293	287		283	312	349	400
337,099	336,530	336,437	337,381	338,056	337,212	337,779	337,517	337,142	336,408
340,837	339,910	339,875	341,418	342,318	340,861	342,400	341,818	340,614	338,617
	336,582	336,456	336,513	338,367		337,912	337,587	337,372	336,770
	$ 55.24	$ 54.29	$ 52.28	$ 49.71		$ 47.44	$ 45.51	$ 43.11	$ 41.04
$ 105.44	94.37	97.87	104.59	105.44	$ 104.32	104.32	96.97	89.42	73.81
83.12	83.12	83.33	89.33	94.37	65.54	95.00	89.47	72.30	65.54
	27,103	26,539	25,823	25,417		24,495	24,074	23,865	23,885
	378	384	385	385		384	389	401	402

Table 2 – Overview of Results

Year ended October 31 (millions of Canadian dollars)	2023	2022	2021	2020	2019
Net interest income	**3,586**	5,271	4,783	4,255	3,596
Non-interest income[(1)]	**6,584**	4,381	4,144	3,672	3,836
Total revenues	**10,170**	9,652	8,927	7,927	7,432
Non-interest expenses[(2)]	**5,801**	5,230	4,903	4,616	4,375
Income before provisions for credit losses and income taxes	**4,369**	4,422	4,024	3,311	3,057
Provisions for credit losses	**397**	145	2	846	347
Income before income taxes	**3,972**	4,277	4,022	2,465	2,710
Income taxes[(3)]	**637**	894	882	434	443
Net income	**3,335**	3,383	3,140	2,031	2,267
Non-controlling interests	**(2)**	(1)	–	42	66
Net income attributable to the Bank's shareholders and holders of other equity instruments	**3,337**	3,384	3,140	1,989	2,201

(1) For fiscal 2023, *Non-interest income* included a $91 million gain recorded to reflect a fair value remeasurement of the equity interest in TMX (2021: $33 million gain following a remeasurement of the previously held equity interest in Flinks and a $30 million loss related to the fair value remeasurement of the Bank's equity interest in AfrAsia; 2020: $24 million foreign currency translation loss on a disposal of subsidiaries; 2019: $79 million gain on disposal of Fiera Capital Corporation shares, a $50 million gain on disposal of premises and equipment, and a $33 million loss resulting from the fair value measurement of an investment).

(2) For fiscal 2023, *Non-interest expenses* included impairment losses on premises and equipment and intangible assets of $86 million (2021: $9 million; 2020: $71 million; 2019: $57 million), $35 million in litigation expenses, a $25 million expense related to changes to the *Excise Tax Act,* and $15 million in provisions for contracts (2019: $45 million). In fiscal 2020, *Non-interest expenses* had included $48 million in severance pay (2019: $10 million) and a $13 million charge related to Maple Financial Group Inc. (Maple) (2019: $11 million).

(3) *Income taxes* in fiscal 2023 included an amount of $24 million related to the Canadian government's 2022 tax measures.

Table 3 – Changes in Net Interest Income

Year ended October 31 (millions of Canadian dollars)	2023	2022	2021	2020	2019
Personal and Commercial					
Net interest income	**3,321**	2,865	2,547	2,420	2,360
Average assets[(1)]	**148,511**	140,300	126,637	115,716	111,140
Average interest-bearing assets[(2)]	**141,458**	133,543	120,956	110,544	106,995
Net interest margin[(2)]	**2.35 %**	2.15 %	2.11 %	2.19 %	2.21 %
Wealth Management					
Net interest income on a taxable equivalent basis[(3)]	**778**	594	446	442	455
Average assets[(1)]	**8,560**	8,440	7,146	5,917	6,219
Financial Markets					
Net interest income on a taxable equivalent basis[(3)]	**(1,054)**	1,258	1,262	971	498
Average assets[(1)]	**180,837**	154,349	151,240	125,565	114,151
USSF&I					
Net interest income	**1,132**	1,090	907	807	656
Average assets[(1)]	**23,007**	18,890	16,150	14,336	10,985
Other					
Net interest income[(3)]	**(591)**	(536)	(379)	(385)	(373)
Average assets[(1)]	**69,731**	71,868	62,333	56,553	43,667
Total					
Net interest income	**3,586**	5,271	4,783	4,255	3,596
Average assets[(1)]	**430,646**	393,847	363,506	318,087	286,162

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

(2) See the Glossary section on pages 124 to 127 for details on the composition of these measures.

(3) For fiscal 2023, the *Net interest income* item of the Financial Markets segment was grossed up by $324 million (2022: $229 million; 2021: $175 million; 2020: $202 million; 2019: $191 million), the *Net interest income* item of the *Other* heading was grossed up by $8 million (2022: $5 million; 2021: $6 million; 2020: $6 million; 2019: $3 million), the *Net interest income* item of the Wealth Management segment was grossed up by $1 million in 2019. The effect of these adjustments is reversed under the *Other* heading.

Table 4 – Non-Interest Income

Year ended October 31 (millions of Canadian dollars)	2023	2022	2021	2020	2019
Underwriting and advisory fees	378	324	415	314	246
Securities brokerage commissions	174	204	238	204	166
Mutual fund revenues	578	587	563	477	449
Investment management and trust service fees	1,005	997	900	735	677
Credit fees	183	155	164	147	134
Revenues from acceptances, letters of credit and guarantee	391	335	342	320	283
Card revenues	202	186	148	138	175
Deposit and payment service charges	300	298	274	262	271
Trading revenues (losses)	2,677	543	268	544	788
Gains (losses) on non-trading securities, net	70	113	151	93	77
Insurance revenues, net	171	158	131	128	136
Foreign exchange revenues, other than trading	183	211	202	164	137
Share in the net income of associates and joint ventures	11	28	23	28	34
Other[1]	261	242	325	118	263
	6,584	4,381	4,144	3,672	3,836
Canada	5,812	4,299	3,992	3,574	3,645
United States	98	18	106	5	85
Other countries	674	64	46	93	106
Non-interest income as a % of total revenues	64.7 %	45.4 %	46.4 %	46.3 %	51.6 %

(1) For fiscal 2023, the *Other* item included a $91 million gain recorded to reflect a fair value remeasurement of the equity interest in TMX (2021: $33 million gain following a remeasurement of the previously held equity interest in Flinks and a $30 million loss related to the fair value remeasurement of the Bank's equity interest in AfrAsia; 2020: $24 million foreign currency translation loss on a disposal of subsidiaries; 2019: $79 million gain on disposal of Fiera Capital Corporation shares, a $50 million gain on disposal of premises and equipment, and a $33 million loss resulting from the fair value measurement of an investment).

Table 5 – Trading Activity Revenues

Year ended October 31 (millions of Canadian dollars)	2023	2022	2021	2020	2019
Net interest income (loss) related to trading activity[1]	(1,816)	682	777	522	28
Taxable equivalent basis[2]	321	229	171	202	188
Net interest income (loss) related to trading activity on a taxable equivalent basis[2]	(1,495)	911	948	724	216
Non-interest income related to trading activity[1]	2,696	548	282	625	800
Taxable equivalent basis[2]	247	48	8	57	135
Non-interest income related to trading activity on a taxable equivalent basis[2]	2,943	596	290	682	935
Trading activity revenues[1]	880	1,230	1,059	1,147	828
Taxable equivalent basis[2]	568	277	179	259	323
Trading activity revenues on a taxable equivalent basis[2]	1,448	1,507	1,238	1,406	1,151
Trading activity revenues by segment on a taxable equivalent basis[2]					
Financial Markets					
Equities	904	979	685	706	621
Fixed-income	417	367	357	430	285
Commodities and foreign exchange	173	156	128	132	126
	1,494	1,502	1,170	1,268	1,032
Other segments	(46)	5	68	138	119
	1,448	1,507	1,238	1,406	1,151

(1) See the Glossary section on pages 124 to 127 for details on the composition of these measures.
(2) See the Financial Reporting Method section on pages 14 to 19 for additional information on non-GAAP financial measures. The taxable equivalent basis presented in this table is related to trading portfolios. The Bank also uses the taxable equivalent basis for certain investment portfolios, and the amounts stood at $11 million for fiscal 2023 (2022: $5 million; 2021: $10 million; 2020: $6 million; 2019: $7 million).

Table 6 – Non-Interest Expenses

Year ended October 31 (millions of Canadian dollars)	2023	2022	2021	2020	2019
Compensation and employee benefits[1]	3,452	3,284	3,027	2,713	2,532
Occupancy[2]	181	157	147	151	254
Amortization – Premises and equipment[3]	172	155	152	140	44
Technology	653	589	557	510	446
Amortization – Technology[4]	432	326	314	366	332
Communications	58	57	53	58	62
Professional fees	257	249	246	244	249
Advertising and business development	168	144	109	103	128
Capital and payroll taxes	37	32	52	73	70
Other[5]	391	237	246	258	258
Total	5,801	5,230	4,903	4,616	4,375
Canada	5,261	4,760	4,478	4,195	4,005
United States	226	209	203	209	210
Other countries	314	261	222	212	160
Efficiency ratio[6]	57.0 %	54.2 %	54.9 %	58.2 %	58.9 %

(1) For fiscal 2020, *Compensation and employee benefits* included $48 million in severance pay (2019: $10 million).
(2) *Occupancy* expense in fiscal 2019 included $45 million in provisions for onerous contracts.
(3) For fiscal 2023, the *Amortization – Premises and Equipment* expense included $11 million in impairment losses.
(4) For fiscal 2023, the *Amortization – Technology* expense included $75 million in intangible asset impairment losses (2021: $9 million; 2020: $71 million; 2019: $57 million).
(5) For fiscal 2023, *Other* expenses included $35 million in litigation expenses, a $25 million expense related to changes to the *Excise Tax Act*, and a $15 million in provisions for contracts. For fiscal 2020, *Other* expenses had included a $13 million charge related to Maple (2019: $11 million).
(6) See the Glossary section on pages 124 to 127 for details on the composition of these measures.

Table 7 – Provisions for Credit Losses[1]

Year ended October 31 (millions of Canadian dollars)	2023	2022	2021	2020	2019
Personal Banking[2]					
Stage 3	119	75	65	147	166
Stages 1 and 2	38	9	(77)	121	8
	157	84	(12)	268	174
Commercial Banking					
Stage 3	48	13	26	76	31
Stages 1 and 2	40	–	26	103	19
POCI	(7)	–	–	–	–
	81	13	52	179	50
Wealth Management					
Stage 3	(1)	1	1	4	–
Stages 1 and 2	3	2	–	3	–
	2	3	1	7	–
Financial Markets					
Stage 3	3	1	78	99	22
Stages 1 and 2	36	(24)	(102)	210	21
	39	(23)	(24)	309	43
USSF&I					
Stage 3	76	48	13	46	94
Stages 1 and 2	53	12	(2)	41	(24)
POCI	(16)	6	(26)	(7)	10
	113	66	(15)	80	80
Other					
Stage 3	–	–	–	–	–
Stages 1 and 2	5	2	–	3	–
	5	2	–	3	–
Total provisions for credit losses					
Stage 3	245	138	183	372	313
Stages 1 and 2	175	1	(155)	481	24
POCI	(23)	6	(26)	(7)	10
	397	145	2	846	347
Average loans and acceptances	215,976	194,340	172,323	159,275	148,765
Provisions for credit losses on impaired loans excluding POCI loans[3] as a % of average loans and acceptances[3]	0.11 %	0.07 %	0.11 %	0.23 %	0.21 %
Provisions for credit losses as a % of average loans and acceptances[3]	0.18 %	0.07 %	– %	0.53 %	0.23 %

(1) The *Stage 3* category presented in this table represents provisions for credit losses on loans classified in Stage 3 of the expected credit loss model and excludes POCI loans (impaired loans excluding POCI loans). The *Stages 1 and 2* category represents provisions for credit losses on non-impaired loans. The *POCI* category represents provisions for credit losses on POCI loans.
(2) Includes credit card receivables.
(3) See the Glossary section on pages 124 to 127 for details on the composition of these measures.

Table 8 – Change in Average Volumes[1]

Year ended October 31 (millions of Canadian dollars)	2023		2022		2021		2020		2019	
	Average volume $	**Rate %**	Average volume $	Rate %	Average volume $	Rate %	Average volume $	Rate %	Average volume $	Rate %
Assets										
Deposits with financial institutions	**40,824**	**4.09**	42,042	1.03	40,294	0.31	24,966	0.44	13,172	1.64
Securities	**126,182**	**1.93**	111,863	1.77	116,023	1.25	97,025	1.63	85,772	1.74
Securities purchased under reverse repurchase agreements and securities borrowed	**19,533**	**6.61**	16,255	2.08	11,559	0.90	16,408	1.39	22,472	1.60
Residential mortgage loans	**82,884**	**3.95**	75,712	2.90	68,297	2.93	59,801	3.13	54,493	3.30
Personal loans	**44,829**	**5.44**	42,723	3.82	38,434	3.16	36,273	3.68	35,816	4.25
Credit card receivables	**2,325**	**13.17**	2,133	12.81	1,864	13.47	1,995	14.62	2,221	14.06
Business and government loans	**69,599**	**6.49**	58,947	3.63	50,216	3.06	47,272	4.13	42,922	5.34
POCI loans	**545**	**21.98**	493	32.68	686	22.64	1,073	16.45	1,386	13.37
Average interest-bearing assets[1]	**386,721**	**4.30**	350,168	2.69	327,373	2.13	284,813	2.66	258,254	3.17
Other assets	**43,925**		43,679		36,133		33,274		27,908	
	430,646	**3.90**	393,847	2.43	363,506	1.93	318,087	2.38	286,162	2.86
Liabilities and equity										
Personal deposits	**84,262**	**2.03**	72,927	0.67	68,334	0.42	63,634	0.87	58,680	1.22
Deposit-taking institutions	**4,997**	**3.81**	5,695	0.88	6,522	0.09	6,494	0.63	5,987	1.80
Other deposits	**195,311**	**4.15**	180,307	1.28	161,373	0.68	137,253	1.26	119,793	2.06
	284,570	**3.51**	258,929	1.10	236,229	0.58	207,381	1.12	184,460	1.79
Subordinated debt	**937**	**5.16**	960	3.70	758	3.22	759	3.25	758	3.25
Obligations other than deposits[2]	**90,194**	**3.43**	81,659	1.13	80,808	0.67	70,973	1.12	67,638	1.67
Average interest-bearing liabilities[1]	**375,701**	**3.51**	341,548	1.25	317,795	0.69	279,113	1.19	252,856	1.81
Other liabilities	**30,698**		30,209		28,195		23,400		18,593	
Equity	**24,247**		22,090		17,516		15,574		14,713	
	430,646	**3.07**	393,847	1.09	363,506	0.61	318,087	1.04	286,162	1.60
Net interest margin[3]		**0.83**		1.34		1.32		1.34		1.26

(1) See the Glossary section on pages 124 to 127 for details on the composition of these measures.
(2) Average obligations other than deposits represent the average of the daily balances for the fiscal year of obligations related to securities sold short, obligations related to securities sold under repurchase agreements and securities loaned, and liabilities related to transferred receivables.
(3) Calculated by dividing net interest income by average assets.

Table 9 – Distribution of Gross Loans and Acceptances by Borrower Category Under Basel Asset Classes

As at October 31 (millions of Canadian dollars)	2023		2022		2021		2020		2019	
	$	%	$	%	$	%	$	%	$	%
Residential mortgage[1]	**99,910**	**44.1**	95,575	46.0	89,035	48.5	81,543	49.2	74,448	48.4
Qualifying revolving retail [2]	**4,000**	**1.8**	3,801	1.8	3,589	2.0	3,599	2.2	4,099	2.7
Other retail [3]	**16,696**	**7.4**	14,899	7.2	12,949	7.0	11,569	7.0	11,606	7.5
Agriculture	**8,545**	**3.8**	8,109	3.9	7,357	4.0	6,696	4.0	6,308	4.1
Oil and gas	**1,826**	**0.8**	1,435	0.7	1,807	1.0	2,506	1.5	2,742	1.8
Mining	**1,245**	**0.5**	1,049	0.5	529	0.3	756	0.5	758	0.5
Utilities	**12,427**	**5.5**	9,682	4.6	7,687	4.2	6,640	4.0	4,713	3.0
Non-real-estate construction[4]	**1,739**	**0.8**	1,935	0.9	1,541	0.8	1,079	0.7	1,168	0.8
Manufacturing	**7,047**	**3.1**	7,374	3.6	5,720	3.1	5,803	3.5	6,549	4.3
Wholesale	**3,208**	**1.4**	3,241	1.6	2,598	1.4	2,206	1.3	2,221	1.4
Retail	**3,801**	**1.7**	3,494	1.7	2,978	1.6	2,955	1.8	3,289	2.1
Transportation	**2,631**	**1.2**	2,209	1.1	1,811	1.0	1,528	0.9	1,682	1.1
Communications	**2,556**	**1.1**	1,830	0.9	1,441	0.8	1,184	0.7	1,601	1.0
Financial services	**11,693**	**5.1**	10,777	5.2	8,870	4.8	7,476	4.4	6,115	3.9
Real estate and real-estate-construction[5]	**25,967**	**11.5**	22,382	10.8	18,195	9.9	14,171	8.6	11,635	7.6
Professional services	**3,973**	**1.7**	2,338	1.1	1,872	1.0	1,490	0.9	1,845	1.2
Education and health care	**3,700**	**1.6**	3,412	1.6	4,073	2.2	3,800	2.3	3,520	2.3
Other services	**6,898**	**3.0**	6,247	3.0	5,875	3.2	5,296	3.2	4,937	3.2
Government	**1,727**	**0.8**	1,661	0.8	1,159	0.6	1,160	0.7	1,071	0.7
Other	**6,478**	**2.9**	5,790	2.8	4,137	2.3	3,586	2.1	2,456	1.6
POCI loans	**560**	**0.2**	459	0.2	464	0.3	855	0.5	1,166	0.8
	226,627	**100.0**	207,699	100.0	183,687	100.0	165,898	100.0	153,929	100.0

(1) Includes residential mortgage loans on one- to four-unit dwellings (Basel definition) and home equity lines of credit.
(2) Includes lines of credit and credit card receivables.
(3) Includes consumer loans and other retail loans but excludes SME loans.
(4) Includes civil engineering loans, public-private partnership loans, and project finance loans.
(5) Includes residential mortgages on dwellings of five or more units and SME loans.

Table 10 – Impaired Loans

As at October 31 (millions of Canadian dollars)	2023	2022	2021	2020	2019
Gross impaired loans					
Personal Banking	220	176	169	287	256
Commercial Banking	296	206	244	333	294
Wealth Management	13	21	23	8	5
Financial Markets	110	167	162	134	93
USSF&I	385	242	64	55	36
Gross impaired loans excluding POCI loans[1]	1,024	812	662	817	684
Gross POCI loans	560	459	464	855	1,166
	1,584	1,271	1,126	1,672	1,850
Net impaired loans[2]					
Personal Banking	145	104	106	206	187
Commercial Banking	140	89	107	184	192
Wealth Management	8	15	16	2	3
Financial Markets	30	91	14	43	53
USSF&I	283	180	40	30	15
Net impaired loans excluding POCI loans[1]	606	479	283	465	450
Net POCI loans	670	551	553	921	1,223
	1,276	1,030	836	1,386	1,673
Allowances for credit losses on impaired loans excluding POCI loans[1]	418	333	379	352	234
Allowances for credit losses on POCI loans	(110)	(92)	(89)	(66)	(57)
Allowances for credit losses on impaired loans	308	241	290	286	177
Impaired loan provisioning rate excluding POCI loans[1]	40.8 %	41.0 %	57.3 %	43.1 %	34.2 %
Gross impaired loans excluding POCI loans as a % of total loans and acceptances[1]	0.45 %	0.39 %	0.36 %	0.49 %	0.45 %
Net impaired loans excluding POCI loans as a % of loans and acceptances[1]	0.27 %	0.23 %	0.15 %	0.28 %	0.29 %

(1) See the Glossary section on pages 124 to 127 for details on the composition of these measures.
(2) Net impaired loans are presented net of allowances for credit losses on Stage 3 loan amounts drawn and on POCI loans.

Table 11 – Allowances for Credit Losses

Year ended October 31 (millions of Canadian dollars)	**2023**	2022	2021	2020	2019
Balance at beginning	**1,131**	1,169	1,343	755	714
Provisions for credit losses	**397**	145	2	846	347
Write-offs	**(199)**	(233)	(192)	(294)	(351)
Disposals	**–**	–	(14)	–	(1)
Recoveries	**47**	40	44	44	52
Exchange rate and other movements	**1**	10	(14)	(8)	(6)
Balance at end	**1,377**	1,131	1,169	1,343	755
Composition of allowances:					
Allowances for credit losses on impaired loans excluding POCI loans[1]	**418**	333	379	352	234
Allowances for credit losses on POCI loans	**(110)**	(92)	(89)	(66)	(57)
Allowances for credit losses on non-impaired loans	**876**	714	708	872	501
Allowances for credit losses on off-balance-sheet commitments and other assets	**193**	176	171	185	77

(1) See the Glossary section on pages 124 to 127 for details on the composition of these measures.

Table 12 – Deposits

As at October 31 (millions of Canadian dollars)	**2023**		2022		2021		2020		2019	
	$	**%**	$	%	$	%	$	%	$	%
Personal	**87,883**	**30.5**	78,811	29.6	70,076	29.1	67,499	31.3	60,065	31.7
Business and government	**197,328**	**68.5**	184,230	69.1	167,870	69.7	143,787	66.6	125,266	66.1
Deposit-taking institutions	**2,962**	**1.0**	3,353	1.3	2,992	1.2	4,592	2.1	4,235	2.2
Total	**288,173**	**100.0**	266,394	100.0	240,938	100.0	215,878	100.0	189,566	100.0
Canada	**257,732**	**89.4**	238,239	89.5	216,906	90.0	195,730	90.7	172,764	91.1
United States	**9,520**	**3.3**	9,147	3.4	9,234	3.8	8,126	3.7	6,907	3.7
Other countries	**20,921**	**7.3**	19,008	7.1	14,798	6.2	12,022	5.6	9,895	5.2
Total	**288,173**	**100.0**	266,394	100.0	240,938	100.0	215,878	100.0	189,566	100.0
Personal deposits as a % of total assets		**20.7**		19.5		19.7		20.4		21.3

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, equity, commodity price, 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 the 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.

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Management's Responsibility for Financial Reporting

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

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

As Chief Executive Officer and as Chief Financial Officer, we have overseen the evaluation of the design and operation of the Bank's internal control over financial reporting in accordance with *National Instrument 52-109 Certification of Disclosure in Issuers' Annual and Interim Filings* released by the Canadian Securities Administrators. Based on the evaluation work performed, we have concluded that the internal control over financial reporting and the disclosure controls and procedures were effective as at October 31, 2023 and that they provide reasonable assurance that the Bank's financial information is reliable and that its consolidated financial statements have been prepared in accordance with IFRS.

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

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

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

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

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

Laurent Ferreira
President and Chief Executive Officer

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

Montreal, Canada, November 30, 2023

Independent Auditor's Report

To the Shareholders of National Bank of Canada

Opinion
We have audited the consolidated financial statements of National Bank of Canada (the Bank), which comprise the consolidated balance sheets as at October 31, 2023 and 2022, and the consolidated statements of income, the consolidated statements of comprehensive income, the consolidated statements of changes in equity and the consolidated statements of cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies (collectively referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Bank as at October 31, 2023 and 2022, and its financial performance and its cash flows for the years then ended in accordance with International Financial Reporting Standards.

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

Key Audit Matters
Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements for the year ended October 31, 2023. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Allowances for credit losses — Refer to Notes 1 and 7 to the financial statements
Key Audit Matter Description
The allowances for credit losses represent management's estimate of expected credit losses (ECL) on financial assets calculated under the IFRS 9, *Financial Instruments* ECL framework. The calculation of ECL is based on the probability of default (PD), loss given default (LGD), and exposure at default (EAD) of the underlying assets and represents an unbiased and probability weighted estimate of losses expected to occur in the future based on forecasts of macroeconomic variables for three scenarios. Lifetime ECL is recorded for financial assets that have experienced significant increases in credit risk (SICR) since initial recognition or that are impaired; otherwise 12-month ECL is recorded. Given uncertainty surrounding the key inputs used to measure credit losses, the Bank has applied expert credit judgment to adjust the modelled ECL results.

We have identified the allowances for credit losses as a key audit matter due to the inherent complexity of the ECL models used and the significant judgment required by management in relation to the forward-looking nature of some key assumptions including the impact of a possible economic recession. Significant auditor judgment was required in evaluating: (i) the models and methodologies used to measure ECL; (ii) the forecasts of macroeconomic scenarios and probability weighting; (iii) the determination of SICR; and (iv) the adjustments to the modelled ECL results representing management's expert credit judgment. Auditing the ECL models and the key judgments and assumptions required a high degree of auditor judgment and an increased extent of audit effort, including the involvement of professionals with specialized skills in credit risk and economics.

How the Key Audit Matter Was Addressed in the Audit
Our audit procedures related to the models and the key judgments and assumptions used by management to estimate ECL included the following, among others:

- With the assistance of professionals with specialized skills in credit risk or economics:
  - For a selection of ECL models, evaluated the appropriateness of the models used to estimate ECL;
  - Evaluated the forecasts of macroeconomic scenarios and their probability weighting by comparing them against independently developed forecasts and publicly available industry data, including the impact of a possible economic recession;
  - Assessed management's determination of SICR and the appropriateness of the related model's programming;
  - Assessed the adjustments to the modelled ECL results by evaluating management's expert credit judgment.

Income taxes – Uncertain tax positions — Refer to Notes 1 and 24 to the financial statements

Key Audit Matter Description

In the normal course of its business, the Bank is involved in a number of transactions for which the tax impacts are uncertain. The Bank accounts for provisions for uncertain tax positions that adequately represent the risk stemming from tax matters under discussion or being audited by tax authorities or from other matters involving uncertainty. These provisions reflect management's best possible estimate of the amounts that may have to be paid based on qualitative assessments of all relevant factors. As disclosed in Note 24, the Bank was reassessed by the tax authorities for additional income taxes and interest in respect of certain Canadian dividends received by the Bank for certain taxation years and may be reassessed for subsequent taxation years in regard to similar activities. The Bank has not recognized any tax liability related to these uncertain tax positions.

We have identified the assessment of the accounting of the uncertain tax positions related to certain Canadian dividends as a key audit matter given the significant judgment made by management when evaluating the probability of acceptance of the Bank's tax positions and when interpreting relevant tax and case law and administrative positions. Auditing these judgments required a high degree of auditor judgment and resulted in an increased extent of audit effort, including the involvement of tax specialists.

How the Key Audit Matter Was Addressed in the Audit

Our audit procedures pertaining to the assessment of the accounting of the uncertain tax positions related to certain Canadian dividends included the following, among others:

- With the assistance of tax specialists, evaluated management's assessment of the probability of acceptance of the Bank's tax positions by assessing:
  - The Bank's interpretations of relevant tax and case law and administrative positions;
  - The correspondence with the relevant tax authorities; and
  - The advice and legal opinions obtained by the Bank's external tax advisors.

Other Information

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

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

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

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

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

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

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

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

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

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

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

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

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

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

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

/s/ Deloitte LLP[1]

November 30, 2023
Montreal, Quebec

[1] CPA auditor, public accountancy permit No. A121501

Consolidated Balance Sheets

As at October 31		2023	2022
Assets			
Cash and deposits with financial institutions		35,234	31,870
Securities	Notes 3, 4 and 6		
At fair value through profit or loss		99,994	87,375
At fair value through other comprehensive income		9,242	8,828
At amortized cost		12,582	13,516
		121,818	109,719
Securities purchased under reverse repurchase agreements and securities borrowed		11,260	26,486
Loans	Note 7		
Residential mortgage		86,847	80,129
Personal		46,358	45,323
Credit card		2,603	2,389
Business and government		84,192	73,317
		220,000	201,158
Customers' liability under acceptances		6,627	6,541
Allowances for credit losses		(1,184)	(955)
		225,443	206,744
Other			
Derivative financial instruments	Note 16	17,516	18,547
Investments in associates and joint ventures	Note 9	49	140
Premises and equipment	Note 10	1,592	1,397
Goodwill	Note 11	1,521	1,519
Intangible assets	Note 11	1,256	1,360
Other assets	Note 12	7,889	5,958
		29,823	28,921
		423,578	403,740
Liabilities and equity			
Deposits	Notes 4 and 13	288,173	266,394
Other			
Acceptances		6,627	6,541
Obligations related to securities sold short		13,660	21,817
Obligations related to securities sold under repurchase agreements and securities loaned	Note 8	38,347	33,473
Derivative financial instruments	Note 16	19,888	19,632
Liabilities related to transferred receivables	Notes 4 and 8	25,034	26,277
Other liabilities	Note 14	7,423	6,361
		110,979	114,101
Subordinated debt	Note 15	748	1,499
Equity			
Equity attributable to the Bank's shareholders and holders of other equity instruments	Notes 18 and 22		
Preferred shares and other equity instruments		3,150	3,150
Common shares		3,294	3,196
Contributed surplus		68	56
Retained earnings		16,744	15,140
Accumulated other comprehensive income		420	202
		23,676	21,744
Non-controlling interests	Note 19	2	2
		23,678	21,746
		423,578	403,740

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

Laurent Ferreira
President and Chief Executive Officer

Lynn Loewen
Director

Consolidated Statements of Income

Year ended October 31		2023	2022
Interest income			
Loans		**12,676**	7,136
Securities at fair value through profit or loss		**1,681**	1,548
Securities at fair value through other comprehensive income		**279**	163
Securities at amortized cost		**473**	263
Deposits with financial institutions		**1,668**	435
		16,777	9,545
Interest expense			
Deposits		**10,015**	3,291
Liabilities related to transferred receivables		**633**	472
Subordinated debt		**47**	28
Other		**2,496**	483
		13,191	4,274
Net interest income[1]		**3,586**	5,271
Non-interest income			
Underwriting and advisory fees		**378**	324
Securities brokerage commissions		**174**	204
Mutual fund revenues		**578**	587
Investment management and trust service fees		**1,005**	997
Credit fees		**574**	490
Card revenues		**202**	186
Deposit and payment service charges		**300**	298
Trading revenues (losses)	Note 21	**2,677**	543
Gains (losses) on non-trading securities, net		**70**	113
Insurance revenues, net		**171**	158
Foreign exchange revenues, other than trading		**183**	211
Share in the net income of associates and joint ventures	Note 9	**11**	28
Other	Note 9	**261**	242
		6,584	4,381
Total revenues		**10,170**	9,652
Non-interest expenses			
Compensation and employee benefits		**3,452**	3,284
Occupancy	Note 10	**353**	312
Technology	Notes 10 and 11	**1,085**	915
Communications		**58**	57
Professional fees		**257**	249
Other	Note 30	**596**	413
		5,801	5,230
Income before provisions for credit losses and income taxes		**4,369**	4,422
Provisions for credit losses	Note 7	**397**	145
Income before income taxes		**3,972**	4,277
Income taxes	Note 24	**637**	894
Net income		**3,335**	3,383
Net income attributable to			
Preferred shareholders and holders of other equity instruments		**141**	107
Common shareholders		**3,196**	3,277
Bank shareholders and holders of other equity instruments		**3,337**	3,384
Non-controlling interests		**(2)**	(1)
		3,335	3,383
Earnings per share *(dollars)*	Note 25		
Basic		**9.47**	9.72
Diluted		**9.38**	9.61
Dividends per common share *(dollars)*	Note 18	**3.98**	3.58

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

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

Consolidated Statements of Comprehensive Income

Year ended October 31	2023	2022
Net income	**3,335**	3,383
Other comprehensive income, net of income taxes		
Items that may be subsequently reclassified to net income		
Net foreign currency translation adjustments		
Net unrealized foreign currency translation gains (losses) on investments in foreign operations	**155**	471
Impact of hedging net foreign currency translation gains (losses)	**(52)**	(138)
	103	333
Net change in debt securities at fair value through other comprehensive income		
Net unrealized gains (losses) on debt securities at fair value through other comprehensive income	**(87)**	(197)
Net (gains) losses on debt securities at fair value through other comprehensive income reclassified to net income	**85**	91
Change in allowances for credit losses on debt securities at fair value through other comprehensive income reclassified to net income	**1**	1
	(1)	(105)
Net change in cash flow hedges		
Net gains (losses) on derivative financial instruments designated as cash flow hedges	**90**	(25)
Net (gains) losses on designated derivative financial instruments reclassified to net income	**25**	33
	115	8
Share in the other comprehensive income of associates and joint ventures	**1**	(2)
Items that will not be subsequently reclassified to net income		
Remeasurements of pension plans and other post-employment benefit plans	**(140)**	(126)
Net gains (losses) on equity securities designated at fair value through other comprehensive income	**45**	(27)
Net fair value change attributable to credit risk on financial liabilities designated at fair value through profit or loss	**(163)**	601
	(258)	448
Total other comprehensive income, net of income taxes	**(40)**	682
Comprehensive income	**3,295**	4,065
Comprehensive income attributable to		
Bank shareholders and holders of other equity instruments	**3,297**	4,066
Non-controlling interests	**(2)**	(1)
	3,295	4,065

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

Consolidated Statements of Comprehensive Income (cont.)

Income Taxes – Other Comprehensive Income

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

Year ended October 31	2023	2022
Items that may be subsequently reclassified to net income		
Net foreign currency translation adjustments		
Net unrealized foreign currency translation gains (losses) on investments in foreign operations	(3)	(13)
Impact of hedging net foreign currency translation gains (losses)	(14)	(28)
	(17)	(41)
Net change in debt securities at fair value through other comprehensive income		
Net unrealized gains (losses) on debt securities at fair value through other comprehensive income	(33)	(71)
Net (gains) losses on debt securities at fair value through other comprehensive income reclassified to net income	33	32
Change in allowances for credit losses on debt securities at fair value through other comprehensive income reclassified to net income	–	–
	–	(39)
Net change in cash flow hedges		
Net gains (losses) on derivative financial instruments designated as cash flow hedges	35	(9)
Net (gains) losses on designated derivative financial instruments reclassified to net income	9	12
	44	3
Share in the other comprehensive income of associates and joint ventures	–	–
Items that will not be subsequently reclassified to net income		
Remeasurements of pension plans and other post-employment benefit plans	(43)	(45)
Net gains (losses) on equity securities designated at fair value through other comprehensive income	8	(10)
Net fair value change attributable to credit risk on financial liabilities designated at fair value through profit or loss	(63)	216
	(98)	161
	(71)	84

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

Consolidated Statements of Changes in Equity

Year ended October 31		2023	2022
Preferred shares and other equity instruments at beginning	Note 18	**3,150**	2,650
Issuances of preferred shares and other equity instruments		**–**	500
Preferred shares and other equity instruments at end		**3,150**	3,150
Common shares at beginning	Note 18	**3,196**	3,160
Issuances of common shares pursuant to the Stock Option Plan		**95**	61
Repurchases of common shares for cancellation		**–**	(24)
Impact of shares purchased or sold for trading		**3**	(1)
Common shares at end		**3,294**	3,196
Contributed surplus at beginning		**56**	47
Stock option expense	Note 22	**18**	17
Stock options exercised		**(10)**	(7)
Other		**4**	(1)
Contributed surplus at end		**68**	56
Retained earnings at beginning		**15,140**	12,854
Net income attributable to the Bank's shareholders and holders of other equity instruments		**3,337**	3,384
Dividends on preferred shares and distributions on other equity instruments	Note 18	**(163)**	(119)
Dividends on common shares	Note 18	**(1,344)**	(1,206)
Premium paid on common shares repurchased for cancellation	Note 18	**–**	(221)
Issuance expenses for shares and other equity instruments, net of income taxes		**–**	(4)
Remeasurements of pension plans and other post-employment benefit plans		**(140)**	(126)
Net gains (losses) on equity securities designated at fair value through other comprehensive income		**45**	(27)
Net fair value change attributable to the credit risk on financial liabilities designated at fair value through profit or loss		**(163)**	601
Impact of a financial liability resulting from put options written to non-controlling interests	Note 14	**10**	(8)
Other		**22**	12
Retained earnings at end		**16,744**	15,140
Accumulated other comprehensive income at beginning		**202**	(32)
Net foreign currency translation adjustments		**103**	333
Net change in unrealized gains (losses) on debt securities at fair value through other comprehensive income		**(1)**	(105)
Net change in gains (losses) on cash flow hedges		**115**	8
Share in the other comprehensive income of associates and joint ventures		**1**	(2)
Accumulated other comprehensive income at end		**420**	202
Equity attributable to the Bank's shareholders and holders of other equity instruments		**23,676**	21,744
Non-controlling interests at beginning	Note 19	**2**	3
Net income attributable to non-controlling interests		**(2)**	(1)
Other		**2**	–
Non-controlling interests at end		**2**	2
Equity		**23,678**	21,746

Accumulated Other Comprehensive Income

As at October 31	2023	2022
Accumulated other comprehensive income		
Net foreign currency translation adjustments	**307**	204
Net unrealized gains (losses) on debt securities at fair value through other comprehensive income	**(35)**	(34)
Net gains (losses) on instruments designated as cash flow hedges	**146**	31
Share in the other comprehensive income of associates and joint ventures	**2**	1
	420	202

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

Consolidated Statements of Cash Flows

Year ended October 31		2023	2022
Cash flows from operating activities			
Net income		3,335	3,383
Adjustments for			
Provisions for credit losses		397	145
Depreciation of premises and equipment, including right-of-use assets		211	202
Amortization of intangible assets		313	279
Impairment losses on premises and equipment and on intangible assets	Notes 10 and 11	88	8
Deferred taxes		(229)	110
Losses (gains) on sales of non-trading securities, net		(70)	(113)
Share in the net income of associates and joint ventures		(11)	(28)
Stock option expense		18	17
Gain on the fair value remeasurement of an equity interest	Note 9	(91)	–
Change in operating assets and liabilities			
Securities at fair value through profit or loss		(12,619)	(2,564)
Securities purchased under reverse repurchase agreements and securities borrowed		15,226	(18,970)
Loans and acceptances, net of securitization		(20,252)	(23,354)
Deposits		21,779	25,456
Obligations related to securities sold short		(8,157)	1,551
Obligations related to securities sold under repurchase agreements and securities loaned		4,874	16,180
Derivative financial instruments, net		1,287	(1,798)
Securitization – Credit cards		(29)	(37)
Interest and dividends receivable and interest payable		407	150
Current tax assets and liabilities		(313)	(437)
Other items		(998)	(2,102)
		5,166	(1,922)
Cash flows from financing activities			
Issuances of preferred shares and other equity instruments		–	500
Issuances of common shares (including the impact of shares purchased for trading)		88	53
Repurchases of common shares for cancellation		–	(245)
Issuance of subordinated debt		–	739
Repurchase of subordinated debt		(750)	–
Issuance expenses for shares and other equity instruments		–	(4)
Repayments of lease liabilities		(102)	(99)
Dividends paid on shares and distributions on other equity instruments		(1,503)	(1,325)
		(2,267)	(381)
Cash flows from investing activities			
Net change in investments in associates and joint ventures		–	202
Purchases of non-trading securities		(8,846)	(9,307)
Maturities of non-trading securities		4,249	2,050
Sales of non-trading securities		5,168	6,269
Net change in premises and equipment, excluding right-of-use assets		(352)	(296)
Net change in intangible assets		(299)	(374)
		(80)	(1,456)
Impact of currency rate movements on cash and cash equivalents		545	1,750
Increase (decrease) in cash and cash equivalents		3,364	(2,009)
Cash and cash equivalents at beginning		31,870	33,879
Cash and cash equivalents at end[(1)]		35,234	31,870
Supplementary information about cash flows from operating activities			
Interest paid		12,236	3,763
Interest and dividends received		16,228	9,184
Income taxes paid		741	1,118

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

(1) This item is the equivalent of Consolidated Balance Sheet item *Cash and deposits with financial institutions*. It includes an amount of $9.3 billion as at October 31, 2023 ($7.7 billion as at October 31, 2022) for which there are restrictions and of which $6.5 billion ($5.3 billion as at October 31, 2022) represent the balances that the Bank must maintain with central banks, other regulatory agencies, and certain counterparties.

Notes to the Audited Consolidated Financial Statements

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

National Bank of Canada (the Bank) is a financial institution incorporated and domiciled in Canada and whose shares are listed on the Toronto Stock Exchange. Its head office is located at 600 De La Gauchetière Street West in Montreal, Quebec, Canada. The Bank is a chartered bank under Schedule 1 of the *Bank Act* (Canada) and is regulated by the Office of the Superintendent of Financial Institutions (Canada) (OSFI). The Bank offers financial services to individuals, businesses, institutional clients, and governments throughout Canada as well as specialized services at the international level. It operates four business segments: the Personal and Commercial segment, the Wealth Management segment, the Financial Markets segment, and the U.S. Specialty Finance and International (USSF&I) segment. Its full line of services includes banking and investing solutions for individuals and businesses, corporate banking and investment banking services, securities brokerage, insurance, and wealth management.

On November 30, 2023, the Board of Directors (the Board) authorized the publication of the Bank's audited annual consolidated financial statements (the consolidated financial statements) for the year ended October 31, 2023.

Basis of Presentation

The Bank's consolidated financial statements are prepared in accordance with International Financial Reporting Standards (IFRS), as issued by the International Accounting Standards Board (IASB). The financial statements also comply with section 308(4) of the *Bank Act* (Canada), which states that, except as otherwise specified by OSFI, the consolidated financial statements are to be prepared in accordance with IFRS. IFRS represent Canadian generally accepted accounting principles (GAAP). None of the OSFI accounting requirements are exceptions to IFRS. The accounting policies described in the Summary of Significant Accounting Policies section have been applied consistently to all periods presented.

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

Interest Rate Benchmark Reform
The reform of interbank offered rates (IBORs) and other interest rate benchmarks is a global initiative being coordinated and led by central banks and governments around the world, including those in Canada. This reform has been unfolding for several years, with the IASB monitoring developments. To minimize the financial statement impacts arising from replacing current interest rate benchmarks with alternative benchmarks, the IASB amended certain IFRS standards and allowed for some temporary exemptions, notably in the area of hedge accounting.

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 were discontinued as of 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 has been available since September 5, 2023. On July 27, 2023, the Canadian Alternative Reference Rate (CARR) Working Group published its recommendations and set a milestone stipulating that no new CDOR or bankers' acceptance loan contracts can be entered into after November 1, 2023. However, this milestone will have no impact on the ability to draw on existing credit facilities that have not yet matured, that have been extended, or that have been subject to material amendments before this deadline.

To prepare for the interest rate benchmark reform, the Bank developed an enterprise-wide project, put together a dedicated team of experts, established a formal governance structure, and prepared a training plan. Several committees were created to ensure the success of the project. The project team is made up of qualified resources from various fields of expertise to ensure a comprehensive analysis of all aspects of the changes as well as the financial, legal, operational, and technological impacts. Many of these experts, who have in-depth knowledge of accounting standards and reform-related activities, are involved in various working groups and participate in meetings with OSFI. The project team regularly reports on the project's progress to the project steering committee and the Financial Markets Risk Committee. As at October 31, 2023, the project was progressing according to schedule. The Bank is exposed to several risks, including interest rate risk and operational risk, which arise from non-derivative financial assets, non-derivative financial liabilities, and derivative financial instruments. The project team ensures that risks are mitigated while ensuring a positive experience for its clients. The Bank is taking all necessary steps to identify, measure, and control all of the risks to ensure a smooth transition throughout the interest rate benchmark reform.

The following table discloses the non-derivative financial assets, non-derivative financial liabilities, and derivative financial instruments subject to the interest rate benchmark reform as at October 31, 2023 that have not yet transitioned to alternative benchmark rates.

	As at October 31, 2023
	CDOR
	Maturing after June 28, 2024
Non-derivative financial assets[1]	23,968
Non-derivative financial liabilities[2]	16,019
Notional amount of derivative financial instruments	425,074

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

Accounting Policy Changes

Amendments to IAS 12 – *Income Taxes*
On May 23, 2023, the IASB issued *International Tax Reform – Pillar Two Model Rules,* which amends IAS 12 – *Income Taxes.* These amendments apply to income taxes arising from tax law enacted or substantively enacted to implement the Pillar 2 model rules of the Organisation for Economic Co-operation and Development (OECD). The amendments also introduce a temporary exception to the accounting of deferred tax assets and liabilities arising from the implementation of these rules as well as related disclosures. These amendments apply immediately upon issuance and retrospectively in accordance with IAS 8 – *Accounting Policies, Changes in Accounting Estimates and Errors*. Additional disclosures of current tax expense (recovery) and other information related to income tax exposures will be provided annually for periods beginning on or after November 1, 2023. During the year ended October 31, 2023, the Bank applied the exception to the recognition and disclosure of information about deferred tax assets and liabilities arising from the Pillar 2 rules in the jurisdictions where they have been adopted. To date, these amendments have had no impact on the Bank's consolidated results.

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

Summary of Significant Accounting Policies

Judgments, Estimates and Assumptions

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

The geopolitical landscape (notably, the Russia-Ukraine war and the recent clashes between Hamas and Israel), inflation, climate change, and higher interest rates continue to create uncertainty. As a result, establishing reliable estimates and applying judgment continue to be substantially complex. The uncertainty surrounding certain key inputs used in measuring expected credit losses is described in Note 7 to these consolidated financial statements.

Basis of Consolidation

Subsidiaries

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

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

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

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

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

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

Non-Controlling Interests

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

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

Investments in Associates and Joint Ventures

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

Investments in associates, i.e., entities over which the Bank exercises significant influence, and investments in joint ventures, i.e., entities over which the Bank has rights to the net assets and exercises joint control, are accounted for using the equity method. Under the equity method, the investment is initially recorded at cost and, thereafter, the carrying amount is increased or decreased by the Bank's proportionate share of net income, recognized in *Non-interest income* in the Consolidated Statement of Income, and by the proportionate share in other comprehensive income, recognized in *Other comprehensive income* in the Consolidated Statement of Comprehensive Income. Distributions received reduce the carrying amount of the interest.

Translation of Foreign Currencies

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

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

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

Classification and Measurement of Financial Instruments

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

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

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

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

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

Financial Instruments Designated at Fair Value Through Profit or Loss

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

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

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

Financial Instruments Designated at Fair Value Through Other Comprehensive Income

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

Securities Measured at Fair Value Through Other Comprehensive Income

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

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

Debt Securities Measured at Fair Value Through Other Comprehensive Income

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

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

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

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

Securities Measured at Fair Value Through Profit or Loss
Securities not classified or designated as measured at fair value through other comprehensive income or at amortized cost are classified as measured at fair value through profit or loss.

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

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

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

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

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

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

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

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

Loans

Loans Measured at Amortized Cost

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

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

Loans Measured at Fair Value Through Profit or Loss

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

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

Reclassification of Financial Assets

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

Establishing Fair Value

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

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

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

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

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

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

Impairment of Financial Assets

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

Determining the Stage

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

Assessment of Significant Increase in Credit Risk

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

Measurement of Expected Credit Losses

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Premises and Equipment

Premises and equipment, except for land and the portion of the head office building under construction, are recognized at cost less accumulated depreciation and accumulated impairment losses, if any. Land and the portion of the head office building under construction are recorded at cost less any accumulated impairment losses. Right-of-use assets are presented in *Premises and equipment* on the Consolidated Balance Sheet. For additional information about the accounting treatment of right-of-use assets, see the Leases section presented below.

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

	Method	Useful life
Significant components of the head office building		
Interior design	Straight-line	10-20 years
Exterior design, roofing and electromechanical system	Straight-line	30 years
Structure	Straight-line	75 years
Other buildings	5% declining balance	
Computer equipment	Straight-line	3-7 years
Equipment and furniture	Straight-line	8 years
Leasehold improvements	Straight-line	(1)

(1) The depreciation period is the lesser of the estimated useful life or the lease term.

Leases

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

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

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

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

Goodwill

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

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

Intangible Assets

Intangible Assets With Finite Useful Lives

Software that is not part of a cloud computing arrangement and certain other intangible assets are recognized at cost less accumulated amortization and accumulated impairment losses. These intangible assets are systematically amortized on a straight-line basis over their useful lives, which vary between four and ten years. The amortization expense is recorded in *Non-interest expenses* in the Consolidated Statement of Income.

Intangible Assets With Indefinite Useful Lives

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

Impairment of Non-Financial Assets

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

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

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

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

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

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

Provisions

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

Interest Income and Expense

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

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

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

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

Dividend Income

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

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

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

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

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

Securities Brokerage Commissions
Securities brokerage commissions are earned in the Wealth Management segment and are recognized when the transaction is executed.

Mutual Fund Revenues
Mutual fund revenues include management fees earned in the Wealth Management segment. Management fees are primarily calculated based on a fund's net asset value and are recorded in the period the services are performed.

Investment Management and Trust Service Fees
Investment management and trust service fees include management fees, trust service fees, and fees for other investment services provided to clients and earned in the Wealth Management segment. Generally, these fees are calculated using the balances of assets under administration and assets under management. Such fees are recognized in the period the service is performed.

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

Credit Fees and Deposit and Payment Service Charges
Credit fees and deposit and payment service charges are earned in the Personal and Commercial, Financial Markets, and U.S. Specialty Finance and International segments. Credit fees include commissions earned by providing services for loan commitments, financial guarantee contracts, bankers' acceptances, and letters of credit and guarantee, and they are generally recognized in income over the period the services are provided. Deposit and payment service charges include fees related to account maintenance activities and transaction-based service charges. Fees related to account maintenance activities are recognized in the period the services are provided, whereas transaction-based service charges are recognized when the transaction is executed.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The Bank offers pension plans that have a defined benefit component and a defined contribution component. The Bank also offers other post-employment benefit plans to eligible employees. The other post-employment benefit plans include post-employment medical, dental, and life insurance coverage. The defined benefit component of the pension plans is funded, whereas the defined contribution component of the pension plans and of the other post-employment benefit plans are not funded.

Defined Benefit Component of the Pension Plans and Other Post-Employment Benefit Plans

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

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

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

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

Defined Contribution Component of the Pension Plans

The expense for these plans is equivalent to the Bank's contributions during the period and is recognized in *Compensation and employee benefits* in the Consolidated Statement of Income.

Share-Based Payments

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

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

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

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

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

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

Note 2 – Future Accounting Policy Changes

The Bank closely monitors both new accounting standards and amendments to existing accounting standards issued by the IASB. The following standard has been issued but is not yet in effect. The Bank is currently assessing the impacts of applying this standard on the consolidated financial statements.

Effective Date – November 1, 2023
IFRS 17 – *Insurance Contracts*
In May 2017, the IASB published IFRS 17 – *Insurance Contracts* (IFRS 17), which replaces IFRS 4, the current insurance contract accounting standard. IFRS 17 introduces a new accounting framework that improves the comparability and quality of financial information. IFRS 17 provides guidance on the recognition, measurement, presentation, and disclosure of insurance contracts. IFRS 17 must be applied retrospectively for annual periods beginning on or after January 1, 2023. If full retrospective application to a group of insurance contracts is impracticable, the modified retrospective approach or the fair value approach may be used.

IFRS 17 affects how an entity accounts for its insurance contracts and how it reports financial performance in the consolidated income statement, in particular the timing of revenue recognition for insurance contracts. The current consolidated balance sheet presentation, whereby the items are included and reported in *Other assets* and *Other liabilities,* respectively, will change.

IFRS 17 introduces three approaches to measure insurance contracts: the general model approach, the premium allocation approach, and the variable fee approach. The general model approach, which is primarily used by the Bank, measures insurance contracts based on the present value of estimates of the expected future cash flows necessary to fulfill the contracts, including an adjustment for non-financial risk as well as the contractual service margin (CSM), which represents the unearned profits that are recognized as services are provided in the future. The premium allocation approach is applied to short-term contracts, and insurance revenues are recognized systematically over the coverage period. For all measurement approaches, if contracts are expected to be onerous, losses are recognized immediately.

The Bank is finalizing its analysis of the IFRS 17 adoption impacts on its consolidated financial statements for the annual period beginning on or after November 1, 2023. At the transition date, November 1, 2022, the Bank applied two of the three transition approaches available under IFRS 17: the full retrospective approach and the fair value approach. For most groups of contracts, the fair value approach has been applied considering that the full retrospective approach is impracticable, since reasonable and supportable information for applying this approach is not available without undue cost or effort.

As at October 31, 2023, the Bank's best estimate of the impact of transitioning to IFRS 17 is a decrease of $48 million, net of income taxes, in equity as at November 1, 2022, related to the new recognition and measurement principles of insurance and reinsurance contract assets and liabilities, including a net amount of CSM established at approximately $89 million. The impact on the Common Equity Tier 1 (CET1) capital ratio is not expected to be material.

The estimated impact of applying the new measurement approaches for insurance and reinsurance contracts is not significant. The Bank continues to refine and validate the new measurement approaches leading up to the disclosure of its 2024 first-quarter results.

Note 3 – Fair Value of Financial Instruments

Fair Value and Carrying Value of Financial Instruments by Category

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

								As at October 31, 2023
	Carrying value and fair value				Carrying value	Fair value		
	Financial instruments classified as at fair value through profit or loss	Financial instruments designated at fair value through profit or loss	Debt securities classified as at fair value through other comprehensive income	Equity securities designated at fair value through other comprehensive income	Financial instruments at amortized cost, net	Financial instruments at amortized cost, net	Total carrying value	Total fair value
Financial assets								
Cash and deposits with financial institutions	–	–	–	–	35,234	35,234	35,234	35,234
Securities	99,236	758	8,583	659	12,582	12,097	121,818	121,333
Securities purchased under reverse repurchase agreements and securities borrowed	–	–	–	–	11,260	11,260	11,260	11,260
Loans and acceptances, net of allowances	13,124	–	–	–	212,319	210,088	225,443	223,212
Other								
Derivative financial instruments	17,516	–	–	–	–	–	17,516	17,516
Other assets	73	–	–	–	4,293	4,293	4,366	4,366
Financial liabilities								
Deposits[1]	–	18,275			269,898	269,490	288,173	287,765
Other								
Acceptances	–	–			6,627	6,627	6,627	6,627
Obligations related to securities sold short	13,660	–			–	–	13,660	13,660
Obligations related to securities sold under repurchase agreements and securities loaned	–	–			38,347	38,347	38,347	38,347
Derivative financial instruments	19,888	–			–	–	19,888	19,888
Liabilities related to transferred receivables	–	9,952			15,082	14,255	25,034	24,207
Other liabilities	–	–			3,497	3,494	3,497	3,494
Subordinated debt	–	–			748	727	748	727

(1) Includes embedded derivative financial instruments.

As at October 31, 2022

				Carrying value and fair value	Carrying value	Fair value		
	Financial instruments classified as at fair value through profit or loss	Financial instruments designated at fair value through profit or loss	Debt securities classified as at fair value through other comprehensive income	Equity securities designated at fair value through other comprehensive income	Financial instruments at amortized cost, net	Financial instruments at amortized cost, net	Total carrying value	Total fair value
Financial assets								
Cash and deposits with financial institutions	–	–	–	–	31,870	31,870	31,870	31,870
Securities	86,338	1,037	8,272	556	13,516	13,007	109,719	109,210
Securities purchased under reverse repurchase agreements and securities borrowed	–	–	–	–	26,486	26,486	26,486	26,486
Loans and acceptances, net of allowances	10,516	–	–	–	196,228	190,955	206,744	201,471
Other								
Derivative financial instruments	18,547	–	–	–	–	–	18,547	18,547
Other assets	87	–	–	–	3,221	3,221	3,308	3,308
Financial liabilities								
Deposits[1]	–	15,355			251,039	249,937	266,394	265,292
Other								
Acceptances	–	–			6,541	6,541	6,541	6,541
Obligations related to securities sold short	21,817	–			–	–	21,817	21,817
Obligations related to securities sold under repurchase agreements and securities loaned	–	–			33,473	33,473	33,473	33,473
Derivative financial instruments	19,632	–			–	–	19,632	19,632
Liabilities related to transferred receivables	–	11,352			14,925	14,137	26,277	25,489
Other liabilities	–	–			2,632	2,627	2,632	2,627
Subordinated debt	–	–			1,499	1,478	1,499	1,478

(1) Includes embedded derivative financial instruments.

Establishing Fair Value

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

Unadjusted quoted prices in active markets provide the best evidence of fair value. When there is no quoted price in an active market, the Bank applies other valuation techniques that maximize the use of relevant observable inputs and that minimize the use of unobservable inputs. Such valuation techniques include the following: using information available from recent market transactions, referring to the current fair value of a comparable financial instrument, applying discounted cash flow analysis, applying option pricing models, or relying on any other valuation technique that is commonly used by market participants and has proven to yield reliable estimates. Judgment is required when applying many of the valuation techniques. The Bank's valuation was based on its assessment of the conditions prevailing as at October 31, 2023 and may change in the future. Furthermore, there may be measurement uncertainty resulting from the choice of valuation model used.

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

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

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

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

Valuation Methods and Assumptions
Financial Instruments Whose Fair Value Equals Carrying Value
The carrying value of the following financial instruments is a reasonable approximation of fair value:

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

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

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

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

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

Derivative Financial Instruments

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

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

Credit Valuation Adjustment (CVA)

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

Funding Valuation Adjustment (FVA)

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

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

Loans

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

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

Deposits

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

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

Liabilities Related to Transferred Receivables

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

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

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

Hierarchy of Fair Value Measurements

Determining the Levels of the Fair Value Measurement Hierarchy
IFRS establishes a fair value measurement hierarchy that classifies the inputs used in financial instrument fair value measurement techniques according to three levels. This fair value hierarchy requires observable market inputs to be used whenever such inputs exist. According to the hierarchy, the highest level of inputs are unadjusted quoted prices in active markets for identical instruments and the lowest level of inputs are unobservable inputs. In some cases, the inputs used to measure the fair value of a financial instrument might be categorized within different levels of the fair value hierarchy. In those cases, the fair value measurement is categorized in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement. The fair value measurement hierarchy has the following levels:

Level 1
Inputs corresponding to unadjusted quoted prices in active markets for identical assets and liabilities and accessible to the Bank at the measurement date. These instruments consist primarily of equity securities, derivative financial instruments traded in active markets, and certain highly liquid debt securities actively traded in over-the-counter markets.

Level 2
Valuation techniques based on inputs, other than the quoted prices included in Level 1 inputs, that are directly or indirectly observable in the market for the asset or liability. These inputs are quoted prices of similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; inputs other than quoted prices used in a valuation model that are observable for that instrument; and inputs that are derived principally from or corroborated by observable market inputs by correlation or other means. These instruments consist primarily of certain loans, certain deposits, derivative financial instruments traded in over-the-counter markets, certain debt securities, certain equity securities whose value is not directly observable in an active market, liabilities related to transferred receivables, and certain other liabilities.

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

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

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

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

During fiscal 2023, $17 million in securities classified as at fair value through profit or loss and $3 million in obligations related to securities sold short were transferred from Level 2 to Level 1 as a result of changing market conditions ($41 million in securities classified as at fair value through profit or loss and $3 million in obligations related to securities sold short in fiscal 2022). In addition, during fiscal 2023, $15 million in securities classified as at fair value through profit or loss and $3 million in obligations related to securities sold short were transferred from Level 1 to Level 2 as a result of changing market conditions (in fiscal 2022, $26 million in securities classified as at fair value through profit or loss and $2 million in obligations related to securities sold short).

During fiscal years 2023 and 2022, financial instruments were transferred to (or from) Level 3 due to changes in the availability of observable market inputs as a result of changing market conditions.

Financial Instruments Recorded at Fair Value on the Consolidated Balance Sheet

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

				As at October 31, 2023
	Level 1	Level 2	Level 3	Total financial assets/liabilities at fair value
Financial assets				
Securities				
At fair value through profit or loss				
Securities issued or guaranteed by				
Canadian government	6,403	10,872	–	17,275
Canadian provincial and municipal governments	–	8,260	–	8,260
U.S. Treasury, other U.S. agencies and other foreign governments	2,781	2,105	–	4,886
Other debt securities	–	3,450	65	3,515
Equity securities	65,018	554	486	66,058
	74,202	25,241	551	99,994
At fair value through other comprehensive income				
Securities issued or guaranteed by				
Canadian government	73	4,124	–	4,197
Canadian provincial and municipal governments	–	1,938	–	1,938
U.S. Treasury, other U.S. agencies and other foreign governments	904	254	–	1,158
Other debt securities	–	1,290	–	1,290
Equity securities	–	281	378	659
	977	7,887	378	9,242
Loans	–	12,907	217	13,124
Other				
Derivative financial instruments	285	17,224	7	17,516
Other assets – Other items	–	–	73	73
	75,464	63,259	1,226	139,949
Financial liabilities				
Deposits[1]	–	18,134	–	18,134
Other				
Obligations related to securities sold short	8,335	5,325	–	13,660
Derivative financial instruments	467	19,399	22	19,888
Liabilities related to transferred receivables	–	9,952	–	9,952
	8,802	52,810	22	61,634

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

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

As at October 31, 2022

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

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

Financial Instruments Classified in Level 3

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

As at October 31, 2023

	Fair value	Primary valuation techniques	Significant unobservable inputs	Range of input values Low		Range of input values High	
Financial assets							
Securities							
Equity securities and other debt securities	929	Net asset value	Net asset value	100	%	100	%
		Market comparable	EV/EBITDA[1] multiple	11	x	14	x
		Discounted cash flows	Discount rate	6.50	%	15.10	%
Loans							
Loans at fair value through profit or loss	217	Discounted cash flows	Discount rate	8.08	%	15.99	%
		Discounted cash flows	Liquidity premium	3.57	%	11.32	%
Other							
Derivative financial instruments							
Equity contracts	5	Option pricing model	Long-term volatility	7	%	58	%
			Market correlation	15	%	94	%
Credit derivative contracts	2	Discounted cash flows	Credit spread	22	Bps[2]	91	Bps[2]
Other assets – Other items	73	Discounted cash flows	Discount rate	13	%	13	%
	1,226						
Financial liabilities							
Other							
Derivative financial instruments							
Interest rate contracts	5	Discounted cash flows	Discount rate	2.20	%	2.20	%
Equity contracts	16	Option pricing model	Long-term volatility	7	%	58	%
			Market correlation	(9)	%	94	%
Credit derivative contracts	1	Discounted cash flows	Credit spread	22	Bps[2]	91	Bps[2]
	22						

As at October 31, 2022

	Fair value	Primary valuation techniques	Significant unobservable inputs	Range of input values Low		Range of input values High	
Financial assets							
Securities							
Equity securities and other debt securities	796	Net asset value	Net asset value	100	%	100	%
		Market comparable	EV/EBITDA[1] multiple	18	x	21	x
		Discounted cash flows	Discount rate	4.50	%	19.00	%
Loans							
Loans at fair value through profit or loss	244	Discounted cash flows	Discount rate	7.06	%	15.09	%
		Discounted cash flows	Liquidity premium	2.62	%	10.49	%
Other							
Derivative financial instruments							
Equity contracts	1	Option pricing model	Long-term volatility	21	%	54	%
			Market correlation	38	%	95	%
Other assets – Other items	87	Discounted cash flows	Discount rate	9	%	9	%
	1,128						
Financial liabilities							
Deposits							
Structured deposit notes[3]	8	Option pricing model	Long-term volatility	10	%	35	%
			Market correlation	(3)	%	94	%
Other							
Derivative financial instruments							
Interest rate contracts	8	Discounted cash flows	Discount rate	2.20	%	2.20	%
Equity contracts	10	Option pricing model	Long-term volatility	9	%	51	%
			Market correlation	1	%	95	%
	26						

(1) EV/EBITDA means Enterprise Value/Earnings Before Interest, Taxes, Depreciation and Amortization.
(2) Bps or basis point is a unit of measure equal to 0.01%.
(3) Includes embedded derivative financial instruments.

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

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

Net Asset Value

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

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

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

Discount Rate

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

Liquidity Premium

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

Long-Term Volatility

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

Market Correlation

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

Credit Spread

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

Sensitivity Analysis of Financial Instruments Classified in Level 3

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

For equity securities and other debt securities, the Bank varies significant unobservable inputs such as net asset values, EV/EBITDA multiples, or price equivalents and establishes a reasonable fair value range that could result in a $155 million increase or decrease in the fair value recorded as at October 31, 2023 (a $126 million increase or decrease as at October 31, 2022).

For loans, the Bank varies unobservable inputs such as a liquidity premium and establishes a reasonable fair value range that could result in a $25 million increase or decrease in the fair value recorded as at October 31, 2023 (a $31 million increase or decrease as at October 31, 2022).

For derivative financial instruments and embedded derivative financial instruments related to structured deposit notes, the Bank varies long-term volatility, market correlation inputs, and credit spread and establishes a reasonable fair value range. As at October 31, 2023, for derivative financial instruments, the net fair value could result in a $16 million increase or decrease (a $5 million increase or decrease as at October 31, 2022), whereas for structured deposit notes, the net fair value could have resulted in a $1 million increase or decrease as at October 31, 2022.

For other assets, the Bank varies unobservable inputs such as discount rates and establishes a reasonable fair value range that could result in a $9 million increase or decrease in the fair value recorded as at October 31, 2023 (a $10 million increase or decrease as at October 31, 2022).

For all Level 3 financial instruments, the reasonable fair value ranges could result in a 6% increase or decrease in net income as at October 31, 2023 (a 5% increase or decrease in net income as at October 31, 2022).

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

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

					Year ended October 31, 2023
	Securities at fair value through profit or loss	**Securities at fair value through other comprehensive income**	**Loans and other assets**	**Derivative financial instruments[1]**	**Deposits[2]**
Fair value as at October 31, 2022	**476**	**320**	**331**	**(17)**	**(8)**
Total realized and unrealized gains (losses) included in *Net income*[3]	**33**	**–**	**(4)**	**(15)**	**–**
Total realized and unrealized gains (losses) included in *Other comprehensive income*	**–**	**58**	**–**	**–**	**–**
Purchases	**62**	**–**	**–**	**–**	**–**
Sales	**(21)**	**–**	**(9)**	**–**	**–**
Issuances	**–**	**–**	**29**	**–**	**–**
Settlements and other	**–**	**–**	**(57)**	**7**	**–**
Financial instruments transferred into Level 3	**1**	**–**	**–**	**8**	**–**
Financial instruments transferred out of Level 3	**–**	**–**	**–**	**2**	**8**
Fair value as at October 31, 2023	**551**	**378**	**290**	**(15)**	**–**
Change in unrealized gains and losses included in *Net income* with respect to financial assets and financial liabilities held as at October 31, 2023[4]	**62**	**–**	**(4)**	**(15)**	**–**

					Year ended October 31, 2022
	Securities at fair value through profit or loss	Securities at fair value through other comprehensive income	Loans and other assets	Derivative financial instruments[1]	Deposits[2]
Fair value as at October 31, 2021	471	306	297	2	–
Total realized and unrealized gains (losses) included in *Net income*[5]	21	–	(50)	(19)	3
Total realized and unrealized gains (losses) included in *Other comprehensive income*	–	7	–	–	–
Purchases	60	7	71	–	–
Sales	(64)	–	–	–	–
Issuances	–	–	22	–	(3)
Settlements and other	–	–	(9)	(1)	–
Financial instruments transferred into Level 3	–	–	–	1	(8)
Financial instruments transferred out of Level 3	(12)	–	–	–	–
Fair value as at October 31, 2022	476	320	331	(17)	(8)
Change in unrealized gains and losses included in *Net income* with respect to financial assets and financial liabilities held as at October 31, 2022[6]	3	–	(50)	(19)	3

(1) The derivative financial instruments include assets and liabilities presented on a net basis.
(2) The amounts include the fair value of embedded derivative financial instruments in deposits.
(3) Total gains (losses) included in *Non-interest income* was a gain of $14 million.
(4) Total unrealized gains (losses) included in *Non-interest income* was an unrealized gain of $43 million.
(5) Total gains (losses) included in *Non-interest income* was a loss of $45 million.
(6) Total unrealized gains (losses) included in *Non-interest income* was an unrealized loss of $63 million.

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

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

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

				As at October 31, 2023
	Level 1	**Level 2**	**Level 3**	**Total**
Financial assets				
Securities at amortized cost				
Securities issued or guaranteed by				
Canadian government	–	5,935	–	5,935
Canadian provincial and municipal governments	–	1,772	–	1,772
U.S. Treasury, other U.S. agencies and other foreign governments	–	593	–	593
Other debt securities	–	3,797	–	3,797
	–	12,097	–	12,097
Loans, net of allowances	–	86,887	116,627	203,514
Financial liabilities				
Deposits	–	269,490	–	269,490
Other				
Liabilities related to transferred receivables	–	14,255	–	14,255
Other liabilities	–	46	–	46
Subordinated debt	–	727	–	727
	–	284,518	–	284,518

				As at October 31, 2022
	Level 1	Level 2	Level 3	Total
Financial assets				
Securities at amortized cost				
Securities issued or guaranteed by				
Canadian government	–	5,439	–	5,439
Canadian provincial and municipal governments	–	1,708	–	1,708
U.S. Treasury, other U.S. agencies and other foreign governments	–	140	–	140
Other debt securities	–	5,720	–	5,720
	–	13,007	–	13,007
Loans, net of allowances	–	81,828	102,640	184,468
Financial liabilities				
Deposits	–	249,937	–	249,937
Other				
Liabilities related to transferred receivables	–	14,137	–	14,137
Other liabilities	–	73	–	73
Subordinated debt	–	1,478	–	1,478
	–	265,625	–	265,625

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

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

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

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

	Carrying value as at October 31, 2023	**Unrealized gains (losses) for the year ended October 31, 2023**	**Unrealized gains (losses) since the initial recognition of the instrument**
Financial assets designated at fair value through profit or loss			
Securities	**758**	**(5)**	**(12)**
Financial liabilities designated at fair value through profit or loss			
Deposits[1][2]	**18,275**	**493**	**3,546**
Liabilities related to transferred receivables	**9,952**	**80**	**562**
	28,227	**573**	**4,108**

	Carrying value as at October 31, 2022	Unrealized gains (losses) for the year ended October 31, 2022	Unrealized gains (losses) since the initial recognition of the instrument
Financial assets designated at fair value through profit or loss			
Securities	1,037	(21)	(7)
Financial liabilities designated at fair value through profit or loss			
Deposits[1][2]	15,355	2,888	3,062
Liabilities related to transferred receivables	11,352	513	533
	26,707	3,401	3,595

(1) For the year ended October 31, 2023, the change in the fair value of deposits designated at fair value through profit or loss attributable to credit risk, and recorded in *Other comprehensive income*, resulted in a loss of $226 million ($817 million gain for the year ended October 31, 2022).
(2) The amount at maturity that the Bank will be contractually required to pay to the holders of these deposits varies and will differ from the reporting date fair value.

Note 5 – Offsetting Financial Assets and Financial Liabilities

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

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

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

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

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

						As at October 31, 2023
				Associated amounts not set off on the Consolidated Balance Sheet		
	Gross amounts recognized	Amounts set off on the Consolidated Balance Sheet	Net amounts reported on the Consolidated Balance Sheet	Financial instruments[1]	Financial assets received/pledged as collateral[2]	Net amounts
Financial assets						
Securities purchased under reverse repurchase agreements and securities borrowed	20,344	9,084	11,260	2,538	8,649	73
Derivative financial instruments	35,404	17,888	17,516	8,032	7,065	2,419
	55,748	26,972	28,776	10,570	15,714	2,492
Financial liabilities						
Obligations related to securities sold under repurchase agreements and securities loaned	47,431	9,084	38,347	2,538	35,679	130
Derivative financial instruments	37,776	17,888	19,888	8,032	5,703	6,153
	85,207	26,972	58,235	10,570	41,382	6,283

						As at October 31, 2022
				Associated amounts not set off on the Consolidated Balance Sheet		
	Gross amounts recognized	Amounts set off on the Consolidated Balance Sheet	Net amounts reported on the Consolidated Balance Sheet	Financial instruments[1]	Financial assets received/pledged as collateral[2]	Net amounts
Financial assets						
Securities purchased under reverse repurchase agreements and securities borrowed	32,134	5,648	26,486	1,887	24,459	140
Derivative financial instruments	33,112	14,565	18,547	9,583	6,062	2,902
	65,246	20,213	45,033	11,470	30,521	3,042
Financial liabilities						
Obligations related to securities sold under repurchase agreements and securities loaned	39,121	5,648	33,473	1,887	31,440	146
Derivative financial instruments	34,197	14,565	19,632	9,583	4,089	5,960
	73,318	20,213	53,105	11,470	35,529	6,106

(1) Carrying amount of financial instruments that are subject to an enforceable master netting agreement or similar agreement but that do not satisfy offsetting criteria.
(2) Excludes collateral in the form of non-financial instruments.

Note 6 – Securities

Residual Contractual Maturities of Securities

As at October 31					2023	2022
	1 year or less	Over 1 year to 5 years	Over 5 years	No specified maturity	Total	Total
Securities at fair value through profit or loss						
Securities issued or guaranteed by						
Canadian government	2,065	10,320	4,890	–	17,275	12,922
Canadian provincial and municipal governments	1,209	1,758	5,293	–	8,260	9,260
U.S. Treasury, other U.S. agencies and other foreign governments	3,073	361	1,452	–	4,886	15,084
Other debt securities	286	2,051	1,178	–	3,515	3,384
Equity securities	–	–	–	66,058	66,058	46,725
	6,633	14,490	12,813	66,058	99,994	87,375
Securities at fair value through other comprehensive income						
Securities issued or guaranteed by						
Canadian government	793	2,719	685	–	4,197	3,212
Canadian provincial and municipal governments	41	467	1,430	–	1,938	1,970
U.S. Treasury, other U.S. agencies and other foreign governments	–	1,150	8	–	1,158	1,878
Other debt securities	3	750	537	–	1,290	1,212
Equity securities	–	–	–	659	659	556
	837	5,086	2,660	659	9,242	8,828
Securities at amortized cost[(1)]						
Securities issued or guaranteed by						
Canadian government	909	5,263	–	–	6,172	5,737
Canadian provincial and municipal governments	275	521	1,136	–	1,932	1,826
U.S. Treasury, other U.S. agencies and other foreign governments	423	181	–	–	604	150
Other debt securities	800	2,858	216	–	3,874	5,803
	2,407	8,823	1,352	–	12,582	13,516

(1) As at October 31, 2023, securities at amortized cost are presented net of $4 million in allowances for credit losses ($7 million as at October 31, 2022).

Credit Quality

As at October 31, 2023 and 2022, securities at fair value through other comprehensive income and securities at amortized cost were mainly classified in Stage 1, with their credit quality falling mostly in the "Excellent" category according to the Bank's internal risk-rating categories. For additional information on the reconciliation of allowances for credit losses, see Note 7 to these consolidated financial statements.

Note 6 – Securities (cont.)

Unrealized Gross Gains (Losses) on Securities at Fair Value Through Other Comprehensive Income[1]

				As at October 31, 2023
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Carrying value[2]
Securities issued or guaranteed by				
Canadian government	4,406	1	(210)	4,197
Canadian provincial and municipal governments	2,110	–	(172)	1,938
U.S. Treasury, other U.S. agencies and other foreign governments	1,227	–	(69)	1,158
Other debt securities	1,423	–	(133)	1,290
Equity securities	616	66	(23)	659
	9,782	67	(607)	9,242

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

(1) Excludes the impact of hedging.
(2) The allowances for credit losses on securities at fair value through other comprehensive income (excluding equity securities), representing $3 million as at October 31, 2023 ($2 million as at October 31, 2022), are reported in *Other comprehensive income*. For additional information, see Note 7 to these consolidated financial statements.

Equity Securities Designated at Fair Value Through Other Comprehensive Income

The Bank designated certain equity securities, the main business objective of which is to generate dividend income, at fair value through other comprehensive income without subsequent reclassification of gains and losses to net income. During the year ended October 31, 2023, a dividend income amount of $33 million was recognized for these investments ($14 million for the year ended October 31, 2022), including amounts of $2 million for investments that were sold during the year ended October 31, 2023 ($4 million for investments that were sold during the year ended October 31, 2022).

	Year ended October 31, 2023			Year ended October 31, 2022		
	Equity securities of private companies	Equity securities of public companies	Total	Equity securities of private companies	Equity securities of public companies	Total
Fair value at beginning	320	236	556	306	311	617
Change in fair value	58	(5)	53	7	(44)	(37)
Designated at fair value through other comprehensive income[1]	–	314	314	7	143	150
Sales[2]	–	(264)	(264)	–	(174)	(174)
Fair value at end	378	281	659	320	236	556

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

Gains (Losses) on Disposals of Securities at Amortized Cost

During the years ended October 31, 2023 and 2022, the Bank disposed of certain debt securities measured at amortized cost. The carrying value of these securities upon disposal was $821 million for the year ended October 31, 2023 ($337 million for the year ended October 31, 2022), and the Bank recognized negligible gains for the year ended October 31, 2023 ($4 million for the year ended October 31, 2022) in *Non-interest income – Gains (losses) on non-trading securities, net* in the Consolidated Statement of Income.

Note 7 – Loans and Allowances for Credit Losses

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

Determining and Measuring Expected Credit Losses (ECL)

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

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

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

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

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

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

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

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

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

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

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

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

Main Parameters

PD Estimates

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

LGD Estimates

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

EAD Estimates

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

Expected Life

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

Incorporation of Forward-Looking Information

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

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

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

Credit Quality of Loans

The following tables present the gross carrying amounts of loans as at October 31, 2023 and 2022, according to credit quality and ECL impairment stage of each loan category at amortized cost, and according to credit quality for loans at fair value through profit or loss. For additional information on credit quality according to the Internal Ratings-Based (IRB) categories, see the Internal Default Risk Ratings table on page 77 in the Credit Risk section of the MD&A for the year ended October 31, 2023.

						As at October 31, 2023
	Non-impaired loans		Impaired loans		Loans at fair value through profit or loss[1]	
	Stage 1	Stage 2	Stage 3	POCI		Total
Residential mortgage						
Excellent	30,075	13	–	–	–	30,088
Good	17,008	247	–	–	–	17,255
Satisfactory	11,795	4,118	–	–	–	15,913
Special mention	318	773	–	–	–	1,091
Substandard	61	252	–	–	–	313
Default	–	–	66	–	–	66
IRB Approach	59,257	5,403	66	–	–	64,726
Standardized Approach	9,540	218	287	304	11,772	22,121
Gross carrying amount	68,797	5,621	353	304	11,772	86,847
Allowances for credit losses[2]	69	93	87	(95)	–	154
Carrying amount	68,728	5,528	266	399	11,772	86,693
Personal						
Excellent	21,338	120	–	–	–	21,458
Good	7,360	1,665	–	–	–	9,025
Satisfactory	6,497	2,240	–	–	–	8,737
Special mention	1,849	810	–	–	–	2,659
Substandard	29	224	–	–	–	253
Default	–	–	156	–	–	156
IRB Approach	37,073	5,059	156	–	–	42,288
Standardized Approach	3,713	79	71	207	–	4,070
Gross carrying amount	40,786	5,138	227	207	–	46,358
Allowances for credit losses[2]	91	108	87	(15)	–	271
Carrying amount	40,695	5,030	140	222	–	46,087
Credit card						
Excellent	641	–	–	–	–	641
Good	380	1	–	–	–	381
Satisfactory	752	68	–	–	–	820
Special mention	304	210	–	–	–	514
Substandard	37	86	–	–	–	123
Default	–	–	–	–	–	–
IRB Approach	2,114	365	–	–	–	2,479
Standardized Approach	124	–	–	–	–	124
Gross carrying amount	2,238	365	–	–	–	2,603
Allowances for credit losses[2]	33	106	–	–	–	139
Carrying amount	2,205	259	–	–	–	2,464
Business and government[3]						
Excellent	7,785	–	–	–	1,113	8,898
Good	28,525	16	–	–	53	28,594
Satisfactory	32,095	8,400	–	2	140	40,637
Special mention	215	1,790	–	–	–	2,005
Substandard	27	290	–	–	–	317
Default	–	–	397	–	–	397
IRB Approach	68,647	10,496	397	2	1,306	80,848
Standardized Approach	9,774	57	47	47	46	9,971
Gross carrying amount	78,421	10,553	444	49	1,352	90,819
Allowances for credit losses[2]	182	194	244	–	–	620
Carrying amount	78,239	10,359	200	49	1,352	90,199
Total loans and acceptances						
Gross carrying amount	190,242	21,677	1,024	560	13,124	226,627
Allowances for credit losses[2]	375	501	418	(110)	–	1,184
Carrying amount	189,867	21,176	606	670	13,124	225,443

(1) Not subject to expected credit losses.
(2) The allowances for credit losses do not include the amounts related to undrawn commitments reported in the *Other liabilities* item of the Consolidated Balance Sheet.
(3) Includes customers' liability under acceptances.

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

As at October 31, 2022

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

(1) Not subject to expected credit losses.
(2) The allowances for credit losses do not include the amounts related to undrawn commitments reported in the *Other liabilities* item of the Consolidated Balance Sheet.
(3) Includes customers' liability under acceptances.

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

As at October 31				2023				2022
	Stage 1	**Stage 2**	**Stage 3**	**Total**	Stage 1	Stage 2	Stage 3	Total
Off-balance-sheet commitments[1]								
Retail								
Excellent	16,648	67	–	16,715	15,292	13	–	15,305
Good	3,485	467	–	3,952	3,316	165	–	3,481
Satisfactory	1,268	285	–	1,553	1,170	180	–	1,350
Special mention	239	93	–	332	193	68	–	261
Substandard	17	15	–	32	15	15	–	30
Default	–	–	2	2	–	–	1	1
Non-retail								
Excellent	14,117	–	–	14,117	13,136	–	–	13,136
Good	21,082	–	–	21,082	18,723	24	–	18,747
Satisfactory	12,258	4,354	–	16,612	7,894	3,488	–	11,382
Special mention	17	248	–	265	12	246	–	258
Substandard	19	33	–	52	4	24	–	28
Default	–	–	10	10	–	–	18	18
IRB Approach	69,150	5,562	12	74,724	59,755	4,223	19	63,997
Standardized Approach	18,172	–	–	18,172	15,432	–	–	15,432
Total exposure	87,322	5,562	12	92,896	75,187	4,223	19	79,429
Allowances for credit losses	116	60	–	176	99	63	–	162
Total exposure, net of allowances	87,206	5,502	12	92,720	75,088	4,160	19	79,267

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

Loans Past Due But Not Impaired[1]

As at October 31				2023				2022
	Residential mortgage	**Personal**	**Credit card**	**Business and government**[2]	Residential mortgage	Personal	Credit card	Business and government[2]
Past due but not impaired								
31 to 60 days	139	102	27	38	106	105	23	23
61 to 90 days	58	65	14	21	38	30	11	9
Over 90 days[3]	–	–	30	–	–	–	22	–
	197	167	71	59	144	135	56	32

(1) Loans less than 31 days past due are not presented as they are not considered past due from an administrative standpoint.
(2) Includes customers' liability under acceptances.
(3) All loans more than 90 days past due, except for credit card receivables, are considered impaired (Stage 3).

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

Impaired Loans

As at October 31			2023			2022
	Gross	Allowances for credit losses	Net	Gross	Allowances for credit losses	Net
Loans – Stage 3						
Residential mortgage	353	87	266	260	61	199
Personal	227	87	140	166	75	91
Credit card[1]	–	–	–	–	–	–
Business and government[2]	444	244	200	386	197	189
	1,024	418	606	812	333	479
Loans – POCI	560	(110)	670	459	(92)	551
	1,584	308	1,276	1,271	241	1,030

(1) Credit card receivables are considered impaired, at the latest, when payment is 180 days past due, and they are written off at that time.
(2) Includes customers' liability under acceptances.

Maximum Exposure to Credit Risk of Impaired Loans

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

As at October 31		2023		2022	
	Gross impaired loans	Percentage covered by guarantees[1]	Gross impaired loans	Percentage covered by guarantees[1]	Types of collateral and guarantees
Loans – Stage 3					
Residential mortgage	353	97%	260	100%	Residential buildings
Personal	227	59%	166	56%	Buildings, land and automobiles
Business and government[2]	444	51%	386	59%	Buildings, land, equipment, government and bank guarantees
Loans – POCI	560	36%	459	52%	Buildings and automobiles

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

Allowances for Credit Losses

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

						Year ended October 31, 2023
	Allowances for credit losses as at October 31, 2022	Provisions for credit losses	Write-offs[1]	Disposals	Recoveries and other	Allowances for credit losses as at October 31, 2023
Balance sheet						
Cash and deposits with financial institutions[2][3]	5	5	–	–	–	10
Securities[3]						
At fair value through other comprehensive income[4]	2	1	–	–	–	3
At amortized cost[2]	7	(3)	–	–	–	4
Securities purchased under reverse repurchase agreements and securities borrowed[2][3]	–	–	–	–	–	–
Loans[5]						
Residential mortgage	118	36	(3)	–	3	154
Personal	239	114	(101)	–	19	271
Credit card	126	81	(83)	–	15	139
Business and government	418	150	(12)	–	11	567
Customers' liability under acceptances	54	(1)	–	–	–	53
	955	380	(199)	–	48	1,184
Other assets[2][3]	–	–	–	–	–	–
Off-balance-sheet commitments[6]						
Letters of guarantee and documentary letters of credit	13	3	–	–	–	16
Undrawn commitments	143	9	–	–	–	152
Backstop liquidity and credit enhancement facilities	6	2	–	–	–	8
	162	14	–	–	–	176
	1,131	397	(199)	–	48	1,377

						Year ended October 31, 2022
	Allowances for credit losses as at October 31, 2021	Provisions for credit losses	Write-offs[1]	Disposals	Recoveries and other	Allowances for credit losses as at October 31, 2022
Balance sheet						
Cash and deposits with financial institutions[2][3]	5	–	–	–	–	5
Securities[3]						
At fair value through other comprehensive income[4]	1	1	–	–	–	2
At amortized cost[2]	3	4	–	–	–	7
Securities purchased under reverse repurchase agreements and securities borrowed[2][3]	–	–	–	–	–	–
Loans[5]						
Residential mortgage	71	46	(3)	–	4	118
Personal	202	69	(52)	–	20	239
Credit card	122	49	(62)	–	17	126
Business and government	515	10	(116)	–	9	418
Customers' liability under acceptances	88	(34)	–	–	–	54
	998	140	(233)	–	50	955
Other assets[2][3]	–	–	–	–	–	–
Off-balance-sheet commitments[6]						
Letters of guarantee and documentary letters of credit	13	–	–	–	–	13
Undrawn commitments	143	–	–	–	–	143
Backstop liquidity and credit enhancement facilities	6	–	–	–	–	6
	162	–	–	–	–	162
	1,169	145	(233)	–	50	1,131

(1) The contractual amount outstanding on financial assets that were written off during the year ended October 31, 2023 and that are still subject to enforcement activity was $118 million ($91 million for the year ended October 31, 2022).
(2) These financial assets are presented net of the allowances for credit losses on the Consolidated Balance Sheet.
(3) As at October 31, 2023 and 2022, these financial assets were mainly classified in Stage 1 and their credit quality fell mostly within the *Excellent* category.
(4) The allowances for credit losses are reported in the *Accumulated other comprehensive income* item of the Consolidated Balance Sheet.
(5) The allowances for credit losses are reported in the *Allowances for credit losses* item of the Consolidated Balance Sheet.
(6) The allowances for credit losses are reported in the *Other liabilities* item of the Consolidated Balance Sheet.

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

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

Year ended October 31					2023					2022
	Allowances for credit losses on non-impaired loans		Allowances for credit losses on impaired loans			Allowances for credit losses on non-impaired loans		Allowances for credit losses on impaired loans		
	Stage 1	Stage 2	Stage 3	POCI[1]	Total	Stage 1	Stage 2	Stage 3	POCI[1]	Total
Residential mortgage										
Balance at beginning	53	80	61	(76)	118	50	52	29	(60)	71
Originations or purchases	18	–	–	–	18	19	–	–	–	19
Transfers[2]:										
to Stage 1	52	(48)	(4)	–	–	19	(17)	(2)	–	–
to Stage 2	(12)	30	(18)	–	–	(10)	13	(3)	–	–
to Stage 3	(2)	(33)	35	–	–	(1)	(7)	8	–	–
Net remeasurement of loss allowances[3]	(29)	65	21	(17)	40	(24)	39	29	(9)	35
Derecognitions[4]	(7)	(9)	(8)	–	(24)	(3)	(3)	(3)	–	(9)
Changes to models	(5)	7	–	–	2	–	1	–	–	1
Provisions for credit losses	15	12	26	(17)	36	–	26	29	(9)	46
Write-offs	–	–	(3)	–	(3)	–	–	(3)	–	(3)
Disposals	–	–	–	–	–	–	–	–	–	–
Recoveries	–	–	2	–	2	–	–	3	–	3
Foreign exchange movements and other	1	1	1	(2)	1	3	2	3	(7)	1
Balance at end	69	93	87	(95)	154	53	80	61	(76)	118
Includes:										
Amounts drawn	69	93	87	(95)	154	53	80	61	(76)	118
Undrawn commitments[5]	–	–	–	–	–	–	–	–	–	–
Personal										
Balance at beginning	70	117	75	(16)	246	73	103	63	(29)	210
Originations or purchases	47	–	–	–	47	45	–	–	–	45
Transfers[2]:										
to Stage 1	91	(82)	(9)	–	–	61	(56)	(5)	–	–
to Stage 2	(25)	30	(5)	–	–	(21)	23	(2)	–	–
to Stage 3	(2)	(88)	90	–	–	–	(31)	31	–	–
Net remeasurement of loss allowances[3]	(77)	152	23	1	99	(72)	85	28	15	56
Derecognitions[4]	(11)	(18)	(4)	–	(33)	(9)	(15)	(5)	–	(29)
Changes to models	1	3	–	–	4	(10)	6	–	–	(4)
Provisions for credit losses	24	(3)	95	1	117	(6)	12	47	15	68
Write-offs	–	–	(101)	–	(101)	–	–	(52)	–	(52)
Disposals	–	–	–	–	–	–	–	–	–	–
Recoveries	–	–	20	–	20	–	–	17	–	17
Foreign exchange movements and other	1	–	(2)	–	(1)	3	2	–	(2)	3
Balance at end	95	114	87	(15)	281	70	117	75	(16)	246
Includes:										
Amounts drawn	91	108	87	(15)	271	67	113	75	(16)	239
Undrawn commitments[5]	4	6	–	–	10	3	4	–	–	7

(1) The total amount of undiscounted initially expected credit losses on the POCI loans acquired during the year ended October 31, 2023 was $93 million ($15 million for the year ended October 31, 2022). The expected credit losses reflected in the purchase price have been discounted.
(2) Represent stage transfers deemed to have taken place at the beginning of the quarter in which the transfer occurred.
(3) Includes the net remeasurement of loss allowances (after transfers) attributable mainly to changes in volumes and in the credit quality of existing loans as well as to changes in risk parameters.
(4) Represent reversals to loss allowances arising from full loan repayments (excluding write-offs and disposals).
(5) The allowances for credit losses on undrawn commitments are reported in the *Other liabilities* item of the Consolidated Balance Sheet.

Year ended October 31					2023					2022
	Allowances for credit losses on non-impaired loans		Allowances for credit losses on impaired loans			Allowances for credit losses on non-impaired loans		Allowances for credit losses on impaired loans		
	Stage 1	Stage 2	Stage 3	POCI[1]	Total	Stage 1	Stage 2	Stage 3	POCI[1]	Total
Credit card										
Balance at beginning	53	112	–	–	165	57	101	–	–	158
Originations or purchases	11	–	–	–	11	12	–	–	–	12
Transfers[2]:										
to Stage 1	100	(100)	–	–	–	84	(84)	–	–	–
to Stage 2	(19)	19	–	–	–	(16)	16	–	–	–
to Stage 3	–	(35)	35	–	–	(1)	(23)	24	–	–
Net remeasurement of loss allowances[3]	(83)	133	33	–	83	(80)	104	21	–	45
Derecognitions[4]	(3)	(2)	–	–	(5)	(2)	(1)	–	–	(3)
Changes to models	–	–	–	–	–	(1)	(1)	–	–	(2)
Provisions for credit losses	6	15	68	–	89	(4)	11	45	–	52
Write-offs	–	–	(83)	–	(83)	–	–	(62)	–	(62)
Disposals	–	–	–	–	–	–	–	–	–	–
Recoveries	–	–	15	–	15	–	–	17	–	17
Foreign exchange movements and other	–	–	–	–	–	–	–	–	–	–
Balance at end	59	127	–	–	186	53	112	–	–	165
Includes:										
Amounts drawn	33	106	–	–	139	31	95	–	–	126
Undrawn commitments[5]	26	21	–	–	47	22	17	–	–	39
Business and government[6]										
Balance at beginning	177	195	197	–	569	177	238	287	–	702
Originations or purchases	93	–	–	–	93	82	–	–	–	82
Transfers[2]:										
to Stage 1	54	(54)	–	–	–	67	(65)	(2)	–	–
to Stage 2	(28)	36	(8)	–	–	(27)	31	(4)	–	–
to Stage 3	(1)	(6)	7	–	–	–	(3)	3	–	–
Net remeasurement of loss allowances[3]	(24)	79	61	(7)	109	(93)	21	24	–	(48)
Derecognitions[4]	(19)	(29)	(4)	–	(52)	(29)	(27)	(4)	–	(60)
Changes to models	(2)	(1)	–	–	(3)	–	–	–	–	–
Provisions for credit losses	73	25	56	(7)	147	–	(43)	17	–	(26)
Write-offs	–	–	(12)	–	(12)	–	–	(116)	–	(116)
Disposals	–	–	–	–	–	–	–	–	–	–
Recoveries	–	–	3	7	10	–	–	3	–	3
Foreign exchange movements and other	1	–	–	–	1	–	–	6	–	6
Balance at end	251	220	244	–	715	177	195	197	–	569
Includes:										
Amounts drawn	182	194	244	–	620	115	160	197	–	472
Undrawn commitments[5]	69	26	–	–	95	62	35	–	–	97
Total allowances for credit losses at end[7]	474	554	418	(110)	1,336	353	504	333	(92)	1,098
Includes:										
Amounts drawn	375	501	418	(110)	1,184	266	448	333	(92)	955
Undrawn commitments[5]	99	53	–	–	152	87	56	–	–	143

(1) The total amount of undiscounted initially expected credit losses on the POCI loans acquired during the year ended October 31, 2023 was $93 million ($15 million for the year ended October 31, 2022). The expected credit losses reflected in the purchase price have been discounted.
(2) Represent stage transfers deemed to have taken place at the beginning of the quarter in which the transfer occurred.
(3) Includes the net remeasurement of loss allowances (after transfers) attributable mainly to changes in volumes and in the credit quality of existing loans as well as to changes in risk parameters.
(4) Represent reversals to loss allowances arising from full loan repayments (excluding write-offs and disposals).
(5) The allowances for credit losses on undrawn commitments are reported in the *Other liabilities* item of the Consolidated Balance Sheet.
(6) Includes customers' liability under acceptances.
(7) Excludes allowances for credit losses on other financial assets at amortized cost and on off-balance-sheet commitments other than undrawn commitments.

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

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

					2023					2022
			As at October 31	Year ended October 31				As at October 31	Year ended October 31	
	Gross loans[1]	Impaired loans[1]	Allowances for credit losses on impaired loans[1][2]	Provisions for credit losses	Write-offs	Gross loans[1]	Impaired loans[1]	Allowances for credit losses on impaired loans[1][2]	Provisions for credit losses	Write-offs
Retail										
Residential mortgage[3]	99,910	405	91	28	2	95,575	299	64	31	4
Qualifying revolving retail[4]	4,000	24	18	82	96	3,801	16	12	54	72
Other retail[5]	16,696	157	67	81	88	14,899	102	58	36	41
	120,606	586	176	191	186	114,275	417	134	121	117
Non-retail										
Agriculture	8,545	67	4	2	–	8,109	31	2	(1)	–
Oil and gas	1,826	–	–	(7)	–	1,435	6	6	(19)	26
Mining	1,245	–	–	(4)	–	1,049	11	4	4	–
Utilities	12,427	–	–	(35)	–	9,682	35	35	(2)	59
Non-real-estate construction[6]	1,739	38	31	–	–	1,935	38	32	5	–
Manufacturing	7,047	76	51	41	–	7,374	21	10	(4)	14
Wholesale	3,208	51	40	15	–	3,241	35	26	2	–
Retail	3,801	29	18	(1)	–	3,494	30	19	2	–
Transportation	2,631	14	9	3	1	2,209	8	7	–	–
Communications	2,556	17	14	5	2	1,830	11	10	2	–
Financial services	11,693	22	5	6	2	10,777	5	3	–	–
Real estate services and real estate construction[7]	25,967	19	5	–	3	22,382	26	6	1	12
Professional services	3,973	8	3	(1)	2	2,338	9	4	–	1
Education and health care	3,700	83	55	31	1	3,412	108	25	25	2
Other services	6,898	13	7	–	2	6,247	20	9	2	2
Government	1,727	–	–	–	–	1,661	–	–	–	–
Other	6,478	1	–	(1)	–	5,790	1	1	–	–
	105,461	438	242	54	13	92,965	395	199	17	116
Excluding POCI loans	226,067	1,024	418	245	199	207,240	812	333	138	233
POCI	560	560	(110)	(23)	–	459	459	(92)	6	–
	226,627	1,584	308	222	199	207,699	1,271	241	144	233
Stages 1 and 2[8]				175					1	
				397	199				145	233

(1) Includes customers' liability under acceptances.
(2) Allowances for credit losses on drawn amounts.
(3) Includes residential mortgages on one-to-four-unit dwellings (Basel definition) and home equity lines of credit.
(4) Includes lines of credit and credit card receivables.
(5) Includes consumer loans and other retail loans but excludes SME loans.
(6) Includes civil engineering loans, public-private partnership loans, and project finance loans.
(7) Includes residential mortgages on dwellings of five or more units and SME loans.
(8) Includes provisions for credit losses on other financial assets at amortized cost and on off-balance-sheet commitments.

Main Macroeconomic Factors

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

						As at October 31, 2023
	Base scenario		Upside scenario		Downside scenario	
	Next 12 months	Remaining forecast period	Next 12 months	Remaining forecast period	Next 12 months	Remaining forecast period
Macroeconomic factors[1]						
GDP growth[2]	– %	1.7 %	0.4 %	1.9 %	(4.9) %	2.6 %
Unemployment rate	6.3 %	6.5 %	5.9 %	5.9 %	7.7 %	7.2 %
Housing price index growth[2]	(1.1) %	1.9 %	2.5 %	2.4 %	(13.9) %	0.3 %
BBB spread[3]	2.4 %	2.1 %	1.9 %	1.8 %	3.1 %	2.3 %
S&P/TSX growth[2][4]	(10.0) %	3.7 %	4.0 %	3.0 %	(25.6) %	5.5 %
WTI oil price[5] *(US$ per barrel)*	77	80	91	86	46	56

						As at July 31, 2023
	Base scenario		Upside scenario		Downside scenario	
	Next 12 months	Remaining forecast period	Next 12 months	Remaining forecast period	Next 12 months	Remaining forecast period
Macroeconomic factors[1]						
GDP growth[2]	(0.4) %	1.7 %	0.4 %	1.9 %	(4.9) %	2.6 %
Unemployment rate	6.1 %	6.5 %	5.7 %	5.6 %	7.5 %	7.0 %
Housing price index growth[2]	– %	2.4 %	6.1 %	2.3 %	(13.9) %	0.3 %
BBB spread[3]	2.4 %	2.1 %	1.9 %	1.8 %	3.1 %	2.4 %
S&P/TSX growth[2][4]	(5.5) %	3.7 %	4.0 %	3.0 %	(25.6) %	5.5 %
WTI oil price[5] *(US$ per barrel)*	67	70	82	77	41	50

						As at October 31, 2022
	Base scenario		Upside scenario		Downside scenario	
	Next 12 months	Remaining forecast period	Next 12 months	Remaining forecast period	Next 12 months	Remaining forecast period
Macroeconomic factors[1]						
GDP growth[2]	0.6 %	1.7 %	1.1 %	1.6 %	(5.2) %	2.9 %
Unemployment rate	6.0 %	6.1 %	5.4 %	5.4 %	7.4 %	6.4 %
Housing price index growth[2]	(11.2) %	0.7 %	– %	0.2 %	(13.9) %	0.3 %
BBB spread[3]	2.4 %	2.1 %	2.0 %	1.9 %	3.4 %	2.6 %
S&P/TSX growth[2][4]	(4.3) %	2.4 %	5.1 %	2.6 %	(25.6) %	5.5 %
WTI oil price[5] *(US$ per barrel)*	78	77	102	97	44	51

(1) All macroeconomic factors are based on the Canadian economy unless otherwise indicated.
(2) Growth rate is annualized.
(3) Yield on corporate BBB bonds less yield on Canadian federal government bonds with a 10-year maturity.
(4) Main stock index in Canada.
(5) The West Texas Intermediate (WTI) index is commonly used as a benchmark for the price of oil.

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

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

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

During the year ended October 31, 2023, the macroeconomic outlook remained essentially unchanged and uncertainty remains high.

The economic outlook is still marked by uncertainty, as central banks have become extremely determined to curb inflation, which remains too high in many countries. With interest rates rising sharply, the year ahead could prove shaky for the global economy. Geopolitical instability could keep energy prices relatively high, despite an expected economic slowdown. Our baseline forecast shows a few quarters of economic contraction in the United States and Canada over the coming year. Of all the G7 countries, Canada has the most restrictive monetary policy, and signs of fragility are emerging, in particular as GDP stagnates over the last two quarters and the unemployment rate rises. Moreover, data from household and business surveys do not suggest an upswing but rather an economy that continues to deteriorate. As for real estate, the market is showing signs of weakness after a fleeting reversal at the start of the year. In the base scenario, the unemployment rate stands at 6.5% after 12 months, up 1.0 percentage point, and house prices are down 1.1% year over year. The S&P/TSX sits at 18,145 points after one year, and the price of oil hovers around US$73.

In the upside scenario, an easing of geopolitical tensions boosts confidence. Inflation continues to subside, as the pressure on supply chains eases without the restrictive monetary policy having caused too much damage to the economy. The Canadian and U.S. governments continue to expand spending, offsetting the effects of restrictive monetary policies. With the labour market holding up, consumer spending remains relatively resilient. House prices rise at a moderate pace against a backdrop of strong demographic growth. After one year, the unemployment rate in this scenario is more favourable than in the base scenario (four-tenths lower). House prices rise 2.5%, the S&P/TSX is at 20,957 points after one year, and the price of oil hovers around US$81.

In the downside scenario, central banks have underestimated the impact of simultaneous tightening measures, and the global economy sinks into a recession as falling demand translates into reduced investment by businesses, which also lay off a large number of workers. Given budgetary constraints, governments are unable to support households and businesses as they did during the pandemic. The geopolitical situation continues to cause concern, with the risk of conflicts escalating. After 12 months, economic contraction pushes unemployment to 8.5%. House prices fall sharply (-13.9%). The S&P/TSX sits at 14,994 points after one year, and the price of oil hovers around US$40.

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

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

Scenarios

The following table shows a comparison of the Bank's allowances for credit losses on non-impaired loans (Stages 1 and 2) as at October 31, 2023 based on the probability weightings of three scenarios with allowances for credit losses resulting from simulations of each scenario weighted at 100%.

	Allowances for credit losses on non-impaired loans
Balance as at October 31, 2023	**1,028**
Simulations	
100% upside scenario	**716**
100% base scenario	**824**
100% downside scenario	**1,338**

Migration

The following table shows a comparison of the Bank's allowances for credit losses on non-impaired loans (Stages 1 and 2) as at October 31, 2023 with the estimated allowances for credit losses that would result if all these non-impaired loans were in Stage 1.

	Allowances for credit losses on non-impaired loans
Balance as at October 31, 2023	**1,028**
Simulations	
Non-impaired loans if they were all in Stage 1	**801**

Note 8 – Financial Assets Transferred But Not Derecognized

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

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

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

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

As at October 31	2023	2022
Carrying value of financial assets transferred but not derecognized		
Securities[1]	91,097	76,551
Residential mortgages	23,227	24,102
	114,324	100,653
Carrying value of associated liabilities[2]	62,295	56,555
Fair value of financial assets transferred but not derecognized		
Securities[1]	91,098	76,551
Residential mortgages	22,002	22,954
	113,100	99,505
Fair value of associated liabilities[2]	61,468	55,767

(1) The amount related to the securities loaned is the maximum amount of Bank securities that can be lent. For obligations related to securities sold under repurchase agreements, the amount includes the Bank's own financial assets as well as those of third parties.
(2) Associated liabilities include liabilities related to transferred receivables and obligations related to securities sold under repurchase agreements before the offsetting impact of $6,994 million as at October 31, 2023 ($3,606 million as at October 31, 2022). Liabilities related to securities loaned are not included, as the Bank can lend its own financial assets and those of third parties. The carrying value and fair value of liabilities related to securities loaned stood at $10,171 million before the offsetting impact of $2,090 million as at October 31, 2023 ($8,843 million before the offsetting impact of $2,043 million as at October 31, 2022).

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

As at October 31	2023	2022
Carrying value of financial assets transferred but not derecognized		
Securities backed by insured residential mortgages and other securities sold to CHT	24,313	25,468
Securities sold under repurchase agreements	40,357	33,880
Securities loaned	49,654	41,305
	114,324	100,653

Note 9 – Investments in Associates and Joint Ventures

As at October 31		2023	2022
	Business segment	Carrying value	Carrying value
Listed associate			
TMX Group Limited[1]	Other	–	96
Unlisted associates		49	44
		49	140

(1) 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. Upon the fair value measurement, a $91 million gain was recorded in the *Non-interest income – Other* item of the Consolidated Statement of Income, reported in the *Other* heading of segment results. As at October 31, 2022, the Bank was exercising significant influence over TMX, mainly through its equity interest, debt financing, and presence on TMX's board of directors, and the Bank's ownership interest in TMX was 2.5%. During the year ended October 31, 2023, TMX paid $3 million in dividends to the Bank ($7 million for the year ended October 31, 2022).

As at October 31, 2023 and 2022, there were no significant restrictions limiting the ability of associates to transfer funds to the Bank in the form of dividends or to repay any loans or advances. Furthermore, the Bank has not made any specific commitment or contracted any contingent liability with respect to associates.

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

Year ended October 31[1]	2023	2022
Net income	6	5
Other comprehensive income	–	–
Comprehensive income	6	5

(1) The amounts are based on the cumulative balances for the 12-month periods ended September 30, 2023 and 2022.

Note 10 – Premises and Equipment

	Owned assets held							Right-of-use assets	Total
	Land	Head office building under construction[1]	Buildings	Computer equipment	Equipment and furniture	Leasehold improvements	Total	Real estate	
Cost									
As at October 31, 2021	71	248	68	255	110	338	1,090	732	1,822
Additions and modifications	3	183	2	53	14	46	301	69	370
Disposals	–	–	(7)	–	(3)	(2)	(12)		(12)
Fully depreciated assets			(7)	(38)	(7)	(10)	(62)	(8)	(70)
Impact of foreign currency translation	–	–	–	6	3	5	14	12	26
As at October 31, 2022	74	431	56	276	117	377	1,331	805	2,136
Additions and modifications	–	222	3	70	8	53	356	59	415
Disposals	–	–	(7)	–	(13)	(27)	(47)		(47)
Transfers[2]	–	(397)	386	4	7	–	–	–	–
Fully depreciated assets			(2)	(35)	(3)	(8)	(48)	(4)	(52)
Impact of foreign currency translation	–	–	–	2	–	1	3	3	6
As at October 31, 2023	**74**	**256**	**436**	**317**	**116**	**396**	**1,595**	**863**	**2,458**
Accumulated depreciation									
As at October 31, 2021			47	150	55	156	408	198	606
Depreciation for the year			2	48	15	32	97	105	202
Disposals			(4)	–	(3)	(2)	(9)		(9)
Fully depreciated assets			(7)	(38)	(7)	(10)	(62)	(8)	(70)
Impact of foreign currency translation			–	2	1	3	6	4	10
As at October 31, 2022			38	162	61	179	440	299	739
Depreciation for the year			4	55	10	36	105	106	211
Disposals			(5)	–	(13)	(27)	(45)		(45)
Impairment losses[3]			–	–	–	–	–	11	11
Fully depreciated assets			(2)	(35)	(3)	(8)	(48)	(4)	(52)
Impact of foreign currency translation			–	1	–	–	1	1	2
As at October 31, 2023			**35**	**183**	**55**	**180**	**453**	**413**	**866**
Carrying value as at October 31, 2022	74	431	18	114	56	198	891	506	1,397
Carrying value as at October 31, 2023	**74**	**256**	**401**	**134**	**61**	**216**	**1,142**	**450**	**1,592**

(1) As at October 31, 2023, contractual commitments related to the head office building under construction stood at $86 million, covering a period up to 2025.
(2) During the year ended October 31, 2023, the Bank started occupying certain floors of the new head office building under construction. As a result, an amount related to significant components being utilized was transferred to their corresponding asset categories.
(3) During the year ended October 31, 2023, the Bank recorded $11 million in impairment losses related to right-of-use assets (no amount was recorded during the year ended October 31, 2022). These impairment losses were recognized in the *Non-interest expenses – Occupancy* item of the Consolidated Statement of Income and reported in the *Other* heading of segment results.

Assets Leased Under Operating Leases

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

The future minimum payments receivable under these operating leases total $6 million and include sublease revenues of $5 million related to real estate right-of-use assets.

Note 10 – Premises and Equipment (cont.)

Leases Recognized in the Consolidated Statement of Income

Year ended October 31	2023	2022
Interest expense	17	16
Expense for leases of low-value assets[1]	10	9
Expense relating to variable lease payments	100	94
Income from leasing and subleasing[2]	4	4

(1) The expense relates to lease payments for low-value assets that are part of the exemptions permitted by the practical expedients of IFRS 16.
(2) These amounts for the years ended October 31, 2023 and 2022 include variable lease payments of $2 million.

For the year ended October 31, 2023, the cash outflows for leases amounted to $229 million (2022: $218 million).

Note 11 – Goodwill and Intangible Assets

Goodwill

The following table presents changes in the carrying amounts of goodwill by cash-generating unit (CGU) and by business segment for the years ended October 31, 2023 and 2022.

	Personal and Commercial[1]	Wealth Management				Financial Markets[1]	USSF&I			Other	Total
		Third-Party Solutions[1]	Securities Brokerage[1]	Managed Solutions[1]	Total		Credigy Ltd.[1]	Advanced Bank of Asia Limited[1]	Total	Flinks Technology Inc.[1]	
Balance as at October 31, 2021	54	256	434	269	959	235	31	124	155	101	1,504
Impact of foreign currency translation	–	–	–	–	–	–	3	12	15	–	15
Balance as at October 31, 2022	54	256	434	269	959	235	34	136	170	101	1,519
Impact of foreign currency translation	–	–	–	–	–	–	–	2	2	–	2
Balance as at October 31, 2023	**54**	**256**	**434**	**269**	**959**	**235**	**34**	**138**	**172**	**101**	**1,521**

(1) Constitutes a CGU.

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

Goodwill was tested for impairment during the years ended October 31, 2023 and 2022, and no impairment loss was recognized.

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

The discount rate used for each CGU or group of CGUs is calculated using the cost of debt financing and the cost related to the Bank's equity. This rate corresponds to the Bank's weighted average cost of capital and reflects the risk specific to the CGU. The long-term growth rate used in calculating discounted cash flow estimates is based on the forecasted growth rate plus a risk premium. The rate is constant over the entire five-year period for which the cash flows were determined. Growth rates are determined, among other factors, based on past growth rates, economic trends, inflation, competition, and the impact of the Bank's strategic initiatives. As at October 31, 2023, for each CGU or CGU group, the discount rate (after tax) used was 9.78% (9.48% as at October 31, 2022), and the long-term growth rate varied between 2% and 5%, depending on the CGU, as at October 31, 2023 and 2022.

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

Intangible Assets

	Indefinite useful life			Finite useful life				Total
	Management contracts[1]	Trademark	Total	Internally-generated software[2]	Other software	Other intangible assets	Total	
Cost								
As at October 31, 2021	160	9	169	1,908	120	64	2,092	2,261
Acquisitions	–	–	–	346	28	–	374	374
Impairment losses[3]	(1)	(1)	(2)	(7)	–	(2)	(9)	(11)
Fully amortized intangible assets				(138)	(21)	(2)	(161)	(161)
Impact of foreign currency translation	–	–	–	–	1	–	1	1
As at October 31, 2022	159	8	167	2,109	128	60	2,297	2,464
Acquisitions	**–**	**–**	**–**	**282**	**17**	**–**	**299**	**299**
Disposals	**–**	**–**	**–**	**(19)**	**–**	**–**	**(19)**	**(19)**
Impairment losses[3]	**(1)**	**(1)**	**(2)**	**(315)**	**–**	**–**	**(315)**	**(317)**
Fully amortized intangible assets				**(168)**	**(18)**	**–**	**(186)**	**(186)**
As at October 31, 2023	**158**	**7**	**165**	**1,889**	**127**	**60**	**2,076**	**2,241**
Accumulated amortization								
As at October 31, 2021				861	75	51	987	987
Amortization for the year				253	20	6	279	279
Impairment losses[3]				(2)	–	(1)	(3)	(3)
Fully amortized intangible assets				(138)	(21)	(2)	(161)	(161)
Impact of foreign currency translation				–	2	–	2	2
As at October 31, 2022				974	76	54	1,104	1,104
Amortization for the year				**287**	**20**	**6**	**313**	**313**
Disposals				**(6)**	**–**	**–**	**(6)**	**(6)**
Impairment losses[3]				**(240)**	**–**	**–**	**(240)**	**(240)**
Fully amortized intangible assets				**(168)**	**(18)**	**–**	**(186)**	**(186)**
As at October 31, 2023				**847**	**78**	**60**	**985**	**985**
Carrying value as at October 31, 2022	159	8	167	1,135	52	6	1,193	1,360
Carrying value as at October 31, 2023	**158**	**7**	**165**	**1,042**	**49**	**–**	**1,091**	**1,256**

(1) For annual impairment testing purposes, management contracts are allocated to the Managed Solutions CGU.
(2) The remaining amortization period for significant internally-generated software is four years.
(3) During the year ended October 31, 2023, the Bank recorded $2 million in impairment losses resulting from the impairment test carried out on indefinite-life intangible assets ($2 million during the year ended October 31, 2022) as well as an amount of $75 million related to internally-generated software for which the Bank has decided to cease its use or development ($5 million during the year ended October 31, 2022). The impairment losses related to internally-generated software were recognized in the *Non-interest expenses – Technology* item of the Consolidated Statement of Income and reported in the Personal and Commercial ($59 million), Wealth Management ($8 million), Financial Markets ($7 million) segments and in the *Other* heading ($1 million) of segment results.

Note 12 – Other Assets

As at October 31	2023	2022
Receivables, prepaid expenses and other items	3,126	2,186
Interest and dividends receivable	1,605	1,057
Due from clients, dealers and brokers	538	842
Defined benefit asset (Note 23)	356	498
Deferred tax assets (Note 24)	634	389
Current tax assets	925	471
Reinsurance assets	14	6
Insurance assets	147	104
Commodities[1]	544	405
	7,889	5,958

(1) Commodities are recorded at fair value based on quoted prices in active markets and are classified in Level 1 of the fair value measurement hierarchy. The commodities were previously presented in *Receivables, prepaid expenses and other items*.

Note 13 – Deposits

As at October 31				2023	2022
	On demand[1]	After notice[2]	Fixed term[3]	Total	Total
Personal	4,335	35,289	48,259	87,883	78,811
Business and government	66,823	32,602	97,903	197,328	184,230
Deposit-taking institutions	1,579	114	1,269	2,962	3,353
	72,737	68,005	147,431	288,173	266,394

(1) Demand deposits are deposits for which the Bank does not have the right to require notice of withdrawal and consist essentially of deposits in chequing accounts.
(2) Notice deposits are deposits for which the Bank may legally require a notice of withdrawal and consist mainly of deposits in savings accounts.
(3) Fixed-term deposits are deposits that can be withdrawn by the holder on a specified date and include term deposits, guaranteed investment certificates, savings accounts and plans, covered bonds, and other similar instruments.

The *Deposits – Business and government* item includes, among other items, covered bonds, as described below, and a $17.7 billion amount of deposits as at October 31, 2023 ($12.8 billion as at October 31, 2022) that are subject to the bank bail-in conversion regulations issued by the Government of Canada. These regulations provide certain powers to the Canada Deposit Insurance Corporation (CDIC), notably the power to convert certain eligible Bank shares and liabilities into common shares should the Bank become non-viable.

Covered Bonds

NBC Covered Bond Guarantor (Legislative) Limited Partnership

In December 2013, the Bank established the covered bond legislative program under which covered bonds are issued. It therefore created NBC Covered Bond Guarantor (Legislative) Limited Partnership (the Guarantor) to guarantee payment of the principal and interest owed to the bondholders. The Bank sold uninsured residential mortgages to the Guarantor and granted it loans to facilitate the acquisition of these assets. During the year ended October 31, 2023, the Bank issued 280 million Swiss francs and 1.0 billion euros in covered bonds, and 1.5 billion euros in covered bonds came to maturity (the Bank issued 1.3 billion euros, US$1.5 billion and 750 million pounds sterling in covered bonds, and 1.0 billion euros and US$1.0 billion in covered bonds came to maturity during the year ended October 31, 2022). The covered bonds totalled $10.9 billion as at October 31, 2023 ($10.4 billion as at October 31, 2022). For additional information, see Note 27 to these consolidated financial statements.

The Bank has limited access to the assets owned by this structured entity according to the terms of the agreements that apply to this transaction. The assets owned by this entity totalled $20.9 billion as at October 31, 2023 ($18.2 billion as at October 31, 2022), of which $20.6 billion ($17.9 billion as at October 31, 2022) is presented in *Residential mortgage* loans on the Bank's Consolidated Balance Sheet.

Note 14 – Other Liabilities

As at October 31	2023	2022
Accounts payable and accrued expenses	**2,458**	2,582
Subsidiaries' debts to third parties	**224**	156
Interest and dividends payable	**2,022**	1,063
Lease liabilities	**517**	552
Due to clients, dealers and brokers	**669**	730
Defined benefit liability (Note 23)	**94**	111
Allowances for credit losses – Off-balance-sheet commitments (Note 7)	**176**	162
Deferred tax liabilities (Note 24)	**28**	14
Current tax liabilities	**208**	67
Insurance liabilities	**11**	10
Other items(1)(2)(3)	**1,016**	914
	7,423	6,361

(1) As at October 31, 2023, *Other items* included $42 million in litigation provisions ($11 million as at October 31, 2022).
(2) As at October 31, 2023, *Other items* included $31 million in provisions for onerous contracts ($33 million as at October 31, 2022).
(3) As at October 31, 2023, *Other items* included the financial liability resulting from put options written to non-controlling interests of Flinks for an amount of $23 million ($33 million as at October 31, 2022).

Note 15 – Subordinated Debt

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

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

On August 31, 2022, the Bank had redeemed debentures denominated in a foreign currency and maturing on February 28, 2087 in an amount of US$7 million at their nominal value plus accrued interest.

On July 25, 2022, the Bank had issued medium-term notes for an amount of $750 million, bearing interest at 5.426% and maturing on August 16, 2032.

As at October 31			2023	2022
Maturity date	**Interest rate**	**Redemption date**		
February 2028	3.183%	February 1, 2023	**–**	750
August 2032(1)	5.426% (2)	August 16, 2027(3)	**750**	750
			750	1,500
Fair value hedge adjustment(4)			**–**	2
Unamortized issuance costs(5)			**(2)**	(3)
Total			**748**	1,499

(1) These notes contain non-viability contingent capital (NVCC) provisions and qualify for the purposes of calculating regulatory capital under Basel III. In the case of a trigger event as defined by OSFI, each note will be automatically and immediately converted, on a full and permanent basis, without the consent of the holder, into a specified number of common shares of the Bank as determined using an automatic conversion formula with a multiplier of 1.5 and a conversion price based on the greater of: (i) a floor price of $5.00; (ii) the current market price of common shares, which represents the volume weighted average price of common shares for the ten trading days ending on the trading day preceding the date of the trigger event. If the common shares are not listed on an exchange when this price is being established, the price will be the fair value reasonably determined by the Bank's Board. The number of shares issued is determined by dividing the par value of the note (plus accrued and unpaid interest on such note) by the conversion price and then applying the multiplier.
(2) Bearing interest at a rate of 5.426%, payable semi-annually until August 16, 2027, and thereafter bearing interest at a floating rate equal to CORRA compounded daily plus 2.32%, payable quarterly.
(3) With the prior approval of OSFI, the Bank may, at its option, redeem these notes in whole or in part, at their nominal value plus accrued and unpaid interest.
(4) The fair value hedge adjustment represents the impact of the hedging transactions applied to hedge changes in the fair value of subordinated debt caused by interest rate fluctuations.
(5) The unamortized costs related to the issuance of the subordinated debt represent the initial cost, net of accumulated amortization, calculated using the effective interest rate method.

Note 16 – Derivative Financial Instruments

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

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

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

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

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

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

Notional Amounts[1]

As at October 31							2023	2022
	Term to maturity							
	3 months or less	Over 3 months to 12 months	Over 1 year to 5 years	Over 5 years	Total contracts	Contracts held for trading purposes	Contracts designated as hedges	Total contracts
Interest rate contracts								
OTC contracts								
Forward rate agreements								
Not settled by central counterparties	8,077	1,035	–	–	9,112	9,112	–	8,505
Swaps								
Not settled by central counterparties	3,681	10,571	72,130	54,055	140,437	138,135	2,302	121,384
Settled by central counterparties	192,142	222,675	391,902	141,129	947,848	876,491	71,357	921,657
Options purchased	–	996	4,347	2,044	7,387	7,265	122	5,919
Options written	602	785	5,126	2,106	8,619	8,088	531	9,010
	204,502	236,062	473,505	199,334	1,113,403	1,039,091	74,312	1,066,475
Exchange-traded contracts								
Futures								
Long positions	12,381	29,624	2,463	–	44,468	44,468	–	28,472
Short positions	24,066	30,587	8,765	–	63,418	63,418	–	62,205
Options purchased	14	–	–	–	14	14	–	3,000
Options written	14	–	–	–	14	14	–	1,362
	36,475	60,211	11,228	–	107,914	107,914	–	95,039
Foreign exchange contracts								
OTC contracts								
Forwards	32,985	13,430	7,590	629	54,634	54,634	–	82,172
Swaps	259,006	98,177	109,135	34,523	500,841	480,017	20,824	515,684
Options purchased	16,564	15,029	4,445	–	36,038	36,038	–	34,831
Options written	17,596	19,312	4,253	–	41,161	41,161	–	39,477
	326,151	145,948	125,423	35,152	632,674	611,850	20,824	672,164
Exchange-traded contracts								
Futures								
Long positions	69	–	–	–	69	69	–	72
Short positions	28	–	–	–	28	28	–	55
	97	–	–	–	97	97	–	127
Equity, commodity and credit derivative contracts[2]								
OTC contracts								
Forwards	11	–	3,568	–	3,579	3,579	–	3,735
Swaps								
Not settled by central counterparties	31,001	19,684	20,439	9,909	81,033	80,889	144	65,569
Settled by central counterparties	176	99	6,417	708	7,400	7,400	–	4,633
Options purchased	4,976	315	916	12	6,219	6,219	–	1,822
Options written	51	468	2,459	351	3,329	3,329	–	2,371
	36,215	20,566	33,799	10,980	101,560	101,416	144	78,130
Exchange-traded contracts								
Futures								
Long positions	1,913	621	411	85	3,030	3,030	–	4,789
Short positions	19,161	2,135	1,146	3	22,445	22,445	–	13,452
Options purchased	10,536	1,880	2,204	–	14,620	14,620	–	9,142
Options written	10,187	2,324	3,677	137	16,325	16,325	–	11,490
	41,797	6,960	7,438	225	56,420	56,420	–	38,873
	645,237	469,747	651,393	245,691	2,012,068	1,916,788	95,280	1,950,808

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

Note 16 – Derivative Financial Instruments (cont.)

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

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

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

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

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

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

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

Credit Risk Exposure of the Derivative Financial Instrument Portfolio

As at October 31			2023			2022
	Replacement cost	**Credit risk equivalent[1]**	**Risk-weighted amount[1]**	Replacement cost	Credit risk equivalent[1]	Risk-weighted amount[1]
Interest rate contracts	**6,708**	**3,024**	**457**	5,490	2,639	508
Foreign exchange contracts	**7,233**	**5,607**	**1,582**	8,775	5,926	1,847
Equity, commodity and credit derivative contracts	**3,575**	**8,544**	**1,428**	4,282	6,569	1,797
	17,516	**17,175**	**3,467**	18,547	15,134	4,152
Impact of master netting agreements	**(8,032)**			(9,583)		
	9,484	**17,175**	**3,467**	8,964	15,134	4,152

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

Credit Risk Exposure of the Derivative Financial Instrument Portfolio by Counterparty

As at October 31		2023		2022
	Replacement cost	**Credit risk equivalent**	Replacement cost	Credit risk equivalent
OECD member-country governments	**928**	**3,052**	1,342	2,700
Banks of OECD member countries	**606**	**3,236**	589	3,292
Other	**7,950**	**10,887**	7,033	9,142
	9,484	**17,175**	8,964	15,134

Fair Value of Derivative Financial Instruments

As at October 31			2023			2022
	Positive	**Negative**	**Net**	Positive	Negative	Net
Contracts held for trading purposes						
Interest rate contracts						
Forwards	147	54	93	125	85	40
Swaps	4,753	4,700	53	3,267	3,620	(353)
Options	179	208	(29)	168	166	2
	5,079	4,962	117	3,560	3,871	(311)
Foreign exchange contracts						
Forwards	878	368	510	1,426	919	507
Swaps	5,550	6,004	(454)	6,461	7,140	(679)
Options	588	544	44	707	597	110
	7,016	6,916	100	8,594	8,656	(62)
Equity, commodity and credit derivative contracts						
Forwards	40	244	(204)	911	314	597
Swaps	2,573	3,741	(1,168)	1,926	3,717	(1,791)
Options	962	2,424	(1,462)	1,440	1,793	(353)
	3,575	6,409	(2,834)	4,277	5,824	(1,547)
Total – Contracts held for trading purposes	15,670	18,287	(2,617)	16,431	18,351	(1,920)
Contracts designated as hedges						
Interest rate contracts						
Swaps	1,629	1,384	245	1,930	1,137	793
Options	–	11	(11)	–	35	(35)
	1,629	1,395	234	1,930	1,172	758
Foreign exchange contracts						
Swaps	217	181	36	182	109	73
	217	181	36	182	109	73
Equity, commodity and credit derivative contracts						
Swaps	–	25	(25)	4	–	4
	–	25	(25)	4	–	4
Total – Contracts designated as hedges	1,846	1,601	245	2,116	1,281	835
Designated as fair value hedges	928	902	26	1,186	586	600
Designated as cash flow hedges	918	699	219	930	695	235
Total fair value	17,516	19,888	(2,372)	18,547	19,632	(1,085)
Impact of master netting agreements	(8,032)	(8,032)	–	(9,583)	(9,583)	–
	9,484	11,856	(2,372)	8,964	10,049	(1,085)

Note 17 – Hedging Activities

The Bank's market risk exposure, risk management objectives, policies and procedures, and risk measurement methods are presented in the Risk Management section of the MD&A for the year ended October 31, 2023.

The Bank has elected, as permitted under IFRS 9, to continue applying the hedge accounting requirements of IAS 39. Some of the tables present information on currencies, specifically, the U.S. dollar (USD), the Australian dollar (AUD), the Canadian dollar (CAD), the Hong Kong dollar (HKD), the euro (EUR), the pound sterling (GBP) and the Swiss franc (CHF).

Note 17 – Hedging Activities (cont.)

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

As at October 31							2023			2022
	Term to maturity					Fair value			Fair value	
	1 year or less	Over 1 year to 2 years	Over 2 years to 5 years	Over 5 years	Total	Assets	Liabilities	Total	Assets	Liabilities
Fair value hedges										
Interest rate risk										
Interest rate swaps						928	858		1,176	527
Notional amount – CDOR reform[1]	594	2,850	3,527	638	7,609			10,730		
Notional amount – Other	10,515	2,317	9,768	6,268	28,868			11,559		
Average fixed interest rate – Pay fixed	0.4 %	1.2 %	2.2 %	3.3 %	2.1 %			1.7 %		
Average fixed interest rate – Receive fixed	5.3 %	3.4 %	3.0 %	3.3 %	4.1 %			2.0 %		
Cross-currency swaps						–	33		10	24
Notional amount	–	–	–	112	112			192		
Average USD-AUD exchange rate	–	–	–	$ 0.6943	$ 0.6943			$ 0.7381		
Average CAD-HKD exchange rate	–	–	–	–	–			$ 0.1621		
Average USD-EUR exchange rate	–	–	–	$ 1.0513	$ 1.0513			$ 1.0513		
Options						–	11		–	35
Notional amount – CDOR reform[1]					–			30		
Notional amount – Other	–	–	122	531	653			959		
Average fixed interest rate – Purchased	–	–	(1.3) %	–	(1.3) %			(1.2) %		
Average fixed interest rate – Written	–	–	–	2.4 %	2.4 %			2.8 %		
	11,109	5,167	13,417	7,549	37,242	928	902	23,470	1,186	586
Cash flow hedges										
Interest rate risk										
Interest rate swaps						701	526		754	610
Notional amount – CDOR reform[1]	371	1,605	3,693	1,550	7,219			12,400		
Notional amount – Other	6,020	3,643	18,759	1,541	29,963			20,455		
Average fixed interest rate – Pay fixed	2.8 %	3.5 %	3.4 %	3.5 %	3.3 %			1.9 %		
Average fixed interest rate – Receive fixed	3.1 %	0.7 %	2.5 %	3.4 %	2.6 %			1.9 %		
Cross-currency swaps						217	148		172	85
Notional amount – CDOR reform[1]	391	1,225	2,297	–	3,913			3,888		
Notional amount – Other	3,301	4,337	9,151	–	16,789			9,202		
Average CAD-USD exchange rate	$ 1.3112	$ 1.3093	$ 1.3161	–	$ 1.3133			$ 1.2972		
Average USD-EUR exchange rate	$ 1.1534	$ 1.1487	$ 1.1308	–	$ 1.1402			$ 1.1691		
Average USD-GBP exchange rate	$ 1.2853	–	$ 1.1945	–	$ 1.2207			$ 1.2375		
Average CHF-USD exchange rate	–	–	$ 1.0064	–	$ 1.0064					
Equity price risk										
Equity swaps										
Notional amount – CDOR reform[1]	144	–	–	–	144	–	25	136	4	–
Average price	$ 101.63	–	–	–	$ 101.63			$ 86.36		
	10,227	10,810	33,900	3,091	58,028	918	699	46,081	930	695
Hedges of net investments in foreign operations[2]										
Foreign exchange risk										
Cross-currency swaps										
Notional amount	10	–	–	–	10	–	–	10	–	–
Average CAD-USD exchange rate	$ 1.3209	–	–	–	$ 1.3209			$ 1.3802		
Average USD-HKD exchange rate	$ 0.1280	–	–	–	$ 0.1280			$ 0.1275		
	10	–	–	–	10	–	–	10	–	–
	21,346	15,977	47,317	10,640	95,280	1,846	1,601	69,561	2,116	1,281

(1) Includes only contracts that reference CDOR and that mature after June 28, 2024.
(2) As at October 31, 2023, the Bank also designated $1,892 million in foreign currency deposits denominated in U.S. dollars as net investment hedging instruments ($1,410 million as at October 31, 2022).

Fair Value Hedges

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

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

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

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

	As at October 31, 2023			Year ended October 31, 2023		
	Carrying value of hedged items	**Cumulative hedge adjustments from active hedges**	**Cumulative adjustments from discontinued hedges**	**Gains (losses) on the hedged items for ineffectiveness measurement[1]**	**Gains (losses) on the hedging instruments for ineffectiveness measurement[1]**	**Hedge ineffectiveness[1]**
Securities at fair value through other comprehensive income	**6,068**	**(332)**	**(211)**	**(191)**	**189**	**(2)**
Mortgages	**2,882**	**(213)**	**(224)**	**(12)**	**28**	**16**
Deposits	**17,728**	**(606)**	**(168)**	**214**	**(219)**	**(5)**
Liabilities related to transferred receivables	**4,155**	**(186)**	**13**	**202**	**(202)**	**–**
				213	**(204)**	**9**

	As at October 31, 2022			Year ended October 31, 2022		
	Carrying value of hedged items	Cumulative hedge adjustments from active hedges	Cumulative adjustments from discontinued hedges	Gains (losses) on the hedged items for ineffectiveness measurement[1]	Gains (losses) on the hedging instruments for ineffectiveness measurement[1]	Hedge ineffectiveness[1]
Securities at fair value through other comprehensive income	6,805	(529)	(53)	(588)	589	1
Mortgages	6,488	(332)	(231)	(415)	453	38
Deposits	5,803	(595)	9	682	(677)	5
Liabilities related to transferred receivables	682	(3)	68	3	(3)	–
Subordinated debt	2	–	2	–	–	–
				(318)	362	44

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

Note 17 – Hedging Activities (cont.)

Cash Flow Hedges

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

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

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

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

	As at October 31, 2023		Year ended October 31, 2023				
	Accumulated other comprehensive income from active hedges	*Accumulated other comprehensive income* from discontinued hedges	Gains (losses) on hedged items for ineffectiveness measurement[1]	Gains (losses) on hedging instruments for ineffectiveness measurement[1]	Hedge ineffectiveness[1]	Unrealized gains (losses) included in *Other comprehensive income* as the effective portion of the hedging instrument[1]	Losses (gains) reclassified to *Net interest income*[1]
Interest rate risk							
Loans	(170)	(240)	127	(131)	(3)	(127)	128
Deposits	127	117	(666)	667	8	223	(17)
Acceptances	59	266	(54)	52	–	52	(52)
Liabilities related to transferred receivables	11	49	6	(6)	–	(6)	(25)
	27	192	(587)	582	5	142	34
Equity price risk							
Other liabilities	(16)	–	17	(17)	–	(17)	–
	11	192	(570)	565	5	125	34

	As at October 31, 2022		Year ended October 31, 2022				
	Accumulated other comprehensive income from active hedges	*Accumulated other comprehensive income* from discontinued hedges	Gains (losses) on hedged items for ineffectiveness measurement[1]	Gains (losses) on hedging instruments for ineffectiveness measurement[1]	Hedge ineffectiveness[1]	Unrealized gains (losses) included in *Other comprehensive income* as the effective portion of the hedging instrument[1]	Losses (gains) reclassified to *Net interest income*[1]
Interest rate risk							
Loans	(169)	(241)	357	(356)	–	(356)	33
Deposits	28	10	257	(253)	–	62	–
Acceptances	210	115	(253)	255	2	253	23
Liabilities related to transferred receivables	64	27	(54)	55	1	54	(11)
	133	(89)	307	(299)	3	13	45
Equity price risk							
Other liabilities	–	–	47	(47)	–	(47)	–
	133	(89)	354	(346)	3	(34)	45

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

Hedges of Net Investments in Foreign Operations

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

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

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

	As at October 31, 2023		**Year ended October 31, 2023**				
	***Accumulated other comprehensive income* from active hedges**	***Accumulated other comprehensive income* from discontinued hedges**	**Gains (losses) on hedged items for ineffectiveness measurement[1]**	**Gains (losses) on hedging instruments for ineffectiveness measurement[1]**	**Hedge ineffectiveness[1]**	**Unrealized gains (losses) included in *Other comprehensive income* as the effective portion of the hedging instrument[1]**	**Losses (gains) reclassified to the *Non-interest income*[1]**
Net investments in foreign operations denominated in:							
USD	**38**	**(353)**	**66**	**(66)**	**–**	**(66)**	**–**

	As at October 31, 2022		Year ended October 31, 2022				
	Accumulated other comprehensive income from active hedges	*Accumulated other comprehensive income* from discontinued hedges	Gains (losses) on hedged items for ineffectiveness measurement[1]	Gains (losses) on hedging instruments for ineffectiveness measurement[1]	Hedge ineffectiveness[1]	Unrealized gains (losses) included in *Other comprehensive income* as the effective portion of the hedging instrument[1]	Losses (gains) reclassified to the *Non-interest income*[1]
Net investments in foreign operations denominated in:							
USD	26	(276)	166	(166)	–	(166)	–

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

Note 17 – Hedging Activities (cont.)

Reconciliation of Equity Components

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

As at October 31		2023		2022
	Net gains (losses) on cash flow hedges	**Net foreign currency translation adjustments**	Net gains (losses) on cash flow hedges	Net foreign currency translation adjustments
Balance at beginning	**31**	**204**	23	(129)
Hedges of net investments in foreign operations[1]				
Gains (losses) included as the effective portion		**(66)**		(166)
Net foreign currency translation gains (losses) on investments in foreign operations		**152**		458
Cash flow hedges[1]				
Gains (losses) included as the effective portion				
Interest rate risk	**142**		13	
Equity price risk	**(17)**		(47)	
Losses (gains) reclassified to *Net interest income*				
Interest rate risk	**34**		45	
Income taxes	**(44)**	**17**	(3)	41
Balance at end	**146**	**307**	31	204

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

Note 18 – Share Capital and Other Equity Instruments

Authorized

Common Shares

An unlimited number of shares without par value.

First Preferred Shares

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

First Preferred Shares and Other Equity Instruments

As at October 31, 2023

	Redemption and conversion date[1][2]	Redemption price per share or LRCN ($)[1]	Convertible into preferred shares[2]	Dividend per share ($) or interest rate per LRCN[3]	Reset premium of the dividend rate or interest rate
First preferred shares issued and outstanding					
Series 30[4]	May 15, 2024 [5][6]	25.00	Series 31	0.25156 [7]	2.40 %
Series 32[4]	February 15, 2025 [5][6]	25.00	Series 33	0.23994 [7]	2.25 %
Series 38[4]	November 15, 2027 [5][6]	25.00	Series 39	0.43919 [7]	3.43 %
Series 40[4]	May 15, 2028 [5][6]	25.00	Series 41	0.36363 [7]	2.58 %
Series 42[4]	November 15, 2023 [5][6]	25.00	Series 43	0.30938 [8]	2.77 %
Other equity instruments issued and outstanding					
Limited Recourse Capital Notes (LRCN)					
Series 1 (LRCN – Series 1)[9][10]	October 15, 2025 [5]	1,000.00	Series 44 [9]	4.30 %[11]	3.943 %
Series 2 (LRCN – Series 2)[9][10]	July 15, 2026 [5]	1,000.00	Series 45 [9]	4.05 %[11]	3.045 %
Series 3 (LRCN – Series 3)[9][10]	October 16, 2027 [5]	1,000.00	Series 46 [9]	7.50 %[11]	4.281 %
First preferred shares authorized but not issued					
Series 31[4]	May 15, 2024 [5]	25.00 [12]	n.a.	Floating rate [13]	2.40 %
Series 33[4]	February 15, 2025 [5]	25.00 [12]	n.a.	Floating rate [13]	2.25 %
Series 39[4]	November 15, 2027 [5]	25.00 [12]	n.a.	Floating rate [13]	3.43 %
Series 41[4]	May 15, 2028 [5]	25.00 [12]	n.a.	Floating rate [13]	2.58 %
Series 43[4]	November 15, 2023 [5]	25.50 [14]	n.a.	Floating rate [13]	2.77 %

n.a. Not applicable

(1) Redeemable in cash at the Bank's option, in whole or in part, subject to the provisions of the *Bank Act* (Canada) and to OSFI approval. For the preferred shares, the redemption prices are increased by all the declared and unpaid dividends on the preferred shares to the date fixed for redemption. In the case of LRCN, the redemption prices are increased by interest accrued and unpaid up to the redemption date.

(2) Convertible at the option of the holders of first preferred shares issued and outstanding, subject to certain conditions.

(3) The dividends are non-cumulative and payable quarterly, whereas interest on the LRCN is payable semi-annually.

(4) Upon the occurrence of a trigger event, as defined by OSFI, each outstanding preferred share will be automatically and immediately converted, on a full and permanent basis, without the consent of the holder, into a number of Bank common shares determined pursuant to an automatic conversion formula. This conversion will be calculated by dividing the value of the preferred shares, i.e., $25.00 per share, plus all declared and unpaid dividends as at the date of the trigger event, by the value of the common shares. The value of the common shares will be the greater of a $5.00 floor price or the current market price of the common shares. Current market price means the volume weighted average trading price of common shares for the ten consecutive trading days ending on the trading day preceding the date of the trigger event. If the common shares are not listed on an exchange when this price is being established, the price will be the fair value reasonably determined by the Bank's Board.

(5) For the preferred shares, redeemable at the date fixed for redemption and on the same date every five years thereafter. In the case of LRCN, the redemption occurs automatically upon the redemption of the preferred shares issued by the Bank in conjunction with the LRCN and held in a limited recourse trust. The preferred shares issued and held in a limited recourse trust are redeemable for a period of one month from the date fixed for redemption and on the same dates every five years thereafter.

(6) Convertible on the date fixed for conversion and on the same date every five years thereafter, subject to certain conditions.

(7) The dividend amount is set for the five-year period commencing on May 16, 2019 for Series 30, on February 16, 2020 for Series 32, on November 16, 2022 for Series 38, and on May 16, 2023 for Series 40 and ending on the redemption date. Thereafter, these shares carry a non-cumulative quarterly fixed dividend in an amount per share determined by multiplying the rate of interest equal to the sum of the five-year Government of Canada bond yield on the applicable fixed-rate calculation date by $25.00, plus the reset premium.

(8) The dividend amount is set for the initial period ending on the date fixed for redemption. Thereafter, these shares carry a non-cumulative quarterly fixed dividend in an amount per share determined by multiplying the rate of interest equal to the sum of the five-year Government of Canada bond yield on the applicable fixed-rate calculation date by $25.00, plus the reset premium.

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

(9) The LRCN – Series 1, LRCN – Series 2 and LRCN – Series 3 are notes for which recourse is limited to the assets held by an independent trustee in a consolidated limited recourse trust. The trust assets consist of Series 44, Series 45 and Series 46 preferred shares issued by the Bank in conjunction with the LRCN – Series 1, LRCN – Series 2 and LRCN – Series 3. In the event of (i) non-payment of interest on any of the interest payment dates, (ii) non-payment of the redemption amount upon redemption of the LRCN, (iii) non-payment of the principal amount upon maturity of the LRCN, or (iv) an event of default in respect of the LRCN, the noteholders will have recourse only to the assets of the trust, and each noteholder will be entitled to its pro rata share of the assets of the trust. In such circumstances, delivery of the assets of the trust will eliminate all of the Bank's obligations with respect to the LRCN. The LRCN – Series 1, LRCN – Series 2 and LRCN – Series 3 are redeemable at maturity or earlier to the extent that the Bank redeems the Series 44, Series 45 and Series 46 preferred shares from the date fixed for redemption, and subject to OSFI's consent and approval.

(10) The Series 44, Series 45 and Series 46 preferred shares issued by the Bank in conjunction with the LRCN – Series 1, LRCN – Series 2 and LRCN – Series 3 are held by a consolidated limited recourse trust on the Bank's balance sheet and are therefore eliminated for financial reporting purposes. Upon the occurrence of a trigger event, as defined by OSFI; (i) each LRCN will be automatically redeemed and the redemption price will be covered by delivery of the trust's assets that consist of Series 44, Series 45 and Series 46 preferred shares; (ii) each outstanding preferred share will be automatically and immediately converted on a full and permanent basis, without the consent of the holder, into a number of Bank common shares determined pursuant to an automatic conversion formula. This conversion will be calculated by dividing the value of the preferred shares, i.e., $1,000 per share, plus all accrued and unpaid interest as at the date of the trigger event, by the value of the common shares. The value of the common shares will be the greater of a $5.00 floor price or the current market price of the common shares. Current market price means the volume weighted average trading price of common shares for the ten consecutive trading days ending on the trading day preceding the date of the trigger event. If the common shares are not listed on an exchange when this price is being established, the price will be the fair value reasonably determined by the Bank's Board.

(11) The interest rate is set for the initial period ending on the date fixed for redemption. Every five years thereafter until November 15, 2075 for the LRCN – Series 1, until August 15, 2076 for the LRCN – Series 2 and until November 16, 2077 for the LRCN – Series 3, the interest rate on the notes will be adjusted and will be an annual interest rate equal to the five-year Government of Canada bond yield on the applicable interest rate calculation date, plus the interest rate reset premium.

(12) As of the date fixed for redemption, and every five years thereafter, the redemption price will be $25.00 per share.

(13) The dividend period begins as of the date fixed for redemption. The amount of the floating quarterly non-cumulative dividend is determined by multiplying by $25.00 the rate of interest equal to the sum of the 90-day Government of Canada treasury bill yield on the floating rate calculation date, plus the reset premium.

(14) As of the date fixed for redemption, the redemption price will be $25.50 per share. Thereafter, on the same date every five years, the redemption price will be $25.00 per share.

Second Preferred Shares

15 million shares without par value, issuable for a maximum aggregate consideration of $300 million. As at October 31, 2023, no shares had been issued or traded.

Shares and Other Equity Instruments Outstanding

As at October 31	2023		2022	
	Number of shares or LRCN	**Shares or LRCN $**	Number of shares or LRCN	Shares or LRCN $
First Preferred Shares				
Series 30	**14,000,000**	**350**	14,000,000	350
Series 32	**12,000,000**	**300**	12,000,000	300
Series 38	**16,000,000**	**400**	16,000,000	400
Series 40	**12,000,000**	**300**	12,000,000	300
Series 42	**12,000,000**	**300**	12,000,000	300
	66,000,000	**1,650**	66,000,000	1,650
Other equity instruments				
LRCN – Series 1	**500,000**	**500**	500,000	500
LRCN – Series 2	**500,000**	**500**	500,000	500
LRCN – Series 3	**500,000**	**500**	500,000	500
	1,500,000	**1,500**	1,500,000	1,500
Preferred shares and other equity instruments	**67,500,000**	**3,150**	67,500,000	3,150
Common shares at beginning of year	**336,582,124**	**3,196**	337,912,283	3,160
Issued pursuant to the Stock Option Plan	**1,678,321**	**95**	1,193,663	61
Repurchase of common shares for cancellation	**–**	**–**	(2,500,000)	(24)
Impact of shares purchased or sold for trading[1]	**31,975**	**3**	(18,295)	(1)
Other	**(7,791)**	**–**	(5,527)	–
Common shares at end of year	**338,284,629**	**3,294**	336,582,124	3,196

(1) As at October 31, 2023, a total of 26,725 shares were sold short for trading, representing an amount of $3 million (5,250 shares were held for trading, representing a negligible amount as at October 31, 2022).

Dividends Declared and Distributions on Other Equity Instruments

Year ended October 31	2023		2022	
	Dividends or interest $	**Dividends per share**	Dividends or interest $	Dividends per share
First Preferred Shares				
Series 30	**14**	**1.0063**	14	1.0063
Series 32	**12**	**0.9598**	12	0.9598
Series 38	**28**	**1.7568**	18	1.1125
Series 40	**16**	**1.3023**	14	1.1500
Series 42	**14**	**1.2375**	14	1.2375
	84		72	
Other equity instruments				
LRCN – Series 1[1]	**21**		21	
LRCN – Series 2[2]	**20**		20	
LRCN – Series 3[3]	**38**		6	
	79		47	
Preferred shares and other equity instruments	**163**		119	
Common shares	**1,344**	**3.9800**	1,206	3.5800
	1,507		1,325	

(1) The LRCN – Series 1 bear interest at a fixed rate of 4.30% per annum.
(2) The LRCN – Series 2 bear interest at a fixed rate of 4.05% per annum.
(3) The LRCN – Series 3 bear interest at a fixed rate of 7.50% per annum.

Issuances of Other Equity Instruments

On September 8, 2022, the Bank had issued $500 million of LRCN – Series 3 for which recourse of the noteholders is limited to the assets held by an independent trustee in a consolidated limited recourse trust. The trust's assets consist of $500 million of Series 46 first preferred shares issued by the Bank in conjunction with the LRCN – Series 3. The LRCN – Series 3 sell for $1,000 each and bear interest at a fixed rate of 7.50% per annum until November 16, 2027 exclusively and, thereafter, at an annual rate equal to the five-year Government of Canada bond yield plus 4.281% until November 16, 2077. The LRCN – Series 3 mature on November 16, 2082.

In the event of (i) non-payment of interest on any of the interest payment dates, (ii) non-payment of the redemption amount upon redemption of the LRCN, (iii) non-payment of the principal amount upon maturity of the LRCN, or (iv) an event of default in respect of the notes, the noteholders will have recourse only to the assets of the trust, and each noteholder will be entitled to its pro rata share of the assets of the trust. In such circumstances, delivery of the trust's assets will eliminate all of the Bank's obligations with respect to the LRCN. The LRCN – Series 3 are redeemable at maturity or earlier to the extent that the Bank redeems the Series 46 preferred shares on certain redemption dates specified in the terms and conditions of said preferred shares, and subject to OSFI's consent and approval.

Given that the LRCN – Series 3 satisfy the non-viability contingent capital requirements, they qualify for the purposes of calculating regulatory capital under Basel III.

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

Repurchases of Common Shares

On December 12, 2022, the Bank began a normal course issuer bid to repurchase for cancellation up to 7,000,000 common shares (representing approximately 2.1% of its then outstanding common shares) over the 12-month period ending on December 11, 2023. On December 10, 2021, the Bank had begun a normal course issuer bid to repurchase for cancellation up to 7,000,000 common shares (representing approximately 2% of its then outstanding common shares) over the 12-month period ended December 9, 2022. Any repurchase through the Toronto Stock Exchange is done at market prices. The common shares may also be repurchased through other means authorized by the Toronto Stock Exchange and applicable regulations, including private agreements or share repurchase programs under issuer bid exemption orders issued by the securities regulators. A private purchase made under an exemption order issued by a securities regulator will be done at a discount to the prevailing market price. The amounts that are paid above the average book value of the common shares are charged to *Retained earnings*. During the year ended October 31, 2023, the Bank did not repurchase any common shares. During the year ended October 31, 2022, the Bank had repurchased 2,500,000 common shares for $245 million, which had reduced *Common share* capital by $24 million and *Retained earnings* by $221 million.

Reserved Common Shares

As at October 31, 2023 and 2022, there were 15,507,568 common shares reserved under the Dividend Reinvestment and Share Purchase Plan. As at October 31, 2023, there were 20,063,688 common shares reserved under the Stock Option Plan (21,742,009 as at October 31, 2022).

Restriction on the Payment of Dividends

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

Dividend Reinvestment and Share Purchase Plan

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

Note 19 – Non-Controlling Interests

As at October 31	**2023**	2022
Flinks Technology Inc.[1]	**2**	2

(1) As at October 31, 2023 and 2022, the non-controlling interest in Flinks stood at 14.1%.

Note 20 – Capital Disclosure

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

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

Capital Management
Capital ratios are obtained by dividing capital (as defined by OSFI's *Capital Adequacy Requirements Guideline*) by risk-weighted assets and are expressed as percentages. Risk-weighted assets are calculated in accordance with the rules established by OSFI for on- and off-balance-sheet risks. Credit, market, and operational risks are factored into the risk-weighted assets calculation for regulatory purposes. The definition adopted by the Basel Committee on Banking Supervision (BCBS) distinguishes between three types of capital. Common Equity Tier 1 (CET1) capital consists of common shareholders' equity less goodwill, intangible assets, and other CET1 capital deductions. Additional Tier 1 (AT1) capital consists of eligible non-cumulative preferred shares, limited recourse capital notes, and other AT1 capital adjustments. The sum of CET1 and AT1 capital forms what is known as Tier 1 capital. Tier 2 capital consists of the eligible portion of subordinated debt and certain allowances for credit losses. Total regulatory capital is the sum of Tier 1 and Tier 2 capital.

The Bank and all other major Canadian banks have to maintain the following minimum capital ratios established by OSFI: a CET1 capital ratio of at least 11.0%, a Tier 1 capital ratio of at least 12.5%, and a Total capital ratio of at least 14.5%. All of these ratios include a capital conservation buffer of 2.5% established by the Basel Committee on Banking Supervision and OSFI, a 1.0% surcharge applicable solely to Domestic Systemically Important Banks (D-SIBs), and a 3.0% domestic stability buffer. On December 8, 2022, OSFI expanded the domestic stability buffer range, setting it at 0% to 4.0% instead of the previous range of 0% to 2.5%, and it announced that the domestic stability buffer would rise from 2.5% to 3.0% effective February 1, 2023. On June 20, 2023, OSFI raised the buffer by 50 bps to 3.5% effective November 1, 2023. The domestic stability buffer must consist exclusively of CET1 capital. A D-SIB that fails to meet this buffer requirement will not be subject to automatic constraints to reduce capital distributions but must provide a remediation plan to OSFI. The Bank must also meet the requirements of an updated capital output floor that will ensure that its total calculated RWA is not below 72.5% of the total RWA as calculated under the Basel III Standardized Approaches. 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 total RWA. Lastly, OSFI requires D-SIBs to maintain a Basel III leverage ratio of at least 3.5%. Effective February 1, 2023, OSFI increased the leverage ratio minimum requirement by imposing a Tier 1 capital buffer of 0.5% applicable only to D-SIBs.

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

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

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

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

During the years ended October 31, 2023 and 2022, the Bank was in compliance with all of OSFI's regulatory capital, leverage, and TLAC requirements.

Note 20 – Capital Disclosure (cont.)

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

As at October 31	2023	2022
Capital		
CET1	16,920	14,818
Tier 1	20,068	17,961
Total	21,056	19,727
Risk-weighted assets	125,592	116,840
Total exposure	456,478	401,780
Capital ratios		
CET1	13.5 %	12.7 %
Tier 1	16.0 %	15.4 %
Total	16.8 %	16.9 %
Leverage ratio	4.4 %	4.5 %
Available TLAC	36,732	32,351
TLAC ratio	29.2 %	27.7 %
TLAC leverage ratio	8.0 %	8.1 %

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

Note 21 – 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 and certain interest income related to the financing of these financial assets and liabilities, net of interest expenses.

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, realized and unrealized gains and losses as well as interest expenses on obligations related to securities sold short, certain commission income as well as other income related to trading activities, and any applicable transaction costs.

Year ended October 31	2023	2022
Net interest income (loss)	(1,816)	682
Non-interest income		
Trading revenues (losses)	2,677	543
Other revenues	19	5
	2,696	548
	880	1,230

Note 22 – Share-Based Payments

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

Stock Option Plan

The Bank's Stock Option Plan is for officers and other designated persons of the Bank and its subsidiaries. Under this plan, options are awarded annually and provide participants with the right to purchase common shares at an exercise price equal to the closing price of the Bank's common share on the Toronto Stock Exchange on the day preceding the award. The options vest evenly over a four-year period and expire ten years from the award date or, in certain circumstances set out in the plan, within specified time limits. The Stock Option Plan contains provisions for retiring employees that allow the participant's rights to continue vesting in accordance with the stated terms of the award agreement. The maximum number of common shares that may be issued under the Stock Option Plan was 20,063,688 as at October 31, 2023 (21,742,009 as at October 31, 2022). The number of common shares reserved for a participant may not exceed 5% of the total number of Bank shares issued and outstanding.

As at October 31		2023		2022
	Number of options	**Weighted average exercise price**	Number of options	Weighted average exercise price
Stock Option Plan				
Outstanding at beginning	**11,861,749**	**$ 64.80**	11,348,680	$ 57.93
Awarded	**1,416,060**	**$ 94.05**	1,771,588	$ 96.35
Exercised	**(1,678,321)**	**$ 50.43**	(1,193,663)	$ 45.73
Cancelled[(1)]	**(52,800)**	**$ 87.49**	(64,856)	$ 76.10
Outstanding at end	**11,546,688**	**$ 70.37**	11,861,749	$ 64.80
Exercisable at end	**7,471,041**	**$ 61.18**	7,344,536	$ 55.50

(1) Includes 8,096 expired options during the year ended October 31, 2023 (27,714 expired options during the year ended October 31, 2022).

Exercise price	Options outstanding	Options exercisable	Expiry date
$44.96	368,469	368,469	December 2023
$47.93	813,888	813,888	December 2024
$42.17	727,265	727,265	December 2025
$54.69	770,928	770,928	December 2026
$64.14	1,063,142	1,063,142	December 2027
$58.79	1,341,590	1,341,590	December 2028
$71.86	1,478,183	1,075,695	December 2029
$71.55	1,857,658	884,810	December 2030
$96.35	1,728,733	425,254	December 2031
$94.05	1,396,832	–	December 2032
	11,546,688	7,471,041	

During the year ended October 31, 2023, the Bank awarded 1,416,060 stock options (1,771,588 stock options during the year ended October 31, 2022) with an average fair value of $14.76 per option ($13.24 for the year ended October 31, 2022).

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

Year ended October 31	2023	2022
Risk-free interest rate	**3.25%**	1.79%
Expected life of options	**7 years**	7 years
Expected volatility	**23.13%**	22.68%
Expected dividend yield	**4.23%**	3.88%

Note 22 – Share-Based Payments (cont.)

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

For the year ended October 31, 2023, an $18 million compensation expense related to this plan was recognized in the Consolidated Statement of Income ($17 million for the year ended October 31, 2022).

Stock Appreciation Rights (SAR) Plan

The SAR Plan is for officers and other designated persons of the Bank and its subsidiaries. Under this plan, participants receive, upon exercising the right, a cash amount equal to the difference between the closing price of the Bank's common share on the Toronto Stock Exchange on the day preceding the exercise date and the closing price on the day preceding the award date. SARs vest evenly over a four-year period and expire ten years after the award date or, in certain circumstances set out in the plan, within specified time limits. The SAR Plan contains provisions for retiring employees that allow the participant's rights to continue vesting in accordance with the stated terms of the award agreement. For the years ended October 31, 2023 and 2022, a negligible compensation expense related to this plan was recognized in the Consolidated Statement of Income.

As at October 31		2023		2022
	Number of SARs	**Weighted average exercise price**	Number of SARs	Weighted average exercise price
SAR Plan[1]				
Outstanding at beginning	**207,841**	**$ 60.73**	266,075	$ 57.61
Awarded	**19,072**	**$ 94.05**	21,464	$ 96.35
Exercised	**(41,241)**	**$ 55.64**	(79,698)	$ 59.89
Outstanding at end	**185,672**	**$ 65.29**	207,841	$ 60.73
Exercisable at end	**124,531**	**$ 55.53**	130,319	$ 51.31

(1) No SARs cancelled or expired during the years ended October 31, 2023 and 2022.

Exercise price	SARs outstanding	SARs exercisable	Expiry date
$44.96	9,886	9,886	December 2023
$47.93	28,824	28,824	December 2024
$42.17	19,748	19,748	December 2025
$54.69	16,320	16,320	December 2026
$64.14	16,236	16,236	December 2027
$58.79	16,604	16,604	December 2028
$71.86	22,266	11,547	December 2029
$71.55	15,252	–	December 2030
$96.35	21,464	5,366	December 2031
$94.05	19,072	–	December 2032
	185,672	124,531	

Deferred Stock Unit (DSU) Plans

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

During the year ended October 31, 2023, the Bank awarded 37,477 DSUs at a weighted average price of $97.45 (39,227 DSUs at a weighted average price of $97.10 for the year ended October 31, 2022). A total of 483,735 DSUs were outstanding as at October 31, 2023 (551,539 DSUs as at October 31, 2022). For the year ended October 31, 2023, a $3 million compensation expense related to these plans was recognized in the Consolidated Statement of Income ($1 million for the year ended October 31, 2022).

Restricted Stock Unit (RSU) Plan

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

During the year ended October 31, 2023, the Bank awarded 2,058,936 RSUs at a weighted average price of $96.42 (1,895,489 RSUs at a weighted average price of $99.59 for the year ended October 31, 2022). As at October 31, 2023, a total of 4,382,431 RSUs were outstanding (4,203,383 RSUs as at October 31, 2022). For the year ended October 31, 2023, a $173 million compensation expense related to this plan was recognized in the Consolidated Statement of Income ($172 million for the year ended October 31, 2022).

Performance Stock Unit (PSU) Plan

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

During the year ended October 31, 2023, the Bank awarded 234,706 PSUs at a weighted average price of $96.42 (238,082 PSUs at a weighted average price of $99.59 for the year ended October 31, 2022). As at October 31, 2023, a total of 745,764 PSUs were outstanding (739,359 PSUs as at October 31, 2022). For the year ended October 31, 2023, a $27 million compensation expense related to this plan was recognized in the Consolidated Statement of Income ($30 million for the year ended October 31, 2022).

Deferred Compensation Plan

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

During the year ended October 31, 2023, the Bank awarded 161,713 share units at a weighted average price of $94.90 (129,464 share units at a weighted average price of $94.87 for the year ended October 31, 2022). As at October 31, 2023, a total of 2,229,248 share units were outstanding (2,036,524 share units as at October 31, 2022). For the year ended October 31, 2023, a $3 million compensation expense related to this plan was recognized in the Consolidated Statement of Income (a $19 million reversal of the compensation expense for the year ended October 31, 2022).

Employee Share Ownership Plan

Under the Bank's Employee Share Ownership Plan, employees who meet the eligibility criteria can contribute up to 8% of their annual gross salary by way of payroll deductions. The Bank matches 25% of the employee contribution up to a maximum of $1,500 per annum. Bank contributions vest to the employee after one year of uninterrupted participation in the plan. Subsequent contributions vest immediately. The Bank's contributions, amounting to $16 million for the year ended October 31, 2023 ($15 million for the year ended October 31, 2022), were recognized when paid in the *Compensation and employee benefits* item of the Consolidated Statement of Income. As at October 31, 2023, a total of 6,392,648 common shares were held for this plan (6,304,689 common shares as at October 31, 2022).

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

Plan Liabilities and Intrinsic Value

Total liabilities arising from the Bank's share-based compensation plans amounted to $686 million as at October 31, 2023 ($716 million as at October 31, 2022). The intrinsic value of these liabilities that had vested as at October 31, 2023 was $345 million ($359 million as at October 31, 2022).

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

The Bank offers pension plans that have a defined benefit component and a defined contribution component. The Bank also offers other post-employment benefit plans to eligible employees. The defined benefit component of the pension plans provides benefits based on years of plan participation and average earnings at retirement. The other post-employment benefits include post-employment medical, dental, and life insurance coverage. Since September 19, 2022, the Bank has been offering a new defined contribution component that is available to all new employees upon hiring as well as to current participants of the defined benefit component. Therefore, as of that date, the defined benefit component is no longer offered to new employees. For the defined contribution component, the Bank's base contribution equals a percentage of annual salary and the Bank's additional contribution varies according to the employee's contributions, and the sum of the employee's age and years of continuous service. The defined benefit component of the pension plans is funded, whereas the defined contribution component and the other post-employment benefit plans are not funded. The fair value of the defined benefit component and the present value of the defined benefit obligations were measured as at October 31.

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

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

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

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

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

Defined Benefit Obligation, Assets of the Plans, and Funded Status

As at October 31

	Pension plans – Defined benefit component		Other post-employment benefit plans	
	2023	2022	**2023**	2022
Defined benefit obligation				
Balance at beginning	**3,971**	4,745	**111**	143
Current service cost	**92**	129	**–**	1
Interest cost	**218**	171	**6**	5
Remeasurements				
Actuarial (gains) losses arising from changes in demographic assumptions	**(40)**	55	**1**	1
Actuarial (gains) losses arising from changes in financial assumptions	**(163)**	(1,063)	**(3)**	(24)
Actuarial (gains) losses arising from experience adjustments	**71**	95	**(12)**	(6)
Employee contributions	**72**	65		
Benefits paid	**(201)**	(226)	**(9)**	(9)
Balance at end	**4,020**	3,971	**94**	111
Plan assets				
Fair value at beginning	**4,469**	5,436		
Interest income	**242**	191		
Administration cost	**(3)**	(3)		
Remeasurements				
Return on plan assets (excluding interest income)	**(329)**	(1,113)		
Bank contributions[1]	**126**	119		
Employee contributions	**72**	65		
Benefits paid	**(201)**	(226)		
Fair value at end	**4,376**	4,469		
Defined benefit asset (liability) at end	**356**	498	**(94)**	(111)

(1) For fiscal 2024, the Bank expects to pay an employer contribution of $122 million to the defined benefit component of the pension plans.

Defined Benefit Asset (Liability)

As at October 31	Pension plans – Defined benefit component		Other post-employment benefit plans	
	2023	2022	**2023**	2022
Defined benefit asset included in *Other assets*	**356**	498		
Defined benefit liability included in *Other liabilities*	**–**	–	**(94)**	(111)
	356	498	**(94)**	(111)

Cost for Pension Plans and Other Post-Employment Benefit Plans

Year ended October 31	Pension plans		Other post-employment benefit plans	
	2023	2022	**2023**	2022
Current service cost	**92**	129	**–**	1
Interest expense (income), net	**(24)**	(20)	**6**	5
Administration costs	**3**	3		
Expense of the defined benefit component	**71**	112	**6**	6
Expense of the defined contribution component	**11**			–
Expense recognized in *Net income*	**82**	112	**6**	6
Remeasurements[1]				
Actuarial (gains) losses on the defined benefit obligation	**(132)**	(913)	**(14)**	(29)
Return on plan assets[2]	**329**	1,113		
Remeasurements recognized in *Other comprehensive income*	**197**	200	**(14)**	(29)
	279	312	**(8)**	(23)

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

Allocation of the Fair Value of the Assets of the Defined Benefit Component of the Pensions Plans

As at October 31			**2023**			2022
	Quoted in an active market[1]	**Not quoted in an active market**	**Total**	Quoted in an active market[1]	Not quoted in an active market	Total
Asset classes						
Cash and cash equivalents	**–**	**378**	**378**	–	273	273
Equity securities	**841**	**1,300**	**2,141**	988	1,150	2,138
Debt securities						
Canadian government[2]	**(237)**	**–**	**(237)**	114	–	114
Canadian provincial and municipal governments	**–**	**2,128**	**2,128**	–	1,769	1,769
Other issuers	**–**	**171**	**171**	–	264	264
Other	**–**	**(205)**	**(205)**	–	(89)	(89)
	604	**3,772**	**4,376**	1,102	3,367	4,469

(1) Unadjusted quoted prices in active markets for identical assets that the Bank can access at the measurement date.
(2) Includes obligations related to securities sold short.

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

The assets of the pension plans may include investment securities issued by the Bank. As at October 31, 2023 and 2022, the assets of the pension plans do not include any securities issued by the Bank.

For fiscal 2023, the Bank and its related entities received $20 million ($21 million in fiscal 2022) in fees from the pension plans for related management, administration, and custodial services.

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

Allocation of the Defined Benefit Obligation by the Status of the Participants in the Defined Benefit Component of the Pension Plans

As at October 31

	Pension plans – Defined benefit component		Other post-employment benefit plans	
	2023	2022	**2023**	2022
Active employees	**41 %**	41 %	**3 %**	7 %
Retirees	**54 %**	53 %	**97 %**	93 %
Participants with deferred vested benefits	**5 %**	6 %		
	100 %	100 %	**100 %**	100 %
Weighted average duration of the defined benefit obligation *(in years)*	**14**	14	**10**	10

Significant Actuarial Assumptions (Weighted Average)

Discount Rate

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

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

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

Other Assumptions

For measurement purposes, the estimated annual growth rate for health care costs was 4.94% as at October 31, 2023 (4.77% as at October 31, 2022). Based on the assumption retained, this rate is expected to decrease gradually to 3.57% in 2040 and remain steady thereafter.

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

As at October 31

	Pension plans – Defined benefit component		Other post-employment benefit plans	
	2023	2022	**2023**	2022
Defined benefit obligation				
Discount rate	**5.65 %**	5.45 %	**5.65 %**	5.45 %
Rate of compensation increase	**4.00 %**	3.00 %	**2.00 %**	3.00 %
Health care cost trend rate			**4.94 %**	4.77 %
Life expectancy *(in years)* at 65 for a participant currently at				
Age 65				
Men	**22.4**	22.4	**22.4**	22.4
Women	**24.8**	24.7	**24.8**	24.7
Age 45				
Men	**23.4**	23.4	**23.4**	23.4
Women	**25.7**	25.6	**25.7**	25.6

Year ended October 31

	Pension plans – Defined benefit component		Other post-employment benefit plans	
	2023	2022	**2023**	2022
Pension plan expense				
Discount rate – Current service	**5.45 %**	3.70 %	**5.45 %**	3.70 %
Discount rate – Interest expense (income), net	**5.45 %**	3.55 %	**5.45 %**	3.55 %
Rate of compensation increase	**4.00 %**	3.00 %	**2.00 %**	3.00 %
Health care cost trend rate			**4.77 %**	4.52 %
Life expectancy *(in years)* at 65 for a participant currently at				
Age 65				
Men	**22.4**	21.4	**22.4**	21.4
Women	**24.7**	23.7	**24.7**	23.7
Age 45				
Men	**23.4**	22.4	**23.4**	22.4
Women	**25.6**	24.7	**25.6**	24.7

Sensitivity of Significant Assumptions for 2023

The following table shows the potential impacts of changes to key assumptions on the defined benefit obligation of the pension plans and other post-employment benefit plans as at October 31, 2023. These impacts are hypothetical and should be interpreted with caution, as changes in each significant assumption may not be linear.

As at October 31, 2023

	Pension plans – Defined benefit component	**Other post-employment benefit plans**
	Change in the obligation	**Change in the obligation**
Impact of a 1.00% increase in the discount rate	**(509)**	**(3)**
Impact of a 1.00% decrease in the discount rate	**642**	**3**
Impact of a 0.25% increase in the rate of compensation increase	**26**	
Impact of a 0.25% decrease in the rate of compensation increase	**(25)**	
Impact of a 1.00% increase in the health care cost trend rate		**4**
Impact of a 1.00% decrease in the health care cost trend rate		**(3)**
Impact of an increase in the age of participants by one year	**(81)**	**(1)**
Impact of a decrease in the age of participants by one year	**78**	**1**

Projected Benefit Payments

Year ended October 31

	Pension plans – Defined benefit component	Other post-employment benefit plans
2024	209	10
2025	217	9
2026	226	9
2027	233	8
2028	239	8
2029 to 2033	1,310	41

Note 24 – Income Taxes

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

Year ended October 31	2023	2022
Consolidated Statement of Income		
Current taxes		
Current year	776	803
Canada Recovery Dividend[1]	32	
Change in income tax rate[1]	10	
Prior period adjustments	48	(19)
	866	784
Deferred taxes		
Origination and reversal of temporary differences	(148)	110
Change in income tax rate[1]	(18)	
Prior period adjustments	(63)	–
	(229)	110
	637	894
Consolidated Statement of Changes in Equity		
Share issuance expenses, other equity instruments and other	(23)	(14)
Consolidated Statement of Comprehensive Income		
Remeasurements of pension plans and other post-employment benefit plans	(43)	(45)
Net change in cash flow hedges	44	3
Net fair value change attributable to credit risk on financial liabilities designated at fair value through profit or loss	(63)	216
Other	(9)	(90)
	(71)	84
Income taxes	543	964

The breakdown of the income tax expense is as follows.

Year ended October 31	2023	2022
Current taxes	774	933
Deferred taxes	(231)	31
	543	964

(1) During the year ended October 31, 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.

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

	As at October 31 Consolidated Balance Sheet		Year ended October 31 Consolidated Statement of Income		Year ended October 31 Consolidated Statement of Comprehensive Income	
	2023	2022	**2023**	2022	**2023**	2022
Deferred tax assets						
Allowances for credit losses	**314**	235	**79**	10	**–**	–
Deferred charges	**362**	317	**45**	(37)	**–**	–
Defined benefit liability – Other post-employment benefit plans	**36**	38	**2**	(1)	**(4)**	(8)
Investments in associates	**–**	23	**(23)**	(34)	**–**	–
Leases liabilities	**108**	118	**(10)**	(14)	**–**	–
Deferred revenue	**91**	62	**29**	11	**–**	–
Tax loss carryforwards	**50**	35	**15**	2	**–**	–
Other items[1]	**31**	32	**(1)**	1	**–**	–
	992	860	**136**	(62)	**(4)**	(8)
Deferred tax liabilities						
Premises and equipment and intangible assets	**(225)**	(312)	**87**	(13)	**–**	–
Defined benefit asset – Pension plans	**(89)**	(127)	**(3)**	(2)	**41**	53
Investments in associates	**(12)**	(2)	**(2)**	(2)	**(8)**	–
Other items	**(60)**	(44)	**11**	(31)	**(27)**	32
	(386)	(485)	**93**	(48)	**6**	85
Net deferred tax assets (liabilities)	**606**	375	**229**	(110)	**2**	77

(1) As at October 31, 2023, the Consolidated Balance Sheet included a negligible amount of deferred tax asset related to share issuance costs ($2 million as at October 31, 2022) reported in *Retained earnings* on the Consolidated Statement of Changes in Equity.

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

As at October 31	**2023**	2022
Deferred tax assets	**634**	389
Deferred tax liabilities	**(28)**	(14)
	606	375

According to forecasts, which are based on information available as at October 31, 2023, the Bank believes that the results of future operations will likely generate sufficient taxable income to utilize all the deferred tax assets before they expire.

As at October 31, 2023, the total amount of temporary differences, unused tax loss carryforwards, and unused tax credits for which no deferred tax asset has been recognized was $536 million ($561 million as at October 31, 2022).

As at October 31, 2023, the total amount of temporary differences related to investments in subsidiaries, associates, and joint ventures for which no deferred tax liability has been recognized was $5,762 million ($5,636 million as at October 31, 2022).

Note 24 – Income Taxes (cont.)

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

Year ended October 31	2023		2022	
	$	%	$	%
Income before income taxes	3,972	100.0	4,277	100.0
Income taxes at Canadian statutory income tax rate	1,112	28.0	1,133	26.5
Reduction in income tax rate due to				
Tax-exempt income from securities	(310)	(7.8)	(191)	(4.5)
Non-taxable portion of capital gains	(1)	–	(1)	–
Impact of enacted tax measures[1]	24	0.6		
Tax rates of subsidiaries, foreign entities and associates	(178)	(4.5)	(71)	(1.7)
Other items	(10)	(0.3)	24	0.6
	(475)	(12.0)	(239)	(5.6)
Income taxes reported in the Consolidated Statement of Income and effective income tax rate	637	16.0	894	20.9

(1) During the year ended October 31, 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.

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".

In October 2023, the Bank filed a notice of appeal with the Tax Court of Canada, and the matter is now in litigation. 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 October 31, 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 for the year ended October 31, 2023.

Proposed Legislation

On November 28, 2023, the Government of Canada released draft legislation entitled *An Act to implement certain provisions of the fall economic statement tabled in Parliament on November 21, 2023 and certain provisions of the budget tabled in Parliament on March 28, 2023* to implement 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 (except for dividends received on "taxable preferred shares" as defined in the *Income Tax Act*), as well as the application of a 2% tax on the net value of equity repurchases occurring as of January 1, 2024.

In its March 28, 2023 budget, the Government of Canada also proposed to implement the Pillar 2 rules (global minimum tax) published by the Organisation for Economic Co-operation and Development (OECD) for fiscal years beginning as of December 31, 2023. To date, the Pillar 2 rules have not yet been included in a bill in Canada. During fiscal 2023, the Pillar 2 rules were included in a bill in certain jurisdictions where the Bank operates.

Note 25 – Earnings Per Share

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

Year ended October 31	2023	2022
Basic earnings per share		
Net income attributable to the Bank's shareholders and holders of other equity instruments	3,337	3,384
Dividends on preferred shares and distributions on other equity instruments	141	107
Net income attributable to common shareholders	3,196	3,277
Weighted average basic number of common shares outstanding *(thousands)*	337,660	337,099
Basic earnings per share *(dollars)*	9.47	9.72
Diluted earnings per share		
Net income attributable to common shareholders	3,196	3,277
Weighted average basic number of common shares outstanding *(thousands)*	337,660	337,099
Adjustment to average number of common shares *(thousands)*		
Stock options(1)	3,108	3,738
Weighted average diluted number of common shares outstanding *(thousands)*	340,768	340,837
Diluted earnings per share *(dollars)*	9.38	9.61

(1) For the year ended October 31, 2023, given that the exercise price of the options was lower than the average price of the Bank's common shares, no options were excluded from the diluted earnings per share calculation. For the year ended October 31, 2022, the calculation of diluted earnings per share excluded an average number of 1,575,093 options outstanding with a weighted average exercise price of $96.35, given that the exercise price of these options was greater than the average price of the Bank's common shares.

Note 26 – Guarantees, Commitments and Contingent Liabilities

Guarantees

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

As at October 31	2023	2022
Letters of guarantee(1)	8,339	6,618
Backstop liquidity, credit enhancement facilities and other(1)	10,101	8,707
Securities lending	147	180

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

Letters of Guarantee

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

Backstop Liquidity and Credit Enhancement Facilities

Facilities to Multi-Seller Conduits

The Bank administers multi-seller conduits that purchase financial assets from clients and finance those purchases by issuing asset-backed commercial paper. The Bank provides backstop liquidity facilities to these multi-seller conduits. As at October 31, 2023, the notional amount of the global-style backstop liquidity facilities totalled $4.6 billion ($3.2 billion as at October 31, 2022), representing the total amount of commercial paper outstanding.

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

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

The Bank also provides credit enhancement facilities to these multi-seller conduits. These facilities have terms of less than one year and are automatically renewable unless the Bank sends a non-renewal notice. As at October 31, 2023 and 2022, the committed notional value for these facilities was $30 million. To date, the credit enhancement facilities provided by the Bank have not been drawn.

The maximum risk of loss for the Bank cannot exceed the total amount of commercial paper outstanding, i.e., $4.6 billion as at October 31, 2023 ($3.2 billion as at October 31, 2022). As at October 31, 2023, the Bank held $67 million ($35 million as at October 31, 2022) of this commercial paper and, consequently, the maximum potential amount of future payments, taking into account the credit enhancement facilities, was $4.5 billion ($3.2 billion as at October 31, 2022).

CDCC Overnight Liquidity Facility
Canadian Derivatives Clearing Corporation (CDCC) acts as a central clearing counterparty for multiple financial instrument transactions in Canada. Certain fixed-income clearing members of CDCC have provided an equally shared committed and uncommitted global overnight liquidity facility for the purpose of supporting CDCC in its clearing activities of securities purchased under reverse repurchase agreements or sold under repurchase agreements. The objective of this facility is to maintain sufficient liquidity in the event of a clearing member's default. As a fixed-income clearing member providing support to CDCC, the Bank provided a liquidity facility. As at October 31, 2023, the notional amount of the overnight uncommitted liquidity facility amounted to $5.6 billion ($5.6 billion as at October 31, 2022). As at October 31, 2023 and 2022, no amount had been drawn.

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

Other Indemnification Agreements
In the normal course of business, including securitization transactions and discontinuances of businesses and operations, the Bank enters into numerous contractual agreements under which it undertakes to compensate the counterparty for costs incurred as a result of litigation, changes in laws and regulations (including tax legislation), claims with respect to past performance, incorrect representations or the non-performance of certain restrictive covenants. The Bank also undertakes to indemnify any person acting as a director or officer or performing a similar function within the Bank or one of its subsidiaries or another entity, at the request of the Bank, for all expenses incurred by that person in proceedings or investigations to which he or she is party in that capacity. Moreover, as a member of a securities transfer network and pursuant to the membership agreement and the regulations governing the operation of the network, the Bank granted collateral in favour of the Bank of Canada to guarantee any obligation of the Bank towards the Bank of Canada that could result from the Bank's participation in the securities transfer network. The durations of the indemnification agreements vary according to circumstance; as at October 31, 2023 and 2022, given the nature of the agreements, the Bank is unable to make a reasonable estimate of the maximum potential liability it could be required to pay to counterparties. No amount related to these agreements has been recognized on the Consolidated Balance Sheet.

Commitments

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

As at October 31	2023	2022
Letters of guarantee[1]	8,339	6,618
Documentary letters of credit[2]	157	161
Credit card receivables[3]	9,802	9,337
Commitments to extend credit[3]	90,706	82,117

(1) See the *Letters of Guarantee* item on the previous page.
(2) Documentary letters of credit are documents issued by the Bank and used in international trade to enable a third party to present a payment request to the Bank for up to an amount established under specific terms and conditions; these instruments are collateralized by the delivery of the goods to which they are related.
(3) Credit card receivables and commitments to extend credit represent unused portions of authorizations to extend credit, under certain conditions, in the form of loans or bankers' acceptances.

Financial Assets Received as Collateral
As at October 31, 2023, the fair value of financial assets received as collateral that the Bank was authorized to sell or repledge was $87.9 billion ($92.3 billion as at October 31, 2022). These financial assets received as collateral consist of securities related to securities financing and derivative transactions as well as securities purchased under reverse repurchase agreements and securities borrowed.

Other Commitments
The Bank acts as an investor in investment banking activities whereby it enters into agreements to finance external private equity funds and investments in equity and debt securities at market value at the time the agreements are signed. In connection with these activities, the Bank had commitments to invest up to $127 million as at October 31, 2023 ($102 million as at October 31, 2022). In addition, through one of its subsidiaries, the Bank purchases retail loans originated by other financial institutions at market value at the time of purchase. As at October 31, 2023, the Bank had commitments to purchase loans of a negligible amount ($60 million as at October 31, 2022).

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

As at October 31	**2023**	2022
Assets pledged to		
Bank of Canada	**300**	325
Direct clearing organizations[(1)]	**3,046**	1,634
Assets pledged in relation to		
Derivative financial instrument transactions	**6,628**	5,368
Borrowing, securities lending and securities sold under reverse repurchase agreements	**85,673**	68,458
Securitization transactions	**25,088**	26,361
Covered bonds[(2)]	**12,120**	11,590
Other	**752**	159
Total	**133,607**	113,895

(1) Includes assets pledged as collateral for activities in the systemically important payment system (designated as Lynx) as at October 31, 2023 and 2022.
(2) The Bank has a covered bond program. For additional information, see Notes 13 and 27 to these consolidated financial statements.

Contingent Liabilities

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

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

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

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

Note 27 – Structured Entities

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

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

Non-Consolidated Structured Entities

Multi-Seller Conduits

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

Investment Funds

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

Private Investments

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

Third-Party Structured Entities

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

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

				As at October 31, 2023
	Multi-seller conduits[1]	Investment funds[2]	Private investments[3]	Third-party structured entities[4]
Assets on the Consolidated Balance Sheet				
Securities at fair value through profit or loss	**67**	**1,042**	**92**	**–**
Securities at amortized cost	**–**	**–**	**–**	**3,106**
Derivative financial instruments	**–**	**–**	**–**	**341**
	67	**1,042**	**92**	**3,447**
As at October 31, 2022	35	335	77	5,201
Liabilities on the Consolidated Balance Sheet				
Derivative financial instruments	**(82)**	**–**	**–**	**(90)**
	(82)	**–**	**–**	**(90)**
As at October 31, 2022	(71)	–	–	(91)
Maximum exposure to loss				
Securities	**67**	**1,042**	**92**	**3,447**
Liquidity, credit enhancement facilities and commitments	**4,549**	**–**	**–**	**469**
	4,616	**1,042**	**92**	**3,916**
As at October 31, 2022	3,190	335	77	5,669
Total assets of the structured entities	**4,587**	**2,583**	**651**	**11,390**
As at October 31, 2022	3,183	1,772	535	11,197

(1) The main underlying assets, located in Canada, are residential mortgages, automobile loans, automobile inventory financings, and other receivables. As at October 31, 2023, the notional committed amount of the global-style liquidity facilities totalled $4.6 billion ($3.2 billion as at October 31, 2022), representing the total amount of commercial paper outstanding. The Bank also provides series-wide credit enhancement facilities for a notional committed amount of $30 million ($30 million as at October 31, 2022). The maximum exposure to loss cannot exceed the amount of commercial paper outstanding. As at October 31, 2023, the Bank held $67 million in commercial paper ($35 million as at October 31, 2022) and, consequently, the maximum potential amount of future payments as at October 31, 2023 was limited to $4.5 billion ($3.2 billion as at October 31, 2022), which represents the undrawn liquidity and credit enhancement facilities.
(2) The underlying assets are various financial instruments and are presented on a net asset basis. Certain investment funds are in a trading portfolio.
(3) The underlying assets are private investments. The amount of total assets of the structured entities corresponds to the amount for the most recent available period.
(4) The underlying assets are residential mortgages, consumer loans, equipment loans, leases, and securities.

Consolidated Structured Entities

Securitization Entity for the Bank's Credit Card Receivables

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

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

Multi-Seller Conduit

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

Note 27 – Structured Entities (cont.)

Investment Funds

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

Covered Bonds

NBC Covered Bond Guarantor (Legislative) Limited Partnership

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

Third-Party Structured Entities

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

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

As at October 31		2023		2022
	Investments and other assets	**Total assets[1]**	Investments and other assets	Total assets[1]
Consolidated structured entities				
Securitization entity for the Bank's credit card receivables[2][3]	**2,176**	**2,272**	1,916	2,073
Multiseller conduit[4]	**1,655**	**1,655**	802	802
Investment funds[5]	**26**	**26**	56	56
Covered bonds[6]	**20,458**	**20,869**	17,900	18,237
Third-party structured entities[7]	**147**	**147**	166	166
	24,462	**24,969**	20,840	21,334

(1) There are restrictions, arising essentially from regulatory requirements, corporate or securities laws, and contractual arrangements, that limit the ability of some of the Bank's consolidated structured entities to transfer funds to the Bank.
(2) The underlying assets are credit card receivables.
(3) The Bank's investment is presented net of third-party holdings.
(4) The underlying assets, located in Canada, are mainly residential mortgages.
(5) The underlying assets are various financial instruments and are presented on a net asset basis. Certain investment funds are in a trading portfolio.
(6) The underlying assets are uninsured residential mortgage loans of the Bank. The average maturity of these underlying assets is two years. As at October 31, 2023, the total amount of transferred mortgage loans was $20.6 billion ($17.9 billion as at October 31, 2022), and the total amount of covered bonds of $10.9 billion was recognized in *Deposits* on the Consolidated Balance Sheet ($10.4 billion as at October 31, 2022). For additional information, see Note 13 to these consolidated financial statements.
(7) The underlying assets consist of a loan portfolio.

Note 28 – Related Party Disclosures

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

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

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

Related Party Transactions

As at October 31

	Key officers and directors[1]		Related entities	
	2023	2022	**2023**	2022
Assets				
Mortgage loans and other loans	**24**	22	**223** [2]	449 [2]
Liabilities				
Deposits	**45**	58	**230** [3]	80 [3]
Other	**–**	–	**3**	6

(1) As at October 31, 2023, key officers and directors and their immediate family members were holding $28 million of the Bank's common and preferred shares ($68 million as at October 31, 2022).

(2) As at October 31, 2023, mortgage loans and other loans consisted of: (i) $7 million in loans to the Bank's associates ($1 million as at October 31, 2022) and (ii) $216 million in loans to entities over which the Bank's key officers or directors or their immediate family members exercise control or significant influence through significant voting power ($448 million as at October 31, 2022).

(3) As at October 31, 2023, deposits consisted of: (i) $1 million in deposits to the Bank's associates (nil as at October 31, 2022) and (ii) $229 million in deposits from entities over which the Bank's key officers or directors and their immediate family members exercise control or significant influence through significant voting power ($80 million as at October 31, 2022).

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

Compensation of Key Officers and Directors

Year ended October 31	**2023**	2022
Compensation and other short-term and long-term benefits	**24**	24
Share-based payments	**26**	21

Note 28 – Related Party Disclosures (cont.)

Principal Subsidiaries of the Bank[1]

				As at October 31, 2023
Name	Business activity	Principal office address	Voting shares[2]	Investment at cost
Canada and United States				
National Bank Acquisition Holding Inc.	Holding company	Montreal, Canada	100%	1,785
National Bank Financial Inc.	Investment dealer	Montreal, Canada	100%	
NBF International Holdings Inc.	Holding company	Montreal, Canada	100%	
National Bank of Canada Financial Group Inc.	Holding company	New York, NY, United States	100%	
Credigy Ltd.	Holding company	Atlanta, GA, United States	100%	
National Bank of Canada Financial Inc.	Investment dealer	New York, NY, United States	100%	
National Bank Investments Inc.	Mutual funds dealer	Montreal, Canada	100%	441
National Bank Life Insurance Company	Insurance	Montreal, Canada	100%	
Natcan Trust Company	Trustee	Montreal, Canada	100%	238
National Bank Trust Inc.	Trustee	Montreal, Canada	100%	195
National Bank Realty Inc.	Real estate	Montreal, Canada	100%	80
NatBC Holding Corporation	Holding company	Hollywood, FL, United States	100%	44
Natbank, National Association	Commercial bank	Hollywood, FL, United States	100%	
Flinks Technology Inc.	Information technology	Montreal, Canada	86%	144
Other countries				
Natcan Global Holdings Ltd.	Holding company	Sliema, Malta	100%	22
NBC Global Finance Limited	Investment services	Dublin, Ireland	100%	
NBC Financial Markets Asia Limited	Investment dealer	Hong Kong, China	100%	5
Advanced Bank of Asia Limited	Commercial bank	Phnom Penh, Cambodia	100%	941
ATA IT Ltd.	Information technology	Bangkok, Thailand	100%	3

(1) Excludes consolidated structured entities. For additional information, see Note 27 to these consolidated financial statements.
(2) The Bank's percentage of voting rights in these subsidiaries.

Note 29 – Management of the Risks Associated With Financial Instruments

The Bank is exposed to credit risk, market risk, and liquidity and funding risk. The Bank's objectives, policies, and procedures for managing risk and the risk measurement methods are presented in the Risk Management section of the MD&A for the year ended October 31, 2023. Text in grey shading and tables identified with an asterisk (*) in the Risk Management section of the MD&A for the year ended October 31, 2023 are integral parts of these consolidated financial statements.

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

The following tables present balance sheet items and off-balance-sheet commitments by residual contractual maturity as at October 31, 2023 and 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 nor 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 funding needs of its clients represent the maximum amount of additional credit that 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.

										As at October 31, 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	25,374	448	354	50	216	–	–	–	8,792	35,234
Securities										
At fair value through profit or loss	694	258	1,663	1,758	2,260	3,667	10,823	12,813	66,058	99,994
At fair value through other comprehensive income	3	30	154	224	426	538	4,548	2,660	659	9,242
At amortized cost	4	158	508	338	1,399	4,110	4,713	1,352	–	12,582
	701	446	2,325	2,320	4,085	8,315	20,084	16,825	66,717	121,818
Securities purchased under reverse repurchase agreements and securities borrowed	2,275	1,641	716	72	416	693	–	–	5,447	11,260
Loans[1]										
Residential mortgage	1,409	1,250	1,990	3,126	2,990	15,339	51,112	9,089	542	86,847
Personal	613	637	1,060	1,271	1,396	6,258	15,656	5,713	13,754	46,358
Credit card									2,603	2,603
Business and government	21,406	4,262	4,007	3,204	2,783	6,695	11,322	5,414	25,099	84,192
Customers' liability under acceptances	6,191	373	50	13	–	–	–	–	–	6,627
Allowances for credit losses									(1,184)	(1,184)
	29,619	6,522	7,107	7,614	7,169	28,292	78,090	20,216	40,814	225,443
Other										
Derivative financial instruments	2,040	1,982	1,367	1,197	611	1,696	2,399	6,224	–	17,516
Investments in associates and joint ventures									49	49
Premises and equipment									1,592	1,592
Goodwill									1,521	1,521
Intangible assets									1,256	1,256
Other assets[1]	2,639	746	166	1,206	546	597	249	659	1,081	7,889
	4,679	2,728	1,533	2,403	1,157	2,293	2,648	6,883	5,499	29,823
	62,648	11,785	12,035	12,459	13,043	39,593	100,822	43,924	127,269	423,578

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

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

										As at October 31, 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	4,648	3,722	4,491	6,056	5,145	8,398	11,635	4,164	39,624	87,883
Business and government	32,642	10,044	17,495	4,271	3,498	9,127	15,768	5,058	99,425	197,328
Deposit-taking institutions	646	408	32	109	18	8	15	33	1,693	2,962
	37,936	14,174	22,018	10,436	8,661	17,533	27,418	9,255	140,742	288,173
Other										
Acceptances	6,191	373	50	13	–	–	–	–	–	6,627
Obligations related to securities sold short[3]	35	155	129	73	76	347	2,332	4,123	6,390	13,660
Obligations related to securities sold under repurchase agreements and securities loaned	23,041	2,719	1,040	3,467	–	274	–	–	7,806	38,347
Derivative financial instruments	1,912	2,697	1,186	1,086	467	2,415	3,068	7,057	–	19,888
Liabilities related to transferred receivables[4]	–	1,760	829	2,142	618	3,915	8,678	7,092	–	25,034
Securitization – Credit card[5]	–	–	–	–	–	48	–	–	–	48
Lease liabilities[5]	9	28	25	24	23	83	197	128	–	517
Other liabilities – Other items[1][5]	1,417	309	174	7	27	37	58	105	4,724	6,858
	32,605	8,041	3,433	6,812	1,211	7,119	14,333	18,505	18,920	110,979
Subordinated debt	–	–	–	–	–	–	–	748	–	748
Equity									23,678	23,678
	70,541	22,215	25,451	17,248	9,872	24,652	41,751	28,508	183,340	423,578
Off-balance-sheet commitments										
Letters of guarantee and documentary letters of credit	89	1,287	1,975	2,185	1,490	1,165	255	50	–	8,496
Credit card receivables[6]									9,802	9,802
Backstop liquidity and credit enhancement facilities[7]	–	15	5,552	15	–	–	–	–	4,519	10,101
Commitments to extend credit[8]	3,186	10,675	8,445	7,562	4,316	4,579	3,312	39	48,592	90,706
Obligations related to:										
Lease commitments[9]	1	1	1	2	2	6	7	1	–	21
Other contracts[10]	11	22	34	33	36	46	138	13	127	460

(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 residual 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 $46.7 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 portion of the head office building under construction.

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	23,141	142	311	18	685	–	–	–	7,573	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
	69,563	16,998	17,588	12,198	10,368	29,227	107,214	33,682	106,902	403,740

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

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

As at October 31, 2022

	1 month or less	Over 1 month to 3 months	Over 3 months to 6 months	Over 6 months to 9 months	Over 9 months to 12 months	Over 1 year to 2 years	Over 2 years to 5 years	Over 5 years	No specified maturity	Total
Liabilities and equity										
Deposits[1][2]										
Personal	1,482	1,493	2,955	6,013	6,141	6,418	7,942	4,252	42,115	78,811
Business and government	36,864	11,605	10,644	4,875	3,728	5,988	13,659	4,227	92,640	184,230
Deposit-taking institutions	724	624	54	122	30	–	7	36	1,756	3,353
	39,070	13,722	13,653	11,010	9,899	12,406	21,608	8,515	136,511	266,394
Other										
Acceptances	5,967	554	20	–	–	–	–	–	–	6,541
Obligations related to securities sold short[3]	428	394	634	74	920	1,493	3,948	6,386	7,540	21,817
Obligations related to securities sold under repurchase agreements and securities loaned	16,233	5,445	1,567	3,406	–	22	–	–	6,800	33,473
Derivative financial instruments	2,584	2,302	1,640	1,009	595	2,047	3,570	5,885	–	19,632
Liabilities related to transferred receivables[4]	–	2,672	422	1,329	2,288	4,558	9,612	5,396	–	26,277
Securitization – Credit card[5]	–	–	–	29	–	–	49	–	–	78
Lease liabilities[5]	8	16	23	23	24	87	219	152	–	552
Other liabilities – Other items[1][5]	1,076	46	99	23	39	27	42	92	4,287	5,731
	26,296	11,429	4,405	5,893	3,866	8,234	17,440	17,911	18,627	114,101
Subordinated debt	–	–	–	–	–	–	–	1,499	–	1,499
Equity									21,746	21,746
	65,366	25,151	18,058	16,903	13,765	20,640	39,048	27,925	176,884	403,740
Off-balance-sheet commitments										
Letters of guarantee and documentary letters of credit	180	1,451	1,338	982	1,398	1,292	138	–	–	6,779
Credit card receivables[6]									9,337	9,337
Backstop liquidity and credit enhancement facilities[7]	–	15	5,552	15	–	–	–	–	3,125	8,707
Commitments to extend credit[8]	3,126	9,205	6,179	6,678	3,270	4,066	3,186	39	46,368	82,117
Obligations related to:										
Lease commitments[9]	1	1	2	2	2	6	9	8	–	31
Other contracts[10]	38	42	47	46	47	21	34	–	102	377

(1) Amounts payable upon demand or notice are considered to have no specified maturity.
(2) The *Deposits* item is presented in greater detail than it is on the Consolidated Balance Sheet.
(3) Amounts have been disclosed according to the residual 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.

Note 30 – Segment Disclosures

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

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

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

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

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

Other
This heading encompasses treasury activities; liquidity management; Bank funding; asset/liability management activities; the activities of the Flinks subsidiary, a fintech company specialized in financial data aggregation and distribution; certain specified items; and the unallocated portion of corporate units.

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

Note 30 – Segment Disclosures (cont.)

Results by Business Segment

Year ended October 31[1]

	Personal and Commercial		Wealth Management		Financial Markets		USSF&I		Other		Total	
	2023	2022	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022
Net interest income[2]	**3,321**	2,865	**778**	594	**(1,054)**	1,258	**1,132**	1,090	**(591)**	(536)	**3,586**	5,271
Non-interest income[2][3]	**1,195**	1,169	**1,743**	1,781	**3,710**	1,210	**77**	20	**(141)**	201	**6,584**	4,381
Total revenues	**4,516**	4,034	**2,521**	2,375	**2,656**	2,468	**1,209**	1,110	**(732)**	(335)	**10,170**	9,652
Non-interest expenses[4][5][6][7]	**2,510**	2,241	**1,534**	1,417	**1,161**	1,029	**402**	344	**194**	199	**5,801**	5,230
Income before provisions for credit losses and income taxes	**2,006**	1,793	**987**	958	**1,495**	1,439	**807**	766	**(926)**	(534)	**4,369**	4,422
Provisions for credit losses	**238**	97	**2**	3	**39**	(23)	**113**	66	**5**	2	**397**	145
Income before income taxes (recovery)	**1,768**	1,696	**985**	955	**1,456**	1,462	**694**	700	**(931)**	(536)	**3,972**	4,277
Income taxes (recovery)[2][8]	**486**	449	**271**	254	**401**	388	**146**	143	**(667)**	(340)	**637**	894
Net income	**1,282**	1,247	**714**	701	**1,055**	1,074	**548**	557	**(264)**	(196)	**3,335**	3,383
Non-controlling interests	**–**	–	**–**	–	**–**	–	**–**	–	**(2)**	(1)	**(2)**	(1)
Net income attributable to the Bank's shareholders and holders of other equity instruments	**1,282**	1,247	**714**	701	**1,055**	1,074	**548**	557	**(262)**	(195)	**3,337**	3,384
Average assets[9]	**148,511**	140,300	**8,560**	8,440	**180,837**	154,349	**23,007**	18,890	**69,731**	71,868	**430,646**	393,847
Total assets	**154,728**	146,668	**8,666**	8,486	**178,784**	157,803	**25,308**	21,217	**56,092**	69,566	**423,578**	403,740

(1) For the year ended October 31, 2022, certain amounts were reclassified, notably due to a revised method for the sectoral allocation of technology investment expenses.

(2) For the year ended October 31, 2023, *Net interest income* was grossed up by $332 million ($234 million in 2022), *Non-interest income* was grossed up by $247 million ($48 million in 2022), and an equivalent amount was recognized in *Income taxes (recovery).* The effects of these adjustments have been reversed under the *Other* heading.

(3) For the year ended October 31, 2023, the Bank concluded that it had lost significant influence over TMX and therefore 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. Upon the fair value measurement, a $91 million gain was recorded in the *Non-interest income* item of the *Other* heading.

(4) For the year ended October 31, 2023, the Bank recorded $75 million in intangible asset impairment losses on technology development in the *Non-interest expenses* item of the following segments: Personal and Commercial ($59 million), Wealth Management ($8 million), Financial Markets ($7 million), and in the *Other* heading ($1 million). Moreover, it recorded $11 million in premises and equipment impairment losses related to right-of-use assets in the *Non-interest expenses* item of the *Other* heading.

(5) For the year ended October 31, 2023, the Bank recorded $35 million in litigation expenses to resolve litigations and other disputes arising from various ongoing or potential claims against the Bank in the *Non-interest expenses* item of the Wealth Management segment.

(6) For the year ended October 31, 2023, the *Non-interest expenses* item of the *Other* heading included an expense of $25 million related to the retroactive impact of the changes 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).

(7) For the year ended October 31, 2023, the Bank recorded in the *Non-interest expenses* item $15 million in charges for (i) contract termination penalties (Personal and Commercial segment: $9 million) and for (ii) provisions for onerous contracts (*Other* heading: $6 million).

(8) For the year ended October 31, 2023, the Bank recorded a $32 million tax expense with respect to the Canada Recovery Dividend, i.e., a one-time, 15% tax on the fiscal 2021 and 2020 average taxable income above $1 billion, as well as an $8 million tax recovery related to a 1.5% increase in the statutory tax rate, which includes the impact related to current and deferred taxes for fiscal 2022. These items are recorded in the *Other* heading. For additional information on these tax measures, see Note 24.

(9) Represents an average of the daily balances for the period, which is also the basis on which sectoral assets are reported in the business segments.

Results by Geographic Segment

Year ended October 31

	Canada		United States		Other		Total	
	2023	2022	**2023**	2022	**2023**	2022	**2023**	2022
Net interest income	**1,901**	3,758	**1,051**	773	**634**	740	**3,586**	5,271
Non-interest income(1)	**5,812**	4,299	**98**	18	**674**	64	**6,584**	4,381
Total revenues	**7,713**	8,057	**1,149**	791	**1,308**	804	**10,170**	9,652
Non-interest expenses(2)(3)(4)(5)	**5,261**	4,760	**226**	209	**314**	261	**5,801**	5,230
Income before provisions for credit losses and income taxes	**2,452**	3,297	**923**	582	**994**	543	**4,369**	4,422
Provisions for credit losses	**284**	79	**81**	35	**32**	31	**397**	145
Income before income taxes	**2,168**	3,218	**842**	547	**962**	512	**3,972**	4,277
Income taxes(6)	**371**	723	**68**	67	**198**	104	**637**	894
Net income	**1,797**	2,495	**774**	480	**764**	408	**3,335**	3,383
Non-controlling interests	**(2)**	(1)	**–**	–	**–**	–	**(2)**	(1)
Net income attributable to the Bank's shareholders and holders of other equity instruments	**1,799**	2,496	**774**	480	**764**	408	**3,337**	3,384
Average assets(7)	**355,337**	324,415	**29,116**	29,988	**46,193**	39,444	**430,646**	393,847
Total assets	**348,073**	336,215	**29,968**	27,986	**45,537**	39,539	**423,578**	403,740

(1) For the year ended October 31, 2023, the Bank concluded that it had lost significant influence over TMX and therefore 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 was recorded in the *Non-interest income item* in Canada.

(2) For the year ended October 31, 2023, the Bank recorded $75 million in intangible asset impairment losses on technology development, and it recorded $11 million in premises and equipment impairment losses related to right-of-use assets in the *Non-interest expenses* item in Canada.

(3) For the year ended October 31, 2023, the Bank recorded $35 million in litigation expenses to resolve litigations and other disputes arising from various ongoing or potential claims against the Bank in the *Non-interest expenses* item in Canada.

(4) For the year ended October 31, 2023, the *Non-interest expenses* item in Canada included an expense of $25 million related to the retroactive impact of the changes 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).

(5) For the year ended October 31, 2023, the Bank recorded, in the *Non-interest expenses* item in Canada, $15 million in charges for (i) contract termination penalties and for (ii) provisions for onerous contracts.

(6) For the year ended October 31, 2023, the Bank recorded a $32 million tax expense with respect to the Canada Recovery Dividend, i.e., a one-time, 15% tax on the fiscal 2021 and 2020 average taxable income above $1 billion, as well as an $8 million tax recovery related to a 1.5% increase in the statutory tax rate, which includes the impact related to current and deferred taxes for fiscal 2022. These items are recorded in Canada. For additional information on these tax measures, see Note 24.

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

Note 31 – Event After the Consolidated Balance Sheet Date

Repurchase of Common Shares

On November 30, 2023, the Bank's Board of Directors approved a normal course issuer bid, beginning December 12, 2023, to repurchase for cancellation up to 7,000,000 common shares (representing approximately 2.07% of its then outstanding common shares) over the 12-month period ending December 11, 2024. Any repurchase through the Toronto Stock Exchange will be done at market prices. The common shares may also be repurchased through other means authorized by the Toronto Stock Exchange and applicable regulations, including private agreements or share repurchase programs under issuer bid exemption orders issued by the securities regulators. A private purchase made under an exemption order issued by a securities regulator will be done at a discount to the prevailing market price. The amounts that are paid above the average book value of the common shares are charged to *Retained earnings*. This normal course issuer bid is subject to the approval of OSFI and the Toronto Stock Exchange (TSX).

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Statistical Review

As at October 31 or for the year ended October 31[1] (millions of Canadian dollars)	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Consolidated Balance Sheet data										
Cash and deposits with financial institutions	**35,234**	31,870	33,879	29,142	13,698	12,756	8,802	8,183	7,567	8,086
Securities	**121,818**	109,719	106,304	102,131	82,226	69,783	65,343	64,541	56,040	52,953
Securities purchased under reverse repurchase agreements and securities borrowed	**11,260**	26,486	7,516	14,512	17,723	18,159	20,789	13,948	17,702	24,525
Loans and acceptances, net of allowances	**225,443**	206,744	182,689	164,740	153,251	146,082	136,457	128,036	116,676	106,959
Other assets	**29,823**	28,921	25,233	20,963	14,475	15,661	14,433	17,498	18,105	12,906
Total assets	**423,578**	403,740	355,621	331,488	281,373	262,441	245,824	232,206	216,090	205,429
Deposits	**288,173**	266,394	240,938	215,878	189,566	170,830	156,671	142,066	130,458	119,883
Other liabilities	**110,979**	114,101	95,233	98,589	75,983	76,539	75,589	77,026	72,755	73,163
Subordinated debt	**748**	1,499	768	775	773	747	9	1,012	1,522	1,881
Share capital and other equity instruments										
Preferred shares and other equity instruments	**3,150**	3,150	2,650	2,950	2,450	2,450	2,050	1,650	1,023	1,223
Common shares	**3,294**	3,196	3,160	3,057	2,949	2,822	2,768	2,645	2,614	2,293
Contributed surplus	**68**	56	47	47	51	57	58	73	67	52
Retained earnings	**16,744**	15,140	12,854	10,307	9,227	8,442	7,703	6,706	6,705	5,850
Accumulated other comprehensive income	**420**	202	(32)	(118)	16	175	168	218	145	289
Non-controlling interests	**2**	2	3	3	358	379	808	810	801	795
Total liabilities and equity	**423,578**	403,740	355,621	331,488	281,373	262,441	245,824	232,206	216,090	205,429
Average assets[2]	**430,646**	393,847	363,506	318,087	286,162	265,940	248,351	235,913	222,929	206,680
Net impaired loans excluding POCI loans[3][4] under IFRS 9	**606**	479	283	465	450	404				
Net impaired loans excluding POCI loans[4] under IAS 39							206	281	254	248
Consolidated Statement of Income data										
Net interest income	**3,586**	5,271	4,783	4,255	3,596	3,382	3,436	3,205	2,929	2,761
Non-interest income	**6,584**	4,381	4,144	3,672	3,836	3,784	3,173	2,635	2,817	2,703
Total revenues	**10,170**	9,652	8,927	7,927	7,432	7,166	6,609	5,840	5,746	5,464
Non-interest expenses	**5,801**	5,230	4,903	4,616	4,375	4,100	3,861	3,875	3,665	3,423
Income before provisions for credit losses and income taxes	**4,369**	4,422	4,024	3,311	3,057	3,066	2,748	1,965	2,081	2,041
Provisions for credit losses	**397**	145	2	846	347	327	244	484	228	208
Income taxes	**637**	894	882	434	443	534	483	225	234	295
Net income	**3,335**	3,383	3,140	2,031	2,267	2,205	2,021	1,256	1,619	1,538
Non-controlling interests	**(2)**	(1)	–	42	66	87	84	75	70	69
Net income attributable to the Bank's shareholders and holders of other equity instruments	**3,337**	3,384	3,140	1,989	2,201	2,118	1,937	1,181	1,549	1,469

(1) Certain amounts from fiscal years 2017 to 2021 were adjusted in 2022 to reflect an accounting policy change applicable to cloud computing arrangements, aside from the average assets figures for fiscal years 2017 to 2019.
(2) Represents an average of the daily balances for the period.
(3) Given the adoption of IFRS 9, all loans classified in Stage 3 of the expected credit loss model are impaired loans. Under IAS 39, loans were considered impaired according to different criteria. Net impaired loans are presented net of allowances for credit losses on Stage 3 loan amounts drawn and, in this table, the net impaired loans presented exclude POCI loans.
(4) Includes customers' liability under acceptances.

As at October 31[1]	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Number of common shares[2] *(thousands)*	**338,285**	336,582	337,912	335,998	334,172	335,071	339,592	338,053	337,236	329,297
Basic earnings per share[2]	**$ 9.47**	$ 9.72	$ 8.95	$ 5.57	$ 6.22	$ 5.93	$ 5.43	$ 3.31	$ 4.56	$ 4.36
Diluted earnings per share[2]	**$ 9.38**	$ 9.61	$ 8.85	$ 5.54	$ 6.17	$ 5.86	$ 5.37	$ 3.29	$ 4.51	$ 4.32
Dividend per share[2]	**$ 3.98**	$ 3.58	$ 2.84	$ 2.84	$ 2.66	$ 2.44	$ 2.28	$ 2.18	$ 2.04	$ 1.88
Share price[2]										
High	**$ 103.58**	$ 105.44	$ 104.32	$ 74.79	$ 68.02	$ 65.63	$ 62.74	$ 47.88	$ 55.06	$ 53.88
Low	**$ 84.97**	$ 83.12	$ 65.54	$ 38.73	$ 54.97	$ 58.69	$ 46.83	$ 35.83	$ 40.75	$ 41.60
Close	**$ 86.22**	$ 92.76	$ 102.46	$ 63.94	$ 68.02	$ 59.76	$ 62.61	$ 47.88	$ 43.31	$ 52.68
Book value[2][3]	**$ 60.68**	$ 55.24	$ 47.44	$ 39.56	$ 36.64	$ 34.31	$ 31.50	$ 28.52	$ 28.26	$ 25.76
Dividends on preferred shares										
Series 16	**–**	–	–	–	–	–	–	–	–	$ 1.2125
Series 20	**–**	–	–	–	–	–	–	–	$ 1.5000	$ 1.5000
Series 24	**–**	–	–	–	–	–	–	–	–	$ 0.4125
Series 26	**–**	–	–	–	–	–	–	–	–	$ 0.4125
Series 28	**–**	–	–	–	–	–	$ 0.9500	$ 0.9500	$ 0.9500	$ 0.9500
Series 30	**$ 1.0063**	$ 1.0063	$ 1.0063	$ 1.0063	$ 1.0156	$ 1.0250	$ 1.0250	$ 1.0250	$ 1.0250	$ 0.7849
Series 32	**$ 0.9598**	$ 0.9598	$ 0.9598	$ 0.9636	$ 0.9750	$ 0.9750	$ 0.9750	$ 0.9750	$ 1.0760	–
Series 34	**–**	–	$ 0.7000	$ 1.4000	$ 1.4000	$ 1.4000	$ 1.4000	$ 1.1373	–	–
Series 36	**–**	–	$ 1.0125	$ 1.3500	$ 1.3500	$ 1.3500	$ 1.3500	$ 0.5733	–	–
Series 38	**$ 1.7568**	$ 1.1125	$ 1.1125	$ 1.1125	$ 1.1125	$ 1.1125	$ 0.4724	–	–	–
Series 40	**$ 1.3023**	$ 1.1500	$ 1.1500	$ 1.1500	$ 1.1500	$ 0.9310	–	–	–	–
Series 42	**$ 1.2375**	$ 1.2375	$ 1.2375	$ 1.2375	$ 1.2375	$ 0.5323	–	–	–	–
LRCN interests										
Series 1	**4.30 %**	4.30 %	4.30 %	4.30 %	–	–	–	–	–	–
Series 2	**4.05 %**	4.05 %	4.05 %	–	–	–	–	–	–	–
Series 3	**7.50 %**	7.50 %	–	–	–	–	–	–	–	–
Financial ratios										
Return on common shareholders' equity[3]	**16.5 %**	18.8 %	20.7 %	14.6 %	18.0 %	18.4 %	18.1 %	11.7 %	16.9 %	17.9 %
Return on average assets[3]	**0.77 %**	0.86 %	0.86 %	0.64 %	0.81 %	0.84 %	0.81 %	0.53 %	0.73 %	0.74 %
Regulatory ratios under Basel III[4]										
Capital ratios										
CET1	**13.5 %**	12.7 %	12.4 %	11.8 %	11.7 %	11.7 %	11.2 %	10.1 %	9.9 %	9.2 %
Tier 1	**16.0 %**	15.4 %	15.0 %	14.9 %	15.0 %	15.5 %	14.9 %[5]	13.5 %	12.5 %[6]	12.3 %[7]
Total	**16.8 %**	16.9 %	15.9 %	16.0 %	16.1 %	16.8 %	15.1 %[5]	15.3 %	14.0 %[8]	15.1 %[7]
Leverage ratio	**4.4 %**	4.5 %	4.4 %	4.4 %	4.0 %	4.0 %	4.0 %	3.7 %	4.0 %	
TLAC ratio[9]	**29.2 %**	27.7 %	26.3 %	23.7 %						
TLAC leverage ratio[9]	**8.0 %**	8.1 %	7.8 %	7.0 %						
Liquidity coverage ratio (LCR)[10]	**155 %**	140 %	154 %	161 %	146 %	147 %	132 %	134 %	131 %	
Net stable funding ratio (NSFR)[10]	**118 %**	117 %	117 %							
Other information										
Number of employees[11]	**28,916**	27,103	24,495	25,604	24,557	22,426	20,584	20,600	19,026	18,725
Branches in Canada	**368**	378	384	403	422	428	429	450	452	452
Banking machines in Canada	**944**	939	927	940	939	937	931	938	930	935

(1) Certain amounts from fiscal years 2017 to 2021 have been adjusted to reflect an accounting policy change in 2022 applicable to cloud computing arrangements, aside from the return on common shareholders' equity and return on average assets figures for fiscal years 2017 to 2019.
(2) The figures for 2014 have been adjusted to reflect the stock dividend paid in 2014.
(3) See the Glossary section on pages 124 to 127 for details on the composition of these measures.
(4) Ratios as at October 31, 2022, 2021 and 2020 are calculated in accordance with the Basel III rules, as set out in OSFI's *Capital Adequacy Requirements Guideline* and *Leverage Requirements Guideline*, and reflect the transitional measures granted by OSFI.
(5) Taking into account the redemption of the Series 28 preferred shares on November 15, 2017.
(6) Taking into account the redemption of the Series 20 preferred shares on November 15, 2015.
(7) Taking into account the redemption of the Series 16 preferred shares on November 15, 2014.
(8) Taking into account the redemption of the Series 20 preferred shares on November 15, 2015 and the $500 million redemption of notes on November 2, 2015.
(9) The TLAC ratio and the TLAC leverage ratio are calculated in accordance with OSFI's *Total Loss Absorbing Capacity Guideline*.
(10) The LCR ratio and the NSFR ratio are calculated in accordance with OSFI's *Liquidity Adequacy Requirements Guideline*.
(11) Full-time equivalent. The methodology was refined during fiscal 2023 and the fiscal 2022 and 2021 figures have been restated.

Information for Shareholders

Description of Share Capital

The authorized share capital of the Bank consists of an unlimited number of common shares, without par value, an unlimited number of first preferred shares, without par value, issuable for a maximum aggregate consideration of $5 billion, and 15 million second preferred shares, without par value, issuable for a maximum aggregate consideration of $300 million. As at October 31, 2023, the Bank had a total of 338,284,629 common shares and 66,000,000 first preferred shares issued and outstanding.

Stock Exchange Listings

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

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

Number of Registered Shareholders

As at October 31, 2023, there were 19,881 common shareholders recorded in the Bank's common share register.

Dividends

Dividend Dates in Fiscal 2024
(subject to approval by the Board of Directors of the Bank)

Record date	Payment date
Common shares	
December 25, 2023	February 1, 2024
March 25, 2024	May 1, 2024
June 24, 2024	August 1, 2024
September 30, 2024	November 1, 2024
Preferred shares,	
Series 30, 32, 38, 40 and 42	
January 8, 2024	February 15, 2024
April 5, 2024	May 15, 2024
July 8, 2024	August 15, 2024
October 7, 2024	November 15, 2024

Dividends Declared on Common Shares During Fiscal 2023

Record date	Payment date	Dividend per share ($)
December 26, 2022	February 1, 2023	0.97
March 27, 2023	May 1, 2023	0.97
June 26, 2023	August 1, 2023	1.02
September 25, 2023	November 1, 2023	1.02

Dividends Declared on Preferred Shares During Fiscal 2023

		Dividend per share ($)				
Record date	Payment date	Series 30	Series 32	Series 38	Series 40	Series 42
January 6, 2023	February 15, 2023	0.2516	0.2399	0.4392	0.2875	0.3094
April 5, 2023	May 15, 2023	0.2515	0.2400	0.4392	0.2875	0.3094
July 6, 2023	August 15, 2023	0.2516	0.2399	0.4392	0.3636	0.3093
October 6, 2023	November 15, 2023	0.2516	0.2400	0.4392	0.3637	0.3094

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

Dividend Reinvestment and Share Purchase Plan

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

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

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

Head Office
National Bank of Canada
600 De La Gauchetière Street West, 4th Floor
Montreal, Quebec H3B 4L2 Canada

Telephone: 514-394-5000
Website: nbc.ca

Annual Meeting
The Annual Meeting of Holders of Common Shares of the Bank will be held on April 19, 2024.

Corporate Social Responsibility Statement
The information will be available in March 2024 on the Bank's website at nbc.ca.

Communication with Shareholders
For information about stock transfers, address changes, dividends, lost certificates, tax forms and estate transfers, shareholders of record may contact the transfer agent at the following address:

Computershare Trust Company of Canada
Share Ownership Management
100 University Avenue, 8th Floor
Toronto, Ontario M5J 2Y1 Canada

Telephone: 1-888-838-1407
Fax: 1-888-453-0330
E-mail: *service@computershare.com*
Website: computershare.com

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

Other shareholder inquiries can be addressed to:
Investor Relations
National Bank of Canada
600 De La Gauchetière Street West, 7th Floor
Montreal, Quebec H3B 4L2 Canada

Telephone: 1-866-517-5455
E-mail: investorrelations@nbc.ca
Website: nbc.ca/investorrelations

Caution Regarding Forward-Looking Statements
From time to time, National Bank of Canada makes written and oral forward-looking statements, including in this Annual Report, in other filings with Canadian regulators, in reports to shareholders, in press releases and in other communications. These statements are made pursuant to the Canadian and American securities legislation.

The Caution Regarding Forward-Looking Statements section can be found on page 13 of this Annual Report.

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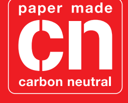

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