ANNUAL REPORT **2022**

LAURENTIAN BANK

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Our Purpose

We believe we can **change banking** for the better. By **seeing beyond numbers** to **bring hopes and dreams** to life. Better begins when everyone feels like they belong and has the **chance to thrive.**

Our Core Values

We place
our **customers first**

We work together
as **One Winning Team**

We act
courageously

We are
results driven

We believe
everyone belongs

Who We Are

Founded in Montreal in 1846, Laurentian Bank has approximately 3,000 employees, working as one winning team to serve our customers across Commercial Banking, Capital Markets, and Personal Banking.

We are a Canadian Schedule 1 Bank with operations across Canada and the United States. We believe that we can change banking for the better by seeing beyond numbers to bring the hopes and dreams of our customers to life. Better begins when everyone feels like they belong and has the chance to thrive. Our core values guide us in everything that we do: 1) We place our customers first; 2) We work together as One Winning Team; 3) We act courageously; 4) We are results driven; and, 5) We believe everyone belongs.

Commercial Banking is our growth engine as a result of our specialized approach across our footprint in Canada and in the United States. Capital Markets provides a focused and aligned approach, allowing us to develop deep customer relationships. Personal Banking is combining a digital first and human approach to change banking for the better.

Our One Winning Team continues to drive shareholder value and long-term, sustainable, profitable growth.

2022 Financial Highlights

Total Revenue
($ billions)

2022	$1.03
2021	$1.00
2020	$0.97

Net Income
($ millions)

2022	$226.6
2021	$57.1
2020	$114.1

Adjusted Net Income[1, 4]
($ millions)

2022	$237.1
2021	$211.2
2020	$138.2

Diluted Earnings per Share

2022	$4.95
2021	$1.03
2020	$2.37

Adjusted Diluted Earnings per Share[2, 4]

2022	$5.19
2021	$4.57
2020	$2.93

Efficiency ratio[3, 4]

2022	67.8%
2021	87.8%
2020	75.6%

Adjusted efficiency ratio[2, 4]

2022	66.5%
2021	68.2%
2020	72.3%

Return on Common Shareholders' Equity[2, 4]

2022	8.9%
2021	1.9%
2020	4.4%

Adjusted Return on Common Shareholders' equity[2, 4]

2022	9.3%
2021	8.3%
2020	5.5%

Total Assets
As at October 31, 2022 ($ billions)

$50.7
+13% Y/Y

Total Deposits
As at October 31, 2022 ($ billions)

$27.1
+18% Y/Y

Common Equity Tier 1 capital ratio
As at October 31, 2022

9.1%

[1] This is a non-GAAP financial measure.

[2] This is a non-GAAP ratio.

[3] This is a supplementary financial measure.

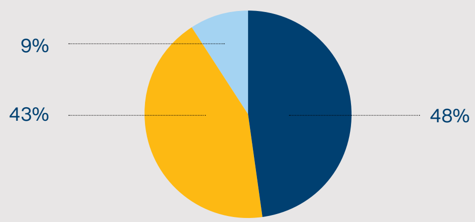
[4] For more information, refer to the non-GAAP financial and other measures section beginning on page 28 of the 2022 Annual Report, including the Management's Discussion and Analysis (MD&A) for the year ended October 31, 2022, which pages are incorporated by reference herein. The MD&A is available on SEDAR at sedar.com.

Solid Financial Foundation and Good Diversification

As at October 31, 2022

Loan portfolio mix

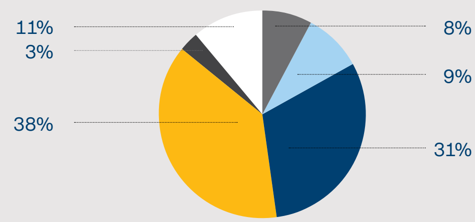
A good proportion of higher margin commercial loans in the Bank mix



Commercial loans
Residential mortgage loans
Personal loans

Geographic footprint

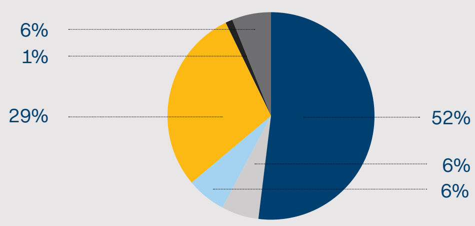
Loans across Canada and the United States



British Columbia and Territories
Alberta & Prairies
Ontario
Quebec
Atlantic Provinces
United States

Multiple funding sources

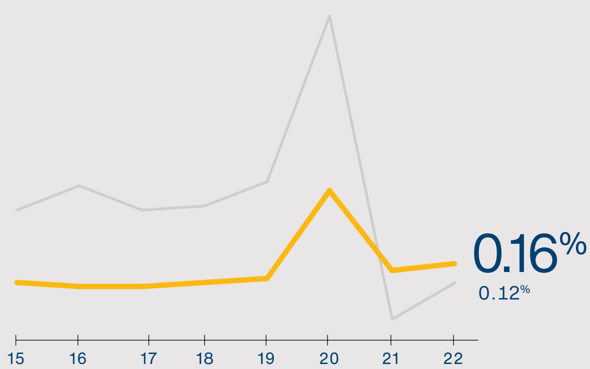
Well-diversified funding sources to support our growth



Personal deposits
Business deposits
Wholesale deposits
Debt related to securitization activities
Subordinated debt
Shareholders' equity

Good track record of strong credit quality

Provision for credit losses[1]
(as a % of average loans and acceptances)



Major Canadian Banks[2]
Laurentian Bank

[1] This is a supplementary financial measure.

[2] Based on the average of the major Canadian banks for the year ended October 31, 2022.

5-Point Plan for Future Growth

At our December 2021 Investor Day, we unveiled the Bank's three-year strategic plan, following a year-long strategic review of the Bank's operations and businesses. The plan is focused, simple, and executable, and lays out a path to accelerated growth by 2024.

A Unique Value Proposition

As part of the strategic review process, our senior management team identified the Bank's unique value proposition and key areas that set us apart from the competition, by listening to our customers and employees, and by looking at external trends. We are:

- Offering an alternative to the Big Six Banks to meet the needs of even more Canadians and businesses
- Specialized with expertise in key markets
- Making a difference in our customers' and employees' lives and financial wellbeing with a more human approach to banking
- Leveraging our size to leapfrog the competition, partnering with others to offer our customers new products and services faster
- Developing creative, resourceful and nimble solutions for the Bank and for our customers

Strategic Plan | 5-Point Plan for Future Growth

1. Build One Winning Team	2. Make Size our Advantage	3. Think Customer First	4. Simplify	5. Make the Better Choice

Culture Our Driving Force	**Commercial Banking** Our Growth Engine	**Capital Markets** Focused & Aligned Offering	**Personal Banking** Repositioning for Growth

Underpinned by a commitment to ESG, a new purpose and new core values

2022	→	2023	→	2024
Execute		Grow		Accelerate

We are here

2022 Financial Targets

Financial Target	2022 Target	2022 Results	Status
Adjusted diluted earnings per share growth[1,2]	>5%	14%	✓
Adjusted return on common shareholders' equity[2]	>8.5%	9.3%	✓
Adjusted efficiency ratio[2]	<68%	66.5%	✓
Adjusted operating leverage[1]	Positive	2.6%	✓

[1] Compared to the year ended October 31, 2021.

[2] The financial objectives are non-GAAP ratios based on non-GAAP financial measures. Refer to the Non-GAAP Financial and Other Measures section on page 28 of the MD&A for more information.

2022 Strategic Plan Accomplishments

Build One Winning Team

Working across boundaries, we are putting the Bank ahead of individual interests, in an environment where everyone belongs and thrives.

- Introduced new hybrid flexible work model as part of our Future of Work strategy
- Deployed enhanced tools for employees to work even more productively in our hybrid workplace
- Rolled out cultural bootcamps on living our core values and co-creating each team's flexible work model
- Launched 2nd annual Employee Survey: increased employee engagement by three percentage points, and survey participation by 17 points
- Improved employee benefits, including an enhanced Employee and Family Assistance program, and introduced new mental health and wellness resources and programs
- Leveraged our Employee Resource Groups to promote the internal development of participants and coordinated ongoing Courageous Conversations Initiative events
- Incorporated equity, diversity & inclusion targets in all leaders' scorecards
- Launched process excellence training program to develop top talent
- Rolled out new tools and resources for development and career pathing, including a webcast series

Think Customer First

We are building up a culture with a relentless focus on the customer.

- Commercial Banking maintained an NPS of above 50, including excellent ratings in real estate and equipment financing, and a world-class rating in inventory financing
- Closed the top five digital pain points as identified by our Personal Banking customers:
  - ✓ Mobile app
  - ✓ Tap on debit
  - ✓ 1st phase of digital account opening
  - ✓ Online password reset
  - ✓ Refreshed public web
- Launched new HISA product
- Launched new loyalty team to enhance customer retention and experience
- Achieved residential mortgages time-to-yes target of less than three days
- Implemented improvements to our contact centre leading to 25% fewer abandoned calls
- Implemented successful concierge service for top financial advisor partners
- Improved first-time right investment lending transactions

Make the Better Choice

From the businesses we are in, to the people we hire, and the suppliers we use, we are living up to our values and integrating environmental, social and governance best practices in our operations and activities.

- Incorporated environment, social and governance (ESG) targets in all leaders' scorecards
- Implemented CEO-led governance structure and revised Board mandates to include ESG oversight
- Published the Bank's first ESG and TCFD Reports and disclosed our Scope 1 and 2 Greenhouse Gas emissions
- Joined the Partnership for Carbon Accounting Financials (PCAF), developing standardized methods for disclosing carbon emissions
- Launched the Bank's first-ever Sustainable Bond Framework
- Conducted a climate risk assessment on commercial loan and residential mortgage portfolios
- Participated in the financing of almost $13 billion in green and sustainable bonds
- In partnership with Mackenzie Investments, LBC Financial Services launched new ESG Model portfolios
- Established the guidelines under which the Bank will no longer directly finance the exploration, production or development of coal or oil and gas

Make Size Our Advantage

We are leveraging our size to create a competitive advantage in specialized markets, and are remaining agile in assessing new opportunities.

- Launched our mobile app in less than seven months from conception to delivery by being agile and nimble in our development
- Entered into a strategic partnership with Brim Financial to enhance our Visa products and end-to-end customer journey
- Introduced a new digital account opening solution in partnership with thirdstream
- Leveraged our strategic partnership with Kyndryl to move the Bank to a next-generation hybrid multicloud environment

Simplify

We are streamlining internal operations and enhancing efficiencies.

- Drove our adjusted efficiency ratio below 67%
- Decommissioned corporate office space by 50% as part of our new hybrid and flexible work model
- Leveraged contract renewals to streamline our number of vendors and professional services providers
- Reduced excess data storage and associated costs
- Decommissioned 50 redundant technology applications
- Launched new Business Efficiency Program

Message from the Chair of the Board

Laurentian Bank had an incredible year. Your Board is very proud of the Bank's many accomplishments led by the thoughtful leadership of our CEO, Rania Llewellyn. The Board and I continue to be inspired by the dedication, focus and agility of the entire team, always keeping a line of sight on seeing beyond numbers and striving to change banking for the better.

A Singular Focus

The past year was fraught with macroeconomic challenges, from the market volatility to rising interest rates and concerns about a recession. Despite the disquiet, Laurentian Bank stayed the course with determination to execute on its strategic plan – as **One Winning Team**. The Board had a front row seat engaging with the entire executive team working in sync, building each other up and supporting the vision – together. Without a doubt, **culture enables our strategy**. The incredible work this year on building and sustaining a strong and vibrant culture of belonging underpins Laurentian Bank's success. The Bank's five core values – We place our customer first; We work together as One Winning Team; We act courageously; We are results driven; and, We believe everyone belongs – are modeled by every team member, from executive to the front line, from support teams to customer-facing teams, and are evidenced in all that has been achieved this past year at the Bank.

Moving the Strategy Forward

In terms of key accomplishments, the Bank had an excellent year, enjoyed tremendous growth, and delivered against our plan by truly focusing on the customer. We're constantly thinking about where we can add value for our customers, whether it's by making banking simpler, faster or more cost effective. The strategy was not about turning things on a dime, but through well-planned and incremental improvements in areas that we deemed as our key priorities.

Our strong financial results were a direct outcome of improving our technology, harnessing the powerful alignment between Capital Markets and Commercial Banking, repositioning the Personal Bank for growth, and always thinking customer first. I'm particularly proud of these results, especially given the difficult economic environment. Looking ahead, we will be making very prudent decisions on where to most wisely invest our capital to continue to grow the Bank and deliver value for our customers and shareholders.

2022 Board Activities

The Board and leaders were united in the shared belief that we are all on the same journey. Our discussions and healthy debates were centered around the strategic plan launched at the Bank's December 2021 Investor Day and, as markets demanded adjustments, we remained nimble and aligned on how to best respond to challenges, staying true to our top priorities.

The Bank continued to advance its environmental, social and governance (ESG) priorities and the Board fully credits its successful execution to our CEO who self-appointed herself as the Bank's ESG Champion. The Board is very proud of the Bank for publishing its first ESG Report. The Board takes its responsibility of ESG oversight seriously and we discuss the importance of ESG at every Board meeting. As I stated last year, we believe we can make a particular difference under the "social" pillar,

> "I can describe this year in one word – execution. We laid out the plan and we executed against that plan."
> **Mike Mueller, Chair of the Board**

and we continue to embed this facet into the DNA of the Bank. We believe this is a genuine differentiator for us.

In terms of governance, the Board is diverse in gender and talent. We recognize there is an opportunity to refresh some of the committee responsibilities and we are committed to adding capacity to the Board next year. We will ensure that we continue to have the skillsets needed to navigate change and to position the Bank for continued good governance and Board succession planning, with a focus on diversity of background, age and experience.

Our attention to risk and cybersecurity is a standing item for the Board. We are steadily and incrementally improving our technology, engaging in regular training sessions, and paying particular attention to the priority initiatives.

Looking Ahead to 2023

We're very excited about the future of the Bank. We have distinct growth opportunities, and we are determined to grow intelligently and invest our capital prudently. We have our five core values that are driven through the organization. We have important measures we're driving towards and, while the market is an unknown, we do know that we have a solid strategy and we're headed in the right direction. Most importantly, we will navigate the right path together – as One Winning Team.

Thank you

In closing, on behalf of the entire Board, we thank Rania for her unwavering vision and the entire leadership team for their steadfast commitment and remarkable efforts in what has been a challenging and unpredictable year. We are tremendously proud of their leadership and their dedication to the Bank's evolving culture, and we remain inspired by how employee engagement is being driven to new heights.

To my fellow Board members, thank you, once again, for your partnership, sound advice and good counsel over the past year. On behalf of the Board, we want to thank David Morris, who left the Board in May, for his contributions and services to Laurentian Bank.

Special thanks to our Laurentian Bank employees who are committed to placing the customer first and working together to **change banking for the better by seeing beyond numbers**.

And finally, to our fellow shareholders, thank you for your trust, support, and impartial feedback. We are extremely optimistic about the future, driven by our purpose and united in our values.

Michael Mueller
Chair of the Board

Message from the President and CEO

In my letter to you last year, I shared that 2022 would be Laurentian Bank's year of execution – and it was. We set ambitious goals for ourselves, and we delivered on our commitments with renewed energy and sense of purpose. We achieved these accomplishments by seeing beyond numbers, in ways that benefit our customers, team members, shareholders, and the communities we serve.

Despite the persisting Covid-19 pandemic, increased uncertainty and volatility in the macroeconomic environment, weighed down by high inflation, interest rate increases and geopolitical tensions, we stayed focused on our strategy. At our December 2021 **Investor Day**, we unveiled the Bank's new three-year strategic plan for sustainable, long-term profitable growth. Our strategy is clear, simple, and achievable and is anchored in **five strategic pillars**:

- **Build One Winning Team** – Working across boundaries, we are putting the Bank ahead of individual interests, in an environment where everyone belongs and thrives.
- **Make Size our Advantage** – We are leveraging our size to create a competitive advantage in specialized markets, and we are remaining agile in assessing new opportunities.
- **Think Customer First** – We are building up a culture with a relentless focus on the customer.
- **Simplify** – We are streamlining internal operations and enhancing efficiencies.
- **Make the Better Choice** – From the businesses we are in, to the people we hire, and the suppliers we use, we are living up to our values and integrating environmental, social and governance (ESG) best practices in our operations and activities.

Year in Review

I am pleased to report that the Bank exceeded all our financial targets for the year.

The Bank reported net income of $226.6 million or $237.1 million on an adjusted basis, up 12% (adjusted) from last year. These results were driven by the strength of our underlying businesses, prudent approach to credit, disciplined cost management and the progress we are making on executing against our plan. Our capital position remains strong, with a CET1 ratio of 9.1%, and we improved our adjusted efficiency ratio by 170 bps to 66.5%.

I'm incredibly proud of what our team accomplished in this first year of our three-year strategic plan. Here are just a few of our many notable accomplishments.

Our One Winning Team

At our Investor Day, we launched an inspiring new purpose and core values that define our culture and underpin everything we do. With **culture** as our driving force, we are focused on engaging and empowering our employees

to work as One Winning Team. We are delivering meaningful improvements to our employees' work-life experience, by:

- Establishing a hybrid and flexible work model where working from home is the first approach for all tasks that can be performed remotely.
- Investing in mental health and wellness resources to support our employees in maintaining a positive work-life balance.
- Fostering and building up an equitable, diverse and inclusive (ED&I) workplace environment where everyone feels like they belong and has the chance to thrive.

Guided by our new purpose and core values, our culture shift is well underway, and Laurentian Bank is a very different bank today than it was two years ago. For the second year in a row, our employees completed our "Voice of the Employee" engagement survey. Our team members embraced the opportunity to tell us how they feel with an outstanding 83% completion rate, an increase of 17 percentage points over 2021, and both employee engagement and manager effectiveness have increased by three points. We will continue to solicit honest feedback from our team members so that we can continue to strengthen our connection with them, validate our successes, and learn where more support may be required.

"Guided by our new purpose and core values, our culture shift is well underway, and Laurentian Bank is a very different bank today than it was two years ago."

Rania Llewellyn, President and CEO

Focus on Growth

Commercial Banking continues to be our growth engine by focusing on our specialized sectors. In 2022:

- Inventory Financing reached record loan growth of over $2 billion.
- Real Estate Financing delivered $1 billion in asset growth.
- Equipment Financing's loan portfolio reached $1.6 billion, up 13% compared to last year.

We also delivered on our commitment to diversify by industry – examples include growing our daycare financing portfolio by 30%, and expanding into new industries such as agriculture and technology. I'm also delighted that we achieved our medium-term target with 24% of our commercial loan portfolio now in the U.S.

We took time, care and effort to deepen our relationships with our business customers who value Laurentian Bank's personalized approach and deep expertise of their businesses and industries. Consequently, we were thrilled to have maintained an excellent Commercial Banking Net Promoter Score (NPS) of over 50.

Capital Markets continues with its focused and aligned offering that is an attractive alternative to our larger competitors. We're proud of our unique value proposition that provides mid-sized customers with personalized, targeted capabilities and a best-in-class boutique-style service. Over the past year, we've also successfully driven alignment between Capital Markets and Commercial Banking by:

- Adding a Real Estate Research Team to align with our core commercial lending capabilities.
- Coordinating our FX capabilities with Commercial, leading to record year over year revenue growth.
- Reaching our target of 75% coverage of our top tier Commercial customers.

Capital Markets also added new ESG capabilities to amplify the Bank's purpose, and participated in 100% of the green and social bond issuances by our core clients.

Personal Banking continues its pivot to reposition for growth and is demonstrating that we "think customer first" by closing key foundational gaps, enhancing our products and processes, and rolling out our digital-first approach. I'm particularly proud of these notable accomplishments last year:

- Closed our customers' top 5 digital pain points by:
  - ✓ delivering on our new mobile app;
  - ✓ introducing tap debit cards;
  - ✓ refreshing our public website;
  - ✓ implementing online password reset; and,
  - ✓ launching phase one of our digital account opening solution, in partnership with thirdstream.
- Announced a strategic partnership with Brim Financial to enhance our Visa products and end-to-end customer journey.
- Achieved our residential mortgages time-to-yes target of less than three days.

Our values are embedded in everything we do. We believe in making the better choice by incorporating **ESG** practices into our activities and operations. To keep ourselves accountable and drive results, ESG and Equity, Diversity and Inclusion targets are included in all leaders' scorecards. In addition, in 2022 we:

- Launched the Bank's first-ever ESG report where we disclosed our Scope 1 and 2 Greenhouse Gas emissions, and joined the Partnership for Carbon Accounting Financials (PCAF).
- Responded to customer demand for ESG products and investment options with new ESG mutual funds.
- Published a new Sustainable Bond Framework which will allow us to finance or refinance eligible projects that have a positive impact on climate change and social inequalities.

We embraced the opportunity to **simplify** our organization to become even more competitive. I'm pleased that our efforts are paying off and we successfully improved our adjusted efficiency ratio below 67% by:

- Decommissioning 50% of our corporate office space and operating day-to-day with a smaller footprint.
- Leveraging contract renewals to streamline our number of vendors and professional service providers.
- Reducing excess data storage and decommissioning redundant technology applications.

Continuing our Momentum

Looking ahead to 2023, we have amazing momentum on our side. I'm incredibly proud of how our team has adapted and positioned ourselves to relentlessly focus on our customers. This will not change in 2023. In fact, we will be even more driven to act courageously and delve into initiatives that will stimulate more growth for the future. Our efforts will be guided by the following three priorities:

1. **Delivering excellent customer service** – We will continue our focus on improving the customer experience and removing pain points, leveraging data from our NPS program which is being expanded to include more channels. This concentrated effort will help us to gain a deeper understanding of what drives customer satisfaction and dissatisfaction, allowing us to implement targeted actions.
2. **Growing deposits** – Coming off a record year in deposit growth, we will continue our focus on growing deposits so that we can maintain a strong balance sheet and support our solid loan growth. Having now closed our customers' top five digital gaps, we are well positioned to deepen our relationships with existing customers and target new ones.
3. **Driving efficiencies through simplification** – We will continue to drive down our adjusted efficiency ratio below 65% over the medium-term by further streamlining our internal processes and operations to find efficiencies and become an even more agile organization.

We could not have had the tremendous year we did without our amazing Laurentian Bank team members. Thank you for embracing our purpose and living our core values – demonstrating everyday how we are collectively **seeing beyond numbers**.

On behalf of the entire leadership team, I would also like to express my sincere appreciation to our Board of Directors and our Chair, Michael Mueller, for your continued guidance and unwavering support of our plan.

To my fellow shareholders and customers: for more than 175 years our Bank helped families, businesses and communities thrive. Thank you for your confidence, trust, and partnership. As we go into 2023, I couldn't be more excited about our future and motivated to build on our successes.

At Laurentian Bank, **we believe** that the future is bright and that, indeed, we *are* **changing banking for the better**.

Rania Llewellyn

President and Chief Executive Officer

Board of Directors

Sonia Baxendale
Corporate Director

Has served on the Board of Directors since August 2016

Chair of the Risk Management Committee and member of the Human Resources and Corporate Governance Committee

Andrea Bolger
Corporate Director

Has served on the Board of Directors since August 2019

Member of the Risk Management Committee and member of the Human Resources and Corporate Governance Committee

Michael T. Boychuk, FCPA, FCA
Corporate Director

Has served on the Board of Directors since August 2013

Chair of the Audit Committee and member of the Risk Management Committee

Suzanne Gouin
Corporate Director

Has served on the Board of Directors since April 2021

Member of the Risk Management Committee and member of the Human Resources and Corporate Governance Committee

Rania Llewellyn
President and Chief Executive Officer, Laurentian Bank of Canada

Has served on the Board of Directors since October 2020

David Mowat
Corporate Director

Has served on the Board of Directors since August 2019

Chair of the Human Resources and Corporate Governance Committee and member of the Audit Committee

Michael Mueller
Corporate Director

Has served on the Board of Directors since December 2018

Chair of the Board

Michelle R. Savoy
Corporate Director

Has served on the Board of Directors since March 2012

Member of the Human Resources and Corporate Governance Committee and member of the Audit Committee

Susan Wolburgh Jenah
Corporate Director

Has served on the Board of Directors since December 2014

Member of the Audit Committee and member of the Human Resources and Corporate Governance Committee

Nicholas Zelenczuk
Corporate Director

Has served on the Board of Directors since May 2020

Member of the Audit Committee and member of the Risk Management Committee

Executive Team

Karine Abgrall-Teslyk
Executive Vice President, Head of Personal Banking

Sébastien Bélair
Executive Vice President, Chief Human Resources Officer

Bindu Cudjoe
Chief Legal Officer and Corporate Secretary

Yves Denommé
Executive Vice President, Operations

Yvan Deschamps
Executive Vice President, Chief Financial Officer

Kelsey Gunderson
Executive Vice President, Capital Markets

Rania Llewellyn
President and Chief Executive Officer

William Mason
Executive Vice President, Chief Risk Officer

Éric Provost
Executive Vice President, Commercial Banking and President, Quebec Market

Beel Yaqub
Executive Vice President, Chief Information Technology Officer

Our Bank's History and Approach to ESG

Throughout Laurentian Bank's more than 175-year history we have maintained a focused commitment to making a positive impact on the lives of our customers and employees and investing in the communities in which we serve.

Sound environmental, social and governance (ESG) management is important to Laurentian Bank because we see the direct correlation between top line growth, attracting and retaining talent, and responding to the evolving expectations of our stakeholders, including our employees, customers, business partners, communities, and shareholders. What's important to them is important to us. Our new purpose statement underscores our commitment to equity, diversity, and inclusion – building on our rich history of helping the underserved and striving to make the better choice in everything we do.

We see ESG as a transformative opportunity. It is one of the five strategic pillars in our strategic plan. Laurentian Bank is "Making the Better Choice" by applying an ESG lens to all our operations and activities and then making bold decisions – including our commitment to no longer directly finance the exploration, production or development of coal or oil and gas.

Our ESG strategy is directly connected to our financial performance and aligned with the Bank's priorities to drive long-term profitable growth – the importance of this is reflected in our CEO's role as ESG Champion for the Bank, and in the ESG targets which are embedded in the scorecards for all senior executives.

Moving forward, we will continue our focus on gaining a solid understanding of our strengths and areas for improvement. We will achieve this through thoughtful discussions with our stakeholders, by further building up our internal capacity, and by engaging with third-party experts to identify additional strategic priorities to guide our approach.

2022 ESG Highlights

Environmental

Improved climate disclosures

- Continued progress on Task Force for Climate-Related Financial Disclosures (TCFD) disclosures and roadmap
- Joined the Partnership for Carbon Accounting Financials (PCAF) to begin assessing financed emissions using PCAF methodology

Offered sustainable solutions

- Participated in the financing of almost $13 billion in green and sustainable bonds to help fund key ecofriendly projects
- Published the Bank's first Sustainability Bond Framework – proceeds will be used to finance or refinance eligible projects, loans, and investments that result in making a positive impact on climate change and social inequalities
- In partnership with Mackenzie Investments, LBC Financial Services launched new ESG Model portfolios

Initiatives to reduce the Bank's emissions footprint

- Decommissioned 50% of our corporate office space to align with hybrid and flexible work model – 100% of excess office furniture and technology was donated and/or recycled
- Introduced "Green Teams" to engage employees on ways to reduce environmental impacts of our work

Social

Commitment to Equity, Diversity & Inclusion (ED&I)

- Developed a new bank-wide ED&I policy and continued mandatory unconscious bias training
- Continued to support our Employee Resource Groups
- Signed on as a Proud Partner of Pride at Work Canada

Supported employee wellbeing and growth

- Increased the employee engagement index by three points since 2021 to 77%
- Supported employee work-life balance through our flexible work model, where work from home is our first approach for tasks that can be performed remotely

Engaged our customers

- Expanded our tools to serve customers remotely, including the new digital onboarding experience, which is being first piloted with employees
- Launched a new website to improve customer experience and access to information

Invested in our communities

- Launched our new "Giving Beyond Numbers" corporate giving and community engagement program, donating over $750,000 to non-profits and charities in our focus areas, including:
  - ✓ $140,000 to local, branch-selected organizations through our Laurentian in the Community Initiative
  - ✓ $100,000 to Canadian Red Cross to support emergency relief efforts worldwide

Governance

Board of Directors

- ESG was included on the Board of Directors agenda for each quarter, and as part of the annual Board training
- Developed Board ED&I policy and established targets for women and under-represented groups to further promote board diversity
- Require that any list of candidates for new directors includes diverse candidates

Compensation

- Our executive compensation packages are aligned with the values of our shareholders, and all leaders' scorecards include ESG and ED&I targets
- Made changes to our employee pension plan that prioritize our ESG values

Risk rating improvement

- Progress on ESG management and disclosure led to an almost seven-point improvement in the Bank's ESG Risk Rating from Sustainalytics, moving from medium to low risk
- Established an Environmental and Social Risk Management group to proactively identify, assess, manage, and report on these risks

MANAGEMENT'S DISCUSSION AND ANALYSIS

AS AT OCTOBER 31, 2022 AND 2021

This Management's Discussion and Analysis (MD&A) presents management's view of the financial condition of Laurentian Bank of Canada (the "Bank") as at October 31, 2022 and its operating results for the year then ended, compared with the corresponding year shown. This MD&A should be read in conjunction with the Audited Consolidated Financial Statements and related notes for the year ended October 31, 2022. This MD&A is dated as of December 8, 2022.

Additional information about the Bank, including the 2022 Annual Information Form, is available on the Bank's website at www.lbcfg.ca and on the System for Electronic Document Analysis and Retrieval website at www.sedar.com.

BASIS OF PRESENTATION

The financial information reported herein is based on the Audited Consolidated Financial Statements and related notes for the year ended October 31, 2022, and, unless otherwise indicated, has been prepared in accordance with International Financial Reporting standards (IFRS), as issued by the International Accounting Standards Board (IASB). All amounts are presented in Canadian dollars.

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ABOUT LAURENTIAN BANK OF CANADA

At Laurentian Bank, we believe we can change banking for the better. By seeing beyond numbers.

Founded in Montréal in 1846, Laurentian Bank helps families, businesses and communities thrive. Today, we have approximately 3,000 employees working together as one team, to provide a broad range of financial services and advice-based solutions for customers across Canada and the United States. We protect, manage and grow $50.7 billion in balance sheet assets and $27.2 billion in assets under administration.

We drive results by placing our customers first, making the better choice, acting courageously, and believing everyone belongs.

CAUTION REGARDING FORWARD-LOOKING STATEMENTS

From time to time, Laurentian Bank of Canada and, as applicable its subsidiaries (collectively referred to as the "Bank") will make written or oral forward-looking statements within the meaning of applicable Canadian and United States (U.S.) securities legislation, including such as those contained in this document (and in the documents incorporated by reference herein), and in other documents filed with Canadian or U.S. regulatory authorities, in reports to shareholders, and in other written or oral communications. These forward-looking statements are made in accordance with the "safe harbor" provisions of, and are intended to be forward-looking statements in accordance with, applicable Canadian and U.S. securities legislation. They include, but are not limited to, statements regarding the Bank's vision, strategic goals, business plans and strategies, priorities and financial performance objectives; the economic and market review and outlook for Canadian, U.S., European, and global economies; the regulatory environment in which the Bank operates; the risk environment, including, credit risk, liquidity, and funding risks; the impact of COVID-19, the statements under the headings "Outlook", "Impact of COVID-19" and "Risk Appetite and Risk Management Framework" contained in the 2022 Annual Report for the year ended October 31, 2022 (the "2022 Annual Report"), including the Management's Discussion and Analysis for the fiscal year ended October 31, 2022; and other statements that are not historical facts.

Forward-looking statements typically are identified with words or phrases such as "believe", "assume", "estimate", "forecast", "outlook", "project", "vision", "expect", "foresee", "anticipate", "intend", "plan", "goal", "aim", "target", and expressions of future or conditional verbs such as "may", "should", "could", "would", "will", "intend" or the negative of any of these terms, variations thereof or similar terminology.

By their very nature, forward-looking statements require the Bank to make assumptions and are subject to inherent risks and uncertainties, both general and specific in nature, which give rise to the possibility that the Bank's predictions, forecasts, projections, expectations, or conclusions may prove to be inaccurate; that the Bank's assumptions may be incorrect (in whole or in part); and that the Bank's financial performance objectives, visions, and strategic goals may not be achieved. Forward-looking statements should not be read as guarantees of future performance or results, or indications of whether or not actual results will be achieved. Material economic assumptions underlying such forward-looking statements are set out in the 2022 Annual Report under the heading "Outlook", which assumptions are incorporated by reference herein.

We caution readers against placing undue reliance on forward-looking statements, as a number of factors, many of which are beyond the Bank's control and the effects of which can be difficult to predict or measure, could influence, individually or collectively, the accuracy of the forward-looking statements and cause the Bank's actual future results to differ significantly from the targets, expectations, estimates or intentions expressed in the forward-looking statements. These factors include, but are not limited to, risks relating to: credit; market; liquidity and funding; insurance; operational; regulatory compliance (which could lead to the Bank being subject to various legal and regulatory proceedings, the potential outcome of which could include regulatory restrictions, penalties, and fines); strategic; reputation; legal and regulatory environment; competitive and systemic risks; supply chain disruptions; geopolitical events and uncertainties; government sanctions; conflict, war, or terrorism; and other significant risks discussed in the risk-related portions of the Bank's 2022 Annual Report, such as those related to: the ongoing and potential impacts of COVID-19 on the Bank's business, financial condition and prospects; Canadian and global economic conditions (including the risk of higher inflation and rising interest rates); geopolitical issues; Canadian housing and household indebtedness; technology, information systems and cybersecurity; technological disruption, privacy, data and third-party related risks; competition and the Bank's ability to execute on its strategic objectives; the economic climate in the U.S. and Canada; digital disruption and innovation (including, emerging fintech competitors); Interbank offered rate (IBOR) transition; changes in currency and interest rates (including the possibility of negative interest rates); accounting policies, estimates and developments; legal and regulatory compliance and changes; changes in government fiscal, monetary and other policies; tax risk and transparency; modernization of Canadian payment systems; fraud and criminal activity; human capital; insurance; business continuity; business infrastructure; emergence of widespread health emergencies or public health crises; emergence of COVID-19 variants; environmental and social risks; including climate change; and the Bank's ability to manage, measure or model operational, regulatory, legal, strategic or reputational risks, all of which are described in more detail in the section titled "Risk Appetite and Risk Management Framework" in the 2022 Annual Report, including the Management's Discussion and Analysis for the fiscal year ended October 31, 2022, which information is incorporated by reference herein. The Bank further cautions that the foregoing list of factors is not exhaustive. When relying on the Bank's forward-looking statements to make decisions involving the Bank, investors and others should carefully consider the foregoing factors, uncertainties, and current and potential events.

Any forward-looking statements contained herein or incorporated by reference represent the views of management only as at the date such statements were or are made, are presented for the purposes of assisting investors, financial analysts, and others in understanding certain key elements of the Bank's financial position, current objectives, strategic priorities, expectations and plans, and in obtaining a better understanding of the Bank's business and anticipated financial performance and operating environment and may not be appropriate for other purposes. The Bank does not undertake any obligation to update any forward-looking statements made by the Bank or on its behalf whether as a result of new information, future events or otherwise, except to the extent required by applicable securities regulations and laws. Additional information relating to the Bank can be located on the SEDAR website at www.sedar.com.

HIGHLIGHTS

TABLE 1
FINANCIAL HIGHLIGHTS

In thousands of dollars, except when noted	2022	2021	2020
Operating results			
Total revenue	**$ 1,034,235**	$ 1,002,457	$ 971,009
Net income	**$ 226,583**	$ 57,069	$ 114,085
Adjusted net income[1]	**$ 237,078**	$ 211,151	$ 138,206
Operating performance			
Diluted earnings per share	**$ 4.95**	$ 1.03	$ 2.37
Adjusted diluted earnings per share[2]	**$ 5.19**	$ 4.57	$ 2.93
Return on common shareholders' equity[2]	**8.9 %**	1.9 %	4.4 %
Adjusted return on common shareholders' equity[2]	**9.3 %**	8.3 %	5.5 %
Net interest margin[3]	**1.84 %**	1.85 %	1.84 %
Efficiency ratio[3]	**67.8 %**	87.8 %	75.6 %
Adjusted efficiency ratio[2]	**66.5 %**	68.2 %	72.3 %
Operating leverage[3]	**23.5 %**	(16.7)%	(0.7)%
Adjusted operating leverage[2][4]	**2.6 %**	5.8 %	— %
Financial position ($ millions)			
Loans and acceptances	**$ 37,581**	$ 33,645	$ 33,193
Total assets	**$ 50,717**	$ 45,077	$ 44,168
Deposits	**$ 27,132**	$ 22,988	$ 23,920
Average earning assets[3]	**$ 39,929**	$ 37,374	$ 37,019
Average loans and acceptances[3]	**$ 35,423**	$ 32,950	$ 33,252
Basel III regulatory capital ratios			
Common Equity Tier 1 (CET1) capital ratio[4]	**9.1 %**	10.2 %	9.6 %
CET1 risk-weighted assets ($ millions)[4]	**$ 23,909**	$ 20,007	$ 19,669
Credit quality			
Gross impaired loans as a % of loans and acceptances[3]	**0.42 %**	0.75 %	0.82 %
Net impaired loans as a % of loans and acceptances[3]	**0.28 %**	0.49 %	0.59 %
Provision for credit losses as a % of average loans and acceptances[3]	**0.16 %**	0.15 %	0.35 %
Common share information			
Closing share price[5]	**$ 30.40**	$ 41.67	$ 26.21
Price / earnings ratio[3]	**6.1 x**	40.5 x	11.1 x
Adjusted price / earnings ratio[2]	**5.8 x**	9.1 x	9.0 x
Book value per share[2]	**$ 58.02**	$ 53.99	$ 53.74
Dividends declared per share	**$ 1.78**	$ 1.60	$ 2.14
Dividend yield[3]	**5.9 %**	3.8 %	8.2 %
Dividend payout ratio[3]	**35.9 %**	154.9 %	90.2 %
Adjusted dividend payout ratio[2]	**34.2 %**	34.9 %	72.9 %

(1) This is a non-GAAP financial measure. Refer to the Non-GAAP Financial and Other Measures section on page 28 for more information.
(2) This is a non-GAAP ratio. Refer to the Non-GAAP Financial and Other Measures section on page 28 for more information.
(3) This is a supplementary financial measure. Refer to the Non-GAAP Financial and Other Measures section on page 28 for more
(4) In accordance with OSFI's "Capital Adequacy Requirements" guideline. Refer to the Capital Management section on page 43 for more information.
(5) Toronto Stock Exchange (TSX) closing market price.

NON-GAAP FINANCIAL AND OTHER MEASURES

NON-GAAP FINANCIAL MEASURES

In addition to financial measures based on generally accepted accounting principles (GAAP), management uses non-GAAP financial measures to assess the Bank's underlying ongoing business performance. Non-GAAP financial measures presented throughout this document are referred to as "adjusted" measures and exclude amounts designated as adjusting items. Adjusting items include the amortization of acquisition-related intangible assets, and certain items of significance that arise from time to time which management believes are not reflective of underlying business performance. Non-GAAP financial measures are not standardized financial measures under the financial reporting framework used to prepare the financial statements of the Bank and might not be comparable to similar financial measures disclosed by other issuers. The Bank believes non-GAAP financial measures are useful to readers in obtaining a better understanding of how management assesses the Bank's performance and in analyzing trends.

Tables 2 and 3 show a reconciliation of the non-GAAP financial measures to their most directly comparable financial measure that is disclosed in the primary financial statements of the Bank.

TABLE 2

RECONCILIATION OF NON-GAAP FINANCIAL MEASURES — CONSOLIDATED STATEMENT OF INCOME

In thousands of dollars	2022	2021	2020
Non-interest expenses	**$ 701,661**	$ 880,362	$ 733,787
Adjusting items, before income taxes			
Amortization of acquisition-related intangible assets[1]	**12,304**	12,042	13,641
Strategic review-related charges[2]	**1,828**	96,067	—
Personal Banking segment impairment charges[3]	**—**	93,392	—
Restructuring charges[4]	**—**	2,385	18,289
Net gain on the settlement of pension plans resulting from annuity purchases[5]	**—**	(7,064)	—
	14,132	196,822	31,930
Adjusted non-interest expenses	**$ 687,529**	$ 683,540	$ 701,857
Income before income taxes	**$ 275,696**	$ 72,595	$ 120,284
Adjusting items, before income taxes			
Adjusting items impacting non-interest expenses (detailed above)	**14,132**	196,822	31,930
Amortization of net premium on purchased financial instruments[6]	**—**	—	638
	14,132	196,822	32,568
Adjusted income before income taxes	**$ 289,828**	$ 269,417	$ 152,852
Reported net income	**$ 226,583**	$ 57,069	$ 114,085
Adjusting items, net of income taxes			
Amortization of acquisition-related intangible assets[1]	**9,152**	9,001	10,206
Strategic review-related charges[2]	**1,343**	70,638	—
Personal Banking segment impairment charges[3]	**—**	77,884	—
Restructuring charges[4]	**—**	1,753	13,443
Net gain on the settlement of pension plans resulting from annuity purchases[5]	**—**	(5,194)	—
Amortization of net premium on purchased financial instruments[6]	**—**	—	472
	10,495	154,082	24,121
Adjusted net income	**$ 237,078**	$ 211,151	$ 138,206
Net income available to common shareholders	**$ 214,804**	$ 44,804	$ 101,619
Adjusting items, net of income taxes (detailed above)	**10,495**	154,082	24,121
Adjusted net income available to common shareholders	**$ 225,299**	$ 198,886	$ 125,740

(1) Amortization of acquisition-related intangible assets results from business acquisitions and is included in the Non-interest expenses line item.

(2) The strategic review-related charges are included in the Impairment and restructuring charges line-item and initially included in the fourth quarter of 2021 impairment charges, severance charges and charges related to lease and other contracts. In 2022, net charges mainly related to lease contracts following the completion of the reduction of leased corporate office premises in Montreal and Toronto, as well as to other updates to estimates initially recorded in 2021.

(3) The Personal Banking segment impairment charges related to the impairment of the Personal Banking segment in 2021 as part of the annual goodwill impairment test. Impairment charges were included in the Impairment and restructuring charges line-item.

(4) Restructuring charges mainly consisted of charges associated with the optimization of the branch network and the related streamlining of certain back-office and corporate functions, as well as to the resolution of the union grievances and complaints. Restructuring charges were included in the Impairment and restructuring charges line-item and included severance charges, salaries, legal fees, communication expenses, professional fees and charges related to lease contracts.

(5) The net gain on the settlement of pension plans resulting from annuity purchases was related to the purchase (or buy-out) of group annuity contracts de-risking the Bank's pension plans and was included in the Non-interest expenses line item.

(6) Amortization of net premium on purchased financial instruments resulted from a one-time gain on a business acquisition in 2012 and was included in the Amortization of net premium on purchased financial instruments line item.

TABLE 3

RECONCILIATION OF NON-GAAP FINANCIAL MEASURES — CONSOLIDATED BALANCE SHEET

In thousands of dollars		**2022**		2021		2020
Shareholders' equity	**$**	**2,781,103**	$	2,640,870	$	2,611,241
Less:						
Preferred shares		**(122,071)**		(122,071)		(244,038)
Limited recourse capital notes		**(122,332)**		(123,612)		—
Cash flow hedges reserve(1)		**(22,607)**		(42,095)		(43,593)
Common shareholders' equity	**$**	**2,514,093**	$	2,353,092	$	2,323,610
Impact of averaging month-end balances(2)		**(94,219)**		45,225		(28,215)
Average common shareholders' equity	**$**	**2,419,874**	$	2,398,317	$	2,295,395

(1) The cash flow hedges reserve is presented in the Accumulated other comprehensive income line item.
(2) Based on the month-end balances for the year.

Table 13 on page 40 of this MD&A also presents a reconciliation of non-gaap financial measures for the quarterly results for fiscal 2022 and 2021.

NON-GAAP RATIOS

Non-GAAP ratios are not standardized financial measures under the financial reporting framework used to prepare the financial statements of the Bank to which the non-GAAP ratios relate and might not be comparable to similar financial measures disclosed by other issuers. Ratios are considered non-GAAP ratios if adjusted measures are used as components, refer to the non-GAAP financial measure section above. The Bank believes non-GAAP ratios are useful to readers in obtaining a better understanding of how management assesses the Bank's performance and in analyzing trends. The following ratios are non-GAAP ratios.

Adjusted diluted earnings per share is calculated by dividing adjusted net income available to common shareholders by the diluted weighted average number of common shares outstanding. The following table presents a reconciliation of adjusted diluted earnings per share to diluted earnings per share, which is disclosed in the primary financial statements of the Bank.

TABLE 4

IMPACT OF ADJUSTING ITEMS ON DILUTED EARNINGS PER SHARE

In thousands of dollars, except per share amounts		**2022**		2021		2020
Diluted earnings per share	**$**	**4.95**	$	1.03	$	2.37
Adjusting items, net of income taxes, on a per share basis(1)		**0.24**		3.54		0.56
Adjusted diluted earnings per share(2)	**$**	**5.19**	$	4.57	$	2.93

(1) Refer to Table 2 on page 28 for the detailed description of adjusting items.
(2) The impact of adjusting items on a per share basis may not add due to rounding.

Return on common shareholders' equity (ROE) is defined as net income available to common shareholders as a percentage of average common shareholders' equity. This ratio can be used in assessing the Bank's profitability.

Adjusted return on common shareholders' equity (Adjusted ROE) is defined as adjusted net income available to common shareholders as a percentage of average common shareholders' equity. This ratio can be used in assessing the Bank's profitability excluding adjusting items defined above.

Adjusted efficiency ratio is defined as adjusted non-interest expenses as a percentage of total revenue. This ratio can be used in assessing the Bank's productivity and cost control.

Adjusted operating leverage is the difference between total revenue and adjusted non-interest expenses growth rates. This ratio can be used in assessing the Bank's efficiency.

Adjusted price / earnings ratio is defined as closing common share price divided by adjusted diluted earnings per share.

Adjusted dividend payout ratio is defined as dividends declared on common shares as a percentage of adjusted net income available to common shareholders.

Book value per common share is defined as common shareholders' equity divided by the number of common shares outstanding at the end of the period.

SUPPLEMENTARY FINANCIAL MEASURES

Management also uses supplementary financial measures to analyze the Bank's results and in assessing underlying business performance and related trends. Please refer to the Glossary on page 79 of this MD&A for more information about the composition of supplementary financial measures disclosed in this document.

BUSINESS HIGHLIGHTS

Strategic plan

In December 2021, the Bank unveiled a new, three-year strategic plan to achieve sustainable, long-term profitable growth. The strategy is focused, simple and executable, and is anchored in five strategic pillars: 1) Build One Winning Team; 2) Make Size our Advantage; 3) Think Customer First; 4) Simplify; and 5) Make the Better Choice. Coupled with the launch of its new purpose and core values, the Bank feels well positioned to drive results and shareholder value.

Build One Winning Team

Working across boundaries, the Bank is putting itself ahead of any individual interests, in an environment where everyone belongs and thrives.

As part of this strategic pillar, the Bank introduced a work-from-home first approach for all tasks that could be performed remotely, and as a result is recruiting top talent from across Canada. The Bank also launched its second annual employee survey. This year, the Bank increased employee engagement by 3 percentage points to 77%, exceeding its objective of reaching a score of 75%.

The Bank has also improved employee benefits, including an enhanced Employee and Family assistance program and introduced new mental health and wellness resources and program. The Bank also reduced turnover and met its annual objective.

Make Size our Advantage

The Bank is leveraging its size to create a competitive advantage in specialized markets, and remaining agile in assessing new opportunities.

In December 2021, the Bank announced a strategic partnership with Brim Financial to fuel its digital transformation and enhance the end-to-end customer journey for its suite of VISA products. Through this partnership, the Bank is reducing the time it takes to get a credit card to its customers from 25 days to instantaneous digital access.

The Bank also partnered with thirdstream to launch a new digital onboarding solution. This partnership is expected to support the Bank's ability to grow its national presence by allowing new and existing customers to open accounts anywhere, anytime and from any device, in minutes.

Digital onboarding was also made possible by a strategic partnership with Kyndryl, which launched the Bank's next-generation hybrid multi-cloud environment allowing the Bank to deliver engaging customer experiences and innovative digital capabilities, quicker, more efficiently and securely.

The Bank is rolling out new products and functionalities to employees first to ensure a seamless customer experience and will be launching a phased customer rollout for both digital account opening and its VISA products in 2023.

Think Customer First

The Bank is building a culture with a relentless focus on the customer.

With a focus on becoming a digital-first organization, the Bank closed the top five digital pain points as identified by our Personal Banking customers. Within the year, the Bank delivered a mobile app, contactless tap on debit, the first phase of digital onboarding, online password reset capabilities and a refreshed public website and online digital experience.

As part of its plan to improve the customer experience and to renew growth in residential mortgage loans, the Bank completed an end-to-end review of its mortgage processes. Through increased cross-functional collaboration, elimination of redundant processes, and greater accountability, the Bank has now reduced its average "time to yes" from application to customer confirmation from more than eight days in 2021 to less than three days, achieving its FY 2022 objective.

Commercial Banking also maintained a Net Promoter Score (NPS) of greater than 50. This is considered an 'excellent' score and it grew by 1 percentage point to 54 for the year, indicating the depth of relationships the Bank has with its customers and level of service it provides.

Simplify

We are streamlining internal operations and enhancing efficiencies.

This year, the Bank decommissioned 50% of its corporate office space and is now operating day-to-day with a reduced footprint as part of its new hybrid and flexible work model.

Furthermore, as part of its VISA transformation, the Bank has simplified its VISA ecosystem and reduced the number of vendors used to issue VISA cards from five to one, as well as reduced manual processes by 90 per cent.

To improve the customer experience, enhance the security of our customers' accounts, and improve efficiencies, the Bank has launched two-step verification for digital account access. Customers registered for two-step verification can now also successfully reset their password online without having to call the Customer Contact Centre. As a result, this will help divert more than 5,000 calls per month from the Contact Centre, increasing efficiencies and improving our ability to service customers.

Other steps the Bank has taken on its path to meeting its efficiency ratio target for the year include reducing our data storage and decommissioning redundant technology applications as it continues to simplify its technology platform.

Make the Better Choice

From the businesses we are in, to the people we hire, and the suppliers we use, we are living up to our values and integrating environmental, social and governance ("ESG") best practices in our operations and activities.

To support this commitment, the Bank established a new ESG governance structure and embedded ESG into Board committee charters, made Equity, Diversity & Inclusion (ED&I) a key priority bank-wide by embedding ED&I targets in leaders' scorecards, and launched new ESG products. In the third quarter of 2022, the Bank received its Sustainalytics ESG Risk Rating survey results was moved from the medium-risk to the low-risk category. More details about its ESG program can be found on the ESG section of the Bank's website

The Bank also published its inaugural Sustainable Bond Framework as part of its ongoing commitment to drive forward new ESG initiatives that make a positive impact for its customers, investors, employees and communities. Under the Framework, the Bank can issue green bonds, social bonds, and sustainability bonds. In each case, proceeds of an issuance will be used to finance or refinance eligible projects, loans, and investments that result in making a positive impact on climate change and social inequalities.

The Bank also participated in the financing of over $12.8 billion in green and sustainable bonds and exceeded its objective by participating in 100% of green bond issuances by its core provincial and corporate clients.

OUTLOOK

ECONOMIC OUTLOOK

The macroeconomic outlook is being driven by tighter financial conditions as central banks raise interest rates to combat inflation, geopolitical developments, such as the Russian invasion of Ukraine and the continuation of the zero-Covid policy in China. Together, these forces have affected global access to food, consumer goods and energy. In addition, the high degree of uncertainty around future interest rate increases is creating further market uncertainty.

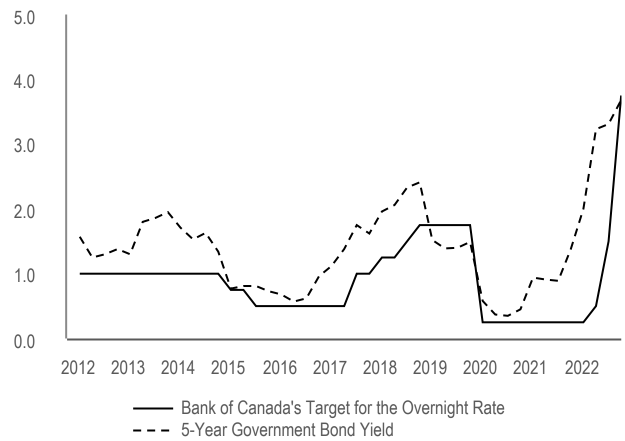
The U.S. Federal Reserve and Bank of Canada have both recently signalled additional policy rate increases. Markets are pricing in lower rate increases in 2023 than what we have seen in 2022, however, the terminal rate in both countries is expected to be higher than initial market expectations. Consumers and businesses are showing increasing signs of inflation fatigue and the odds of a recession in the U.S. and Canada in 2023 have materially increased.

In Canada, the Consumer Price Index moderated in September to 6.9% from June's four-decade high of 8.1%, however still significantly higher than the Bank of Canada's stated 2% target. As a result, Canadian consumer spending patterns are adapting towards cheaper alternatives in most goods and services. However, as in the U.S., the Canadian labour market conditions remain solid. The number of job openings per unemployed worker is notably at an all-time high. The unemployment rate stood at 5.2% in October, very close to the 4.9% all-time low figure reached mid-2022.

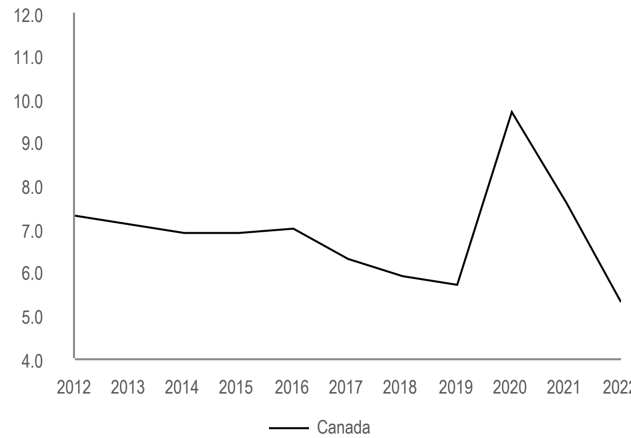
In the housing sector, resale activity has continued to cool to more balanced conditions. The decline in demand has generally been concentrated in single-detached homes. As potential first-time buyers wait on the sidelines due to higher financing costs, the rental market has tightened leading to higher rents. Homebuilding activity remains near last year's all-time high, particularly for condos and rental units. The federal government moderately revised-up immigration targets for the 2023-25 period, which we view as supportive for above-average household formation in Canada relative to other countries.

The combined effects of both global macro and geopolitical events have contributed to significant foreign exchange volatility and has fuelled appetite for the US dollar relative to other currencies. The Canadian dollar stood at US$0.74 in early November, reaching lows previously observed in mid-2020.

INTEREST RATES IN CANADA
(Quarterly data, end of period, in percentage)
(Source: Bank of Canada)



UNEMPLOYMENT RATES IN CANADA
(Annual data, in percentage)
(Source: Statistics Canada)



FINANCIAL TARGETS

In December 2021 the Bank announced its three-year strategic plan to drive long-term profitable growth. Table 5 shows the Bank's 2022 and medium-term financial targets, and the Bank's performance for the fiscal year 2022.

TABLE 5
FINANCIAL TARGETS

Percentage amounts	2022 Target	**2022**	Medium-term Targets
Adjusted diluted earnings per share growth[1]	>5%[2]	**14 %**	7% to 10%
Adjusted return on common shareholders' equity[1]	>8.5%	**9.3 %**	>10%
Adjusted efficiency ratio[1]	<68%	**66.5 %**	<65%
Adjusted operating leverage[1]	Positive	**2.6 %**	Positive

(1) The financial objectives are non-GAAP ratios based on non-GAAP financial measures. Refer to the Non-GAAP Financial and Other Measures section on page 28 for more information.
(2) Compared to the year ended October 31, 2021.

These financial targets are based on management's view of the Bank's fundamentals, taking into account prudent capital management, a diversified funding strategy, and sound underwriting standards. In 2022, the Bank exceeded its financial targets for the year, mainly as a result of the strong loan growth and operational efficiency. The Bank also increased its investments to close foundational gaps and improve customer experience, as well as to support growth. However, as noted in the Economic Outlook section above, macro-economic conditions remain uncertain and may affect the Bank's medium-term performance.

Key assumptions supporting the Bank's medium-term objectives

The following assumptions are the most significant items considered in setting the Bank's strategic and financial objectives. The Bank's objectives do not constitute guidance and are based on certain key planning assumptions. Other factors such as those detailed in the Caution Regarding Forward-Looking Statements section on page 26 and in the "Risk Appetite and Risk Management Framework" section of this document could also cause future results to differ materially from these objectives.

Considering the economic environment described above, management expects that the following factors will underpin its financial outlook for the medium term:

- Commercial Banking to remain the growth engine of the Bank and resumption of growth in both residential mortgage loans and personal loans;
- Interest rate environment to stabilize;
- Continued progress on optimization of the Bank's operations;
- Loan loss provisions as a percentage of average loans and acceptances increasing towards the high-teens due to changes in the Bank's loan mix; and
- Continue to tightly control expenses.

ANALYSIS OF CONSOLIDATED RESULTS

OVERVIEW OF FISCAL 2022

Laurentian Bank of Canada reported net income of $226.6 million and diluted earnings per share of $4.95 for the year ended October 31, 2022, compared with $57.1 million and $1.03 for the year ended October 31, 2021. Return on common shareholders' equity was 8.9% for the year ended October 31, 2022, compared with 1.9% in 2021. Adjusted net income was $237.1 million and adjusted diluted earnings per share were $5.19 for the year ended October 31, 2022, compared with $211.2 million and $4.57 in 2021. Adjusted return on common shareholders' equity was 9.3% for the year ended October 31, 2022, compared with 8.3% in 2021. The increase in net income and diluted earnings per share, compared with the year ended October 31, 2021, is further detailed below.

TABLE 6
CONDENSED CONSOLIDATED RESULTS

In thousands of dollars, except percentage amounts	2022	2021	Variance 2022/ 2021
Net interest income	$ 733,336	$ 692,341	6 %
Other income	300,899	310,116	(3)%
Total revenue	1,034,235	1,002,457	3 %
Provision for credit losses	56,878	49,500	15 %
Non-interest expenses	701,661	880,362	(20)%
Income before income taxes	275,696	72,595	280 %
Income taxes	49,113	15,526	216 %
Net income	226,583	57,069	297 %
Preferred share dividends and limited recourse capital note interest	11,779	12,265	(4)%
Net income available to common shareholders	$ 214,804	$ 44,804	379 %
Non-GAAP financial measures			
Adjusted non-interest expenses[1]	$ 687,529	$ 683,540	1 %
Adjusted income before income taxes[1]	289,828	269,417	8 %
Adjusted net income[1]	237,078	211,151	12 %
Adjusted net income available to common shareholders[1]	225,299	198,886	13 %

(1) This is a non-GAAP financial measure. Refer to the Non-GAAP Financial and Other Measures section on page 28 for more information.

TOTAL REVENUE

Total revenue was $1,034.2 million for the year ended October 31, 2022, an increase of 3% compared with $1,002.5 million for the year ended October 31, 2021. Net interest income contributed to 71% of total revenue in 2022, and other income contributed to 29% (69% and 31% respectively in 2021).

NET INTEREST INCOME

Net interest income increased by $41.0 million to $733.3 million for the year ended October 31, 2022, from $692.3 million for the year ended October 31, 2021. The increase was mainly due to higher interest income from commercial loans.

In line with its strategic plan to drive long-term profitable growth, the Bank has been repositioning its loan portfolio to increase the proportion of higher yielding commercial loans in its overall business mix. As at October 31, 2022, commercial loans accounted for 48% of total loans, compared with 42% a year ago, fuelled by the strong growth in the inventory financing and real estate portfolios. Further details on the loan portfolio mix are provided on page 53 of this MD&A.

Net interest margin as a percentage of average earning assets stood at 1.84% for the year ended October 31, 2022 and decreased by 1 basis point when compared with the year ended October 31, 2021, mainly due to higher funding costs, loan repricing lags and lower mortgage prepayment penalties as a result of the rising interest rate environment, partly offset by favourable changes in our business mix. Tables 7 and 8 provide more information about net interest income and margin.

TABLE 7
NET INTEREST INCOME

In thousands of dollars, except percentage amounts			2022			2021
	Average volume	Interest	Average rate	Average volume	Interest	Average rate
Assets						
Cash resources and securities	$ 4,313,549	$ 75,254	1.74 %	$ 4,169,858	$ 47,482	1.14 %
Securities purchased under reverse repurchase agreements	96,843	933	0.96	209,389	288	0.14
Loans						
Personal	3,418,070	175,790	5.14	3,852,221	164,606	4.27
Residential mortgage	15,719,232	398,722	2.54	15,940,973	430,743	2.70
Commercial and other	16,381,159	760,887	4.64	13,201,554	522,524	3.96
Total loans	35,518,461	1,335,399	3.76	32,994,748	1,117,873	3.39
Derivatives and other	—	62,772	—		87,672	—
Total interest earning assets[1]	39,928,853	1,474,358	3.69	37,373,995	1,253,315	3.35
Non-interest earning assets and assets related to trading activities	8,237,669	—	—	7,832,569	—	—
Total assets	$ 48,166,522	$ 1,474,358	3.06 %	$ 45,206,564	$ 1,253,315	2.77 %
Liabilities and shareholders' equity						
Demand and notice deposits	$ 8,791,030	$ 110,712	1.26 %	$ 7,389,474	$ 35,861	0.49 %
Term deposits	16,617,302	357,098	2.15	16,127,709	328,430	2.04
Debt related to securitization activities	11,575,835	207,183	1.79	10,736,340	175,964	1.64
Subordinated debt	426,784	20,486	4.80	349,598	15,208	4.35
Other		45,543	—		5,511	—
Total interest-bearing liabilities[1]	37,410,951	741,022	1.98	34,603,121	560,974	1.62
Acceptances	33,274	—	—	10,112	—	—
Non-interest-bearing liabilities and liabilities related to trading activities	8,026,871	—	—	7,892,111	—	—
Total liabilities	45,471,096	741,022	1.63	42,505,344	560,974	1.32
Shareholders' equity	2,695,426		—	2,701,220		—
Total liabilities and shareholders' equity	$ 48,166,522	$ 741,022	1.54 %	$ 45,206,564	$ 560,974	1.24 %
Net interest income and margin[2] (on average earning assets)		$ 733,336	1.84 %		$ 692,341	1.85 %

(1) Interest earning assets and interest-bearing liabilities are supplementary financial measures. Refer to the Non-GAAP Financial and Other Measures section on page 28 for more information.

(2) Net interest margin is a supplementary financial measure. Refer to the Non-GAAP Financial and Other Measures section on page 28 for more information.

TABLE 8
CHANGES IN NET INTEREST INCOME

In thousands of dollars			2022
	Increase (decrease) due to change in		
	Average volume	Average rate	Net change
Interest earning assets	$ 85,676	$ 135,367	$ 221,043
Interest-bearing liabilities	(45,520)	(134,528)	(180,048)
Net interest income	$ 40,156	$ 839	$ 40,995

OTHER INCOME

Other income amounted to $300.9 million for the year ended October 31, 2022, a decrease of $9.2 million or 3%, compared with $310.1 million for the year ended October 31, 2021.

Lending fees amounted to $69.1 million for 2022, mainly unchanged compared with $69.4 million for 2021, driven by strong real estate lending activity.

Fees and securities brokerage commissions amounted to $50.7 million for 2022, a decrease of $13.6 million or 21% compared with $64.2 million for 2021. The decrease mostly stemmed from lower underwriting activities as a result of the volatile financial markets.

Income from mutual funds amounted to $48.0 million for 2022, a decrease of $1.1 million or 2% compared with $49.1 million for 2021, resulting from the decline in equity markets which affected trailing commissions.

Service charges on deposits and payments amounted to $29.8 million for 2022, a decrease by $0.9 million or 3% compared with $30.7 million for 2021. The decrease resulted in part from the ongoing changes to retail customers banking behaviour, as they gradually adopt digitally-based services. Refer to the Business Highlights section on page 30 of the MD&A for further details about the Bank's progress on its "digital-first" approach.

Income from financial instruments, which includes revenues from treasury operations and trading-related income, increased by $2.2 million or 7% to $31.8 million for 2022, compared with $29.6 million for 2021. The increase was mainly driven by higher foreign exchange revenue.

Card service revenues increased by $1.5 million or 5%, as a result of higher consumer spending.

Fees on investment accounts decreased by $1.4 million or 9% to $14.1 million for 2022, compared with $15.5 million for 2021, as a result of lower levels of investment accounts under administration and some client attrition.

Insurance income is generated by insurance programs related to the Bank's credit and card product offerings. Insurance revenues are presented net of claims and expenses. Net revenues decreased by $1.2 million or 12% to $9.0 million for 2022, compared with $10.2 million for 2021, mainly as a result of lower insurance premiums. Additional information on the Bank's insurance revenues is disclosed in Note 27 to the Consolidated Financial Statements.

Other, which mainly includes revenues from leasing activities, increased by $5.7 million or 41% to $19.7 million for 2022, compared with $14.0 million for 2021, essentially due to better equipment resale activities driven by a strong secondary market.

TABLE 9
OTHER INCOME

In thousands of dollars, except percentage amounts	2022	2021	Variance 2022/2021
Lending fees	$ 69,068	$ 69,446	(1)%
Fees and securities brokerage commissions	50,652	64,226	(21)
Income from mutual funds	48,022	49,088	(2)
Income from financial instruments	31,771	29,590	7
Service charges	29,815	30,746	(3)
Card service revenues	28,834	27,342	5
Fees on investment accounts	14,094	15,509	(9)
Insurance income, net	8,978	10,219	(12)
Other	19,665	13,950	41
Other income	$ 300,899	$ 310,116	(3)%

PROVISION FOR CREDIT LOSSES

The provision for credit losses increased by $7.4 million to $56.9 million for the year ended October 31, 2022 compared with $49.5 million for the year ended October 31, 2021, mainly as a result of higher provisions on performing loans due to less favourable forward-looking macro-economic scenarios, partly offset by lower provisions on impaired loans. Releases of allowances of $11.1 million on commercial performing loans had also been recorded in the year ended October 31, 2021.

Refer to the "Credit risk management" section on pages 52 to 58 of this MD&A and to Note 6 to the Consolidated Financial Statements for more information on provision for credit losses and allowances for credit losses.

NON-INTEREST EXPENSES

Non-interest expenses decreased by $178.7 million or 20% to $701.7 million for the year ended October 31, 2022, compared with $880.4 million for the year ended October 31, 2021. In 2021, non-interest expenses included impairment and restructuring charges of $191.8 million; refer to the Non-GAAP Financial and Other Measures section for further details. Adjusted non-interest expenses increased by $4.0 million or 1% to $687.5 million for the year ended October 31, 2022, compared with $683.5 million for the year ended October 31, 2021.

Salaries and employee benefits increased by $15.8 million or 4% to $386.2 million for the year ended October 31, 2022, compared with the year ended October 31, 2021. The year-over-year increase is partly due to a $7.1 million net gain on the settlement of pension plans resulting from annuity purchases recorded in 2021. Salary increases and talent acquisition to close foundational gaps, improve the customer experience, and support growth, as well as higher performance-based compensation also contributed to the increase year-over-year.

Premises and technology costs decreased by $13.1 million to $179.9 million for the year ended October 31, 2022, compared with the year ended October 31, 2021. The decrease mostly stems from lower amortization charges and rent expenses resulting from the strategic review and the impairment effected in the fourth quarter of 2021.

Other non-interest expenses increased by $8.6 million to $133.7 million for 2022, compared with $125.1 million for 2021. The increase mainly resulted from higher professional and advisory services fees resulting from investments made to support the Bank's strategic plan. Higher advertising, business development and travel expenses also contributed to the increase.

*Impairment and restructuring charge*s amounted to $1.8 million for 2022, compared with $191.8 million for 2021. In 2022, this line-item mainly included net charges related to lease contracts following the completion of the reduction of leased corporate office premises in Montreal and Toronto, as well as to other updates to estimates initially recorded in the prior year. In 2021, impairment and restructuring charges mainly resulted from the strategic review of the Bank's operations for $96.1 million and from the impairment of the Personal Banking segment for $93.4 million. The Impairment and restructuring charges line-item mainly included impairment charges, severance charges and charges related to lease and other contracts.

Efficiency ratio

The efficiency ratio on a reported basis improved to 67.8% for the year ended October 31, 2022, compared with 87.8% for the year ended October 31, 2021. The decrease year-over-year is mainly due to the aforementioned impairment and restructuring charges recorded in 2021. The adjusted efficiency ratio improved to 66.5% for the year ended October 31, 2022, compared with 68.2% for the year ended October 31, 2021, mainly as a result of an increase in total revenue year-over-year. The adjusted operating leverage was positive year-over-year.

TABLE 10
NON-INTEREST EXPENSES

In thousands of dollars, except percentage amounts	2022	2021	Variance 2022/2021
Salaries and employee benefits			
Salaries	$ 236,468	$ 225,669	
Performance-based compensation	88,853	85,796	
Employee benefits	60,836	58,935	
	386,157	370,400	4 %
Premises and technology			
Technology costs	121,509	117,380	
Depreciation and amortization	40,899	49,782	
Rent and property taxes	12,356	20,272	
Other	5,182	5,571	
	179,946	193,005	(7)%
Other			
Professional and advisory services	43,826	39,580	
Advertising, business development and travel	29,000	21,157	
Communications	15,649	17,127	
Other	45,255	47,249	
	133,730	125,113	7 %
Impairment and restructuring charges			
Strategic review-related charges	1,828	96,067	
Personal Bank segment impairment charges	—	93,392	
Restructuring charges	—	2,385	
	1,828	191,844	(99)%
Non-interest expenses	$ 701,661	$ 880,362	(20)%
Adjusted non-interest expenses[1]	$ 687,529	$ 683,540	1 %

(1) This is a non-GAAP financial measure. Refer to the Non-GAAP Financial and Other Measures section on page 28 for more information.

INCOME TAXES

For the year ended October 31, 2022, the income tax expense was $49.1 million and the effective tax rate was 18%. The lower effective tax rate, compared to the statutory rate, is attributed to a lower taxation level of income from foreign operations, as well as from the favourable effect of holding investments in Canadian securities that generate non-taxable dividend income. For the year ended October 31, 2021, the income tax expense was $15.5 million, and the effective tax rate was 21%. The lower effective tax rate in the prior year, compared to the statutory rate, was essentially attributed to the same reasons, as detailed in the table below. Year-over-year, the lower effective tax rate mainly resulted from the higher proportion of income from foreign operations. Note 19 to the Consolidated Financial Statements provides further information on income taxes.

TABLE 11

RECONCILIATION OF THE INCOME TAX EXPENSE TO THE DOLLAR AMOUNT OF INCOME TAX USING THE STATUTORY RATE

In thousands of dollars, except percentage amounts		**2022**			2021	
Income taxes at statutory rates	**$**	**72,539**	**26.3 %**	$	18,982	26.1 %
Change resulting from:						
Lower taxation related to income from foreign operations		**(18,209)**	**(6.6)**		(9,394)	(12.9)
Non-taxable dividends and non-taxable portion of capital gains		**(3,520)**	**(1.3)**		(3,471)	(4.8)
Impairment of goodwill		**—**	**—**		9,227	12.7
Other, net		**(1,697)**	**(0.6)**		182	0.3
Income taxes as reported in the Consolidated Statement of Income	**$**	**49,113**	**17.8 %**	$	15,526	21.4 %

Federal tax rate increase

Canada's 2022 federal budget, which was released on April 7, 2022, proposed to introduce a permanent 1.5% tax rate increase for members of banks and insurers group where a $100 million taxable income exemption can be allocated amongst subjected entities of a same group. On November 4, 2022, the Department of Finance Canada has issued the Budget Implementation Act 2, which will enact the new 2022 federal budget tax measures. The financial impact is not expected to be material for the Bank. The budget also proposed to introduce a temporary tax referred to as the Canada Recovery Dividend, which is now expected to be a one-time 15% tax on the 2020 and 2021 average taxable income above $1 billion, to be paid in equal instalments over 5 years. The Bank is not subject to the temporary Canada Recovery Dividend.

TRANSACTIONS WITH RELATED PARTIES

Related parties of the Bank consist of key management personnel and their close family members, as well as their related companies. Key management personnel consist of members of the Executive Committee or the Bank's Board of Directors (the "Board" or "Board of Directors"). As at October 31, 2022, loans provided to key management personnel totalled $1.9 million. Loans to key management personnel are granted under market conditions for similar risks and are initially measured at fair value. Loans to key management personnel consist mostly of term residential mortgage loans, as well as personal loans, at market rates less a discount based on the type and amount of the loan.

In the normal course of business, the Bank also provides usual banking services to key management personnel and their related entities, including bank accounts (deposits) under terms similar to those offered to arm's length parties. As at October 31, 2022, these deposits totalled $1.4 million. See Note 21 to the Consolidated Financial Statements for additional information on related party transactions.

OVERVIEW OF FISCAL 2021

Laurentian Bank of Canada reported net income of $57.1 million and diluted earnings per share of $1.03 for the year ended October 31, 2021, compared with $114.1 million and $2.37 for the year ended October 31, 2020. Return on common shareholders' equity was 1.9% for the year ended October 31, 2021, compared with 4.4% in 2020. Of note, reported results for 2021 included impairment and restructuring charges of $191.8 million ($150.3 million after income taxes), or $3.45 per share, mainly related to the strategic review of the Bank's operations completed in the fourth quarter of 2021 and to the impairment of the Personal Banking segment. Adjusted net income was $211.2 million and adjusted diluted earnings per share were $4.57 for the year ended October 31, 2021, compared with $138.2 million and $2.93 diluted per share in 2020. Excluding the effect of the impairment and restructuring charges recorded in fiscal 2021, the improvement in results compared to fiscal 2020 was mainly due to lower loan losses owing to better in macro economic conditions as the COVID-19 situation evolved. Revenue growth and a reduction in adjusted non-interest expenses also contributed positively to results as business conditions improved and focus on expense management continued. Adjusted return on common shareholders' equity was 8.3% for the year ended October 31, 2021, compared with 5.5% in 2020.

ANALYSIS OF QUARTERLY RESULTS

FOURTH QUARTER OF 2022 COMPARED WITH FOURTH QUARTER OF 2021

Net income was $55.7 million and diluted earnings per share were $1.26 for the fourth quarter of 2022, compared with a net loss of $102.9 million and a diluted loss per share of $2.39 for the fourth quarter of 2021. Of note, reported results for the fourth quarter of 2021 included impairment and restructuring charges of $189.4 million ($148.5 million after income taxes), or $3.40 per share, related to the strategic review of the Bank's operations completed in the fourth quarter of 2021 and to the impairment of the Personal Banking segment. Adjusted net income was $57.8 million and adjusted diluted earnings per share were $1.31 for the fourth quarter of 2022, compared with $47.8 million and $1.06 for the fourth quarter of 2021.

Total revenue

Total revenue of $257.1 million for the fourth quarter of 2022 increased by 3% compared with $250.4 million for the fourth quarter of 2021.

Net interest income increased by $10.7 million or 6% to $183.8 million for the fourth quarter of 2022, compared with $173.1 million for the fourth quarter of 2021. The increase was mainly due to higher interest income stemming from commercial loans, partly offset by higher funding costs and lower mortgage pre-payment penalties. The net interest margin was 1.77% for the fourth quarter of 2022, a decrease of 6 basis points compared with the fourth quarter of 2021, mainly due to higher funding costs, loan repricing lags and lower mortgage prepayment penalties as a result of the rising interest rate environment, partly offset by favourable changes in our business mix.

Other income decreased by $4.0 million or 5% to $73.3 million for the fourth quarter of 2022, compared with $77.3 million for the fourth quarter of 2021. The volatile market conditions unfavourably impacted financial markets revenue in the fourth quarter of 2022, including fees and securities brokerage commissions and income from mutual funds.

Provision for credit losses

The provision for credit losses was $17.8 million for the fourth quarter of 2022 compared with $24.9 million for the fourth quarter of 2021, an improvement of $7.1 million. The decrease is mainly due to lower provisions on performing loans as the Bank had recorded a $19.3 million provision in the fourth quarter of 2021 in relation to its investment loan portfolio, following the Bank's strategic review. This was partly offset by higher provisions on impaired loans in the fourth quarter of 2022. The provision for credit losses as a percentage of average loans and acceptances stood at 19 bps for the quarter, compared to 30 bps for the same quarter a year ago. Refer to the "Credit risk management" section on pages 52 to 58 of this MD&A and to Note 6 to the Consolidated Financial Statements for more information on provision for credit losses and allowances for credit losses.

Non-interest expenses

Non-interest expenses amounted to $174.1 million for the fourth quarter of 2022, a decrease of $182.3 million compared with the fourth quarter of 2021. In the fourth quarter of 2021, non-interest expenses included the aforementioned impairment and restructuring charges of $189.4 million. Adjusted non-interest expenses increased by $7.1 million or 4% to $171.2 million for the fourth quarter of 2022, compared with $164.1 million for the fourth quarter of 2021.

Salaries and employee benefits amounted to $89.6 million for the fourth quarter of 2022, an increase of $1.9 million compared with the fourth quarter of 2021, mostly due to salary increases and talent acquisition to close foundational gaps, improve the customer experience, and support growth. This increase was partly offset by a one-time $2.9 million employee benefits subsidy arising from the Bank's U.S. activities.

Premises and technology costs were $47.0 million for the fourth quarter of 2022, an increase of $1.6 million compared with the fourth quarter of 2021. The increase year-over-year is mainly due to higher technology costs as the Bank is investing in its infrastructure and closing foundational gaps.

Other non-interest expenses were $37.8 million for the fourth quarter of 2022, an increase of $3.8 million compared with the fourth quarter of 2021, mainly resulting from higher professional and advisory services fees resulting from investments made to support the Bank's strategic plan, as well as higher advertising, business development and travel expenses.

*Impairment and restructuring charge*s were negative $0.2 million for the fourth quarter of 2022, compared with $189.4 million for the fourth quarter of 2021. In the fourth quarter of 2022, this line-item included net charges mainly related to lease contracts following the completion of the reduction of leased corporate office premises, as well as to other updates to estimates initially recorded in the prior year. In the fourth quarter of 2021, impairment and restructuring charges mainly resulted from the strategic review of the Bank's operations for $96.1 million and from the impairment of the Personal Banking segment for $93.4 million. The Impairment and restructuring charges line-item mainly included impairment charges, severance charges and charges related to lease and other contracts.

Efficiency ratio
The efficiency ratio on a reported basis was 67.7% for the fourth quarter of 2022, compared with 142.3% for the fourth quarter of 2021. The decrease year-over-year is mainly due to the aforementioned impairment and restructuring charges recorded in the fourth quarter of 2021. The adjusted efficiency ratio was 66.6% for the fourth quarter of 2022, compared to 65.5% for the fourth quarter of 2021. The increase year-over-year is due to the increase in adjusted non-interest expenses.

Income taxes

For the quarter ended October 31, 2022, income taxes were $9.5 million, and the effective tax rate was 15%. The lower effective tax rate, compared to the statutory rate, is attributed to a lower taxation level of income from foreign operations, as well as from the favourable effect of holding investments in Canadian securities that generate non-taxable dividend income. For the quarter ended October 31, 2021, the income tax recovery was $28.1 million, and the effective tax rate was 21%.

QUARTERLY RESULTS AND TREND ANALYSIS

The Bank's intermediation business provides a relatively steady source of income stemming from intermediation activities. However, certain activities related to financial markets, such as trading activities, may result in more volatility. In addition, variations in market interest rates or equity markets, as well as in credit conditions can influence the Bank's results. Furthermore, other transactions such as business acquisitions or specific regulatory developments may significantly impact revenues and expenses. Given that the second quarter usually consists of only 89 days compared with 92 days for the other quarters, overall profitability is generally lower for that quarter, mainly as net interest income is impacted.

TABLE 12
QUARTERLY RESULTS

In thousands of dollars, except per share and percentage amounts				2022				2021
	Oct. 31	**July 31**	**April 30**	**Jan. 31**	Oct. 31	July 31	April 30	Jan. 31
Net interest income	**$183,824**	**$188,504**	**$180,090**	**$180,918**	$173,095	$174,696	$171,476	$173,074
Other income	**73,318**	**71,448**	**79,512**	**76,621**	77,336	80,188	78,292	74,300
Total revenue	**257,142**	**259,952**	**259,602**	**257,539**	250,431	254,884	249,768	247,374
Provision for credit losses	**17,849**	**16,629**	**13,000**	**9,400**	24,900	5,400	2,400	16,800
Non-interest expenses	**174,147**	**177,479**	**172,105**	**177,930**	356,480	170,258	179,561	174,063
Income (loss) before income taxes	**65,146**	**65,844**	**74,497**	**70,209**	(130,949)	79,226	67,807	56,511
Income taxes (recovery)	**9,496**	**9,978**	**14,948**	**14,691**	(28,073)	17,162	14,745	11,692
Net income (loss)	**$ 55,650**	**$ 55,866**	**$ 59,549**	**$ 55,518**	$(102,876)	$62,064	$ 53,062	$44,819
Adjusted net income[1]	**$ 57,834**	**$ 58,153**	**$ 61,600**	**$ 59,491**	$ 47,829	$59,046	$ 56,704	$47,572
Operating performance								
Diluted earnings per share	**$ 1.26**	**$ 1.18**	**$ 1.34**	**$ 1.17**	$ (2.39)	$ 1.32	$ 1.15	$ 0.96
Adjusted diluted earnings per share[2]	**$ 1.31**	**$ 1.24**	**$ 1.39**	**$ 1.26**	$ 1.06	$ 1.25	$ 1.23	$ 1.03
Return on common shareholders' equity[2]	**8.7 %**	**8.4 %**	**10.0 %**	**8.5 %**	(16.9)%	9.4 %	8.6 %	7.1 %
Adjusted return on common shareholders' equity[2]	**9.0 %**	**8.7 %**	**10.3 %**	**9.2 %**	7.5 %	8.9 %	9.2 %	7.5 %
Net interest margin[3]	**1.77 %**	**1.83 %**	**1.87 %**	**1.88 %**	1.83 %	1.86 %	1.88 %	1.84 %
Efficiency ratio[3]	**67.7 %**	**68.3 %**	**66.3 %**	**69.1 %**	142.3 %	66.8 %	71.9 %	70.4 %
Adjusted efficiency ratio[2]	**66.6 %**	**67.1 %**	**65.2 %**	**67.0 %**	65.5 %	68.4 %	69.9 %	68.9 %

(1) Refer to the Non-GAAP Financial and Other Measures section on page 28 for more information.
(2) This is a non-GAAP ratio. Refer to the Non-GAAP Financial and Other Measures section on page 28 for more information.
(3) This is a supplementary financial measure. Refer to the Non-GAAP Financial and Other Measures section on page 28 for more information.

Trend analysis

Net interest income
Net interest income generally increased over the last two years, mainly due to higher interest stemming from commercial loans, partly offset by higher funding costs, loan repricing lags and lower mortgage prepayment penalties as a result of the rising interest rate environment.

Other income
Other income generally increased throughout 2021 and the first half of 2022, mostly as a result of market driven revenues, including trading and brokerage operations. In the second half of 2022, the volatile conditions unfavourably impacted financial markets revenues, including fees and securities brokerage commissions and income from mutual funds.

Provision for credit losses
In 2021, while uncertainty over the impact of the COVID-19 remained, the economic outlook improved and led to releases of provisions on performing loans of $9.9 million in the second quarter of 2021 and $3.6 million in the third quarter of 2021. In the fourth quarter of 2021, a review of the investment loan portfolio led to an increase of allowances and provisions for credit losses of $19.3 million. In the first quarter of 2022, the provision for credit losses decreased due to favourable repayments leading to lower write-offs in the commercial loan portfolio. In the second half of 2022, higher provisions on performing loans were recorded due to less favourable forward-looking macro-economic scenarios and probability weights.

Non-interest expenses
Non-interest expenses generally increased throughout 2021 and 2022, as a result of higher expenses to close foundational gaps, improve the customer experience, and support growth. Impairment and restructuring charges mostly for the fourth quarter of 2021 also impacted the level of non-interest expenses.

TABLE 13
RECONCILIATION ON QUARTERLY NON-GAAP FINANCIAL MEASURES

In thousands of dollars				2022				2021
	Oct. 31	July 31	April 30	Jan. 31	Oct. 31	July 31	April 30	Jan. 31
Non-interest expenses	**$ 174,147**	**$ 177,479**	**$ 172,105**	**$ 177,930**	$ 356,480	$ 170,258	$ 179,561	$ 174,063
Adjusting items[1], before income taxes								
Amortization of acquisition-related intangible assets	3,172	3,074	3,030	3,028	3,009	2,946	3,014	3,073
Strategic review-related charges	(237)	—	(277)	2,342	96,067	—	—	—
Personal Banking segment impairment charges	—	—	—	—	93,392	—	—	—
Restructuring charges	—	—	—	—	(88)	(38)	1,890	621
Net gain on the settlement of pension plans resulting from annuity purchases	—	—	—	—	—	(7,064)	—	—
	2,935	3,074	2,753	5,370	192,380	(4,156)	4,904	3,694
Adjusted non-interest expenses	**$ 171,212**	**$ 174,405**	**$ 169,352**	**$ 172,560**	$ 164,100	$ 174,414	$ 174,657	$ 170,369
Reported net income	**$ 55,650**	**$ 55,866**	**$ 59,549**	**$ 55,518**	$ (102,876)	$ 62,064	$ 53,062	$ 44,819
Adjusting items[2], net of income taxes								
Amortization of acquisition-related intangible assets	2,359	2,287	2,254	2,252	2,248	2,205	2,252	2,296
Strategic review-related charges	(175)	—	(203)	1,721	70,638	—	—	—
Personal Banking segment impairment charges	—	—	—	—	77,884	—	—	—
Restructuring charges	—	—	—	—	(65)	(29)	1,390	457
Net gain on the settlement of pension plans resulting from annuity purchases	—	—	—	—	—	(5,194)	—	—
	2,184	2,287	2,051	3,973	150,705	(3,018)	3,642	2,753
Adjusted net income	**$ 57,834**	**$ 58,153**	**$ 61,600**	**$ 59,491**	$ 47,829	$ 59,046	$ 56,704	$ 47,572
Net income (loss) available to common	**$ 54,361**	**$ 51,265**	**$ 58,261**	**$ 50,917**	$ (104,231)	$ 57,387	$ 49,946	$ 41,702
Adjusting items, net of income taxes (detailed above)	2,184	2,287	2,051	3,973	150,705	(3,018)	3,642	2,753
Adjusted net income available to common shareholders	**$ 56,545**	**$ 53,552**	**$ 60,312**	**$ 54,890**	$ 46,474	$ 54,369	$ 53,588	$ 44,455

(1) Refer to Table 2 on page 28 for the detailed description of adjusting items.

ANALYSIS OF FINANCIAL CONDITION

TABLE 14
CONDENSED BALANCE SHEET

In thousands of dollars	2022	2021
Assets		
Cash and deposits with banks	**$ 1,890,923**	$ 667,123
Securities	**6,184,461**	6,499,193
Securities purchased under reverse repurchase agreements	**3,727,752**	2,764,281
Liquid assets[1]	**11,803,136**	9,930,597
Loans and acceptances, net of allowances	**37,387,585**	33,449,707
Other assets	**1,526,037**	1,696,720
	$ 50,716,758	$ 45,077,024
Liabilities and Shareholders' Equity		
Deposits	**$ 27,131,806**	$ 22,988,229
Other liabilities	**8,274,874**	7,842,613
Debt related to securitization activities	**12,192,422**	11,255,530
Subordinated debt	**336,553**	349,782
Shareholders' equity	**2,781,103**	2,640,870
	$ 50,716,758	$ 45,077,024

(1) Liquid assets is a supplementary financial measure and consist of cash, deposits with banks, securities and securities purchased under reverse repurchase agreements.

As at October 31, 2022, total assets amounted to $50.7 billion, a 13% increase from $45.1 billion as at October 31, 2021, due to the higher level of both loans and liquid assets.

Liquid assets

As at October 31, 2022, liquid assets amounted to $11.8 billion, an increase of $1.9 billion compared with $9.9 billion as at October 31, 2021. The Bank continues to prudently manage its level of liquid assets. The Bank's funding sources remain well diversified and sufficient to meet all liquidity requirements. Liquid assets represented 23% of total assets as at October 31, 2022, an increase of 1% since October 31, 2021.

Loans

Loans and bankers' acceptances, net of allowances, stood at $37.4 billion as at October 31, 2022, an increase of $3.9 billion or 12% since October 31, 2021. During 2022, strong commercial loan growth and an increase in residential mortgage loans was partly offset by a decrease in personal loans.

Commercial loans and acceptances amounted to $18.2 billion as at October 31, 2022, an increase of $4.1 billion or 29% since October 31, 2021. The increase resulted mainly from strong growth in both inventory financing and real estate lending, which increased by $2.4 billion and $1.4 billion respectively.

Residential mortgage loans of $16.2 billion as at October 31, 2022 increased by $0.3 billion or 2% from October 31, 2021. Throughout 2022, the Bank continued its efforts to improve its mortgage processes. Refer to the Business Highlights section for further details.

Personal loans of $3.3 billion as at October 31, 2022 decreased by $0.4 billion from October 31, 2021, mainly as a result of a decline in the investment loan portfolio driven by volatile market conditions.

Other assets

Other assets stood at $1.5 billion as at October 31, 2022, a decrease of $0.2 billion or 10% since October 31, 2021 mainly due to lower accounts receivable.

LIABILITIES

Deposits

Deposits increased by $4.1 billion or 18% to $27.1 billion as at October 31, 2022 compared with $23.0 billion as at October 31, 2021. Personal deposits stood at $22.2 billion as at October 31, 2022, up $4.1 billion compared with October 31, 2021, mostly due to deepening and expanding relationships with advisors and brokers which led to higher personal notice and demand deposits, as well as term deposits. Personal deposits represented 82% of total deposits as at October 31, 2022, compared with 79% as at October 31, 2021, and contributed to the Bank's good liquidity position. Business and other deposits increased by $0.1 billion over the same period to $4.9 billion, due to an increase in wholesale funding which included a $0.3 billion issuance of covered bonds in April 2022.

Other liabilities

Other liabilities stood at $8.3 billion as at October 31, 2022, an increase of $0.4 billion or 6% since October 31, 2021. The increase resulted mainly from higher obligations related to securities sold short associated with trading activities, partly offset by lower accounts payable.

Debt related to securitization activities

Debt related to securitization activities increased by $0.9 billion or 8% compared with October 31, 2021 and stood at $12.2 billion as at October 31, 2022. Since the beginning of the year, new mortgage loan securitization through the CMHC programs, supplemented by other secured funding, more than offset maturities, as well as normal repayments. For additional information on the Bank's securitization activities, please refer to Notes 7 and 14 to the Consolidated Financial Statements.

Subordinated debt

Subordinated debt stood at $336.6 million as at October 31, 2022, compared with $349.8 million as at October 31, 2021, as the issuance on March 25, 2022 of $350.0 million of notes maturing in June 2032 was offset by the early redemption on June 22, 2022 of the notes maturing in June 2027. Subordinated debt is an integral part of the Bank's regulatory capital and affords its depositors additional protection, as further detailed in the Capital Management section below.

SHAREHOLDERS' EQUITY

Shareholders' equity amounted to $2,781.1 million as at October 31, 2022, compared with $2,640.9 million as at October 31, 2021. Compared to October 31, 2021, retained earnings increased by $127.1 million, mainly as a result of the net income contribution of $226.6 million, partly offset by dividends. The Bank also repurchased 401,200 common shares under its Normal Course Issuer Bid, which reduced common shares by $10.8 million and retained earnings by $6.4 million in 2022. For additional information, please refer to the Capital Management section below and to the Consolidated Statement of Changes in Shareholders' Equity.

The Bank's book value per common share was $58.02 as at October 31, 2022 compared to $53.99 as at October 31, 2021.

OFF-BALANCE SHEET ARRANGEMENTS AND STRUCTURED ENTITIES

In the normal course of its operations, the Bank uses structured entities to securitize or transfer financial assets, as detailed below. The Bank also enters into several arrangements that, under IFRS, are either not recorded on the Bank's balance sheet or are recorded in amounts that differ from the notional amounts. In particular, the Bank administers clients' assets that are not reported on the balance sheet. Moreover, off-balance sheet arrangements include derivatives, as well as credit commitments and guarantees, as detailed below.

OFF-BALANCE SHEET ARRANGEMENTS

Assets under administration

Assets under administration mainly include assets of clients to whom the Bank provides various administrative services, such as, retail and institutional investment portfolios. Table 15 below summarizes assets under administration. As at October 31, 2022 these items totalled $27.2 billion, down $3.8 billion or 12% compared with October 31, 2021. Fees, commissions and other income related to these assets contribute to the Bank's profitability.

TABLE 15
ASSETS UNDER ADMINISTRATION[1]

In thousands of dollars	2022	2021
Registered and non-registered investment accounts	**$ 17,720,188**	$ 20,838,595
Clients' brokerage assets	**4,846,958**	5,305,279
Mutual funds	**3,322,114**	3,989,132
Loans under administration	**1,212,276**	753,351
Other	**109,187**	112,609
Assets under administration	**$ 27,210,723**	$ 30,998,967

(1) This is a supplementary financial measure. Refer to the Non-GAAP Financial and Other Measures section on page 28 for more information.

Assets related to registered and non-registered investment accounts were down by $3.1 billion or 15% year-over-year and clients' brokerage assets decreased by $0.5 billion or 9% year-over-year, both mostly reflecting lower market values of underlying investments.

Mutual fund assets under administration, mainly composed of the preferred series of LBC-Mackenzie mutual funds, decreased by $0.7 billion or 17% year-over-year, mostly as a result of lower market values.

Loans under administration, mainly including syndication activities, loans administered for third parties and derecognized securitized mortgage loans, increased by $0.5 billion as a result of increased commercial activity and volumes.

Derivative contracts

In the normal course of its operations, the Bank enters into various derivative contracts to protect itself against the risk of fluctuations in interest rates, foreign exchange rates, as well as stock prices and indices on which returns of index-linked deposits are based. Derivative contracts are also used to meet clients' requirements and generate revenues from trading activities.

All derivatives are recorded on the balance sheet at fair value. Derivative values are calculated using notional amounts. However, these amounts are not recorded on the balance sheet, as they do not represent the actual amounts exchanged. Likewise, notional amounts do not reflect the credit risk related to derivatives, although they serve as a reference for determining the amount of cash flows to be exchanged. The notional amounts of the Bank's derivatives totalled $29.0 billion as at October 31, 2022 with a net negative fair value of $496.4 million.

Notes 22 to 25 to the Consolidated Financial Statements provide further information on the various types of derivative products and their recognition in the Consolidated Financial Statements.

Credit commitments and guarantees

In the normal course of its operations, the Bank enters into various off-balance sheet credit instruments to meet the financing needs of its clients and earn fee income. These instruments may expose the Bank to liquidity and credit risk and are subject to adequate risk management. Table 20 details the maximum amount of additional credit that the Bank could be required to extend if the commitments are fully used. In the normal course of its operations, the Bank also enters into guarantee agreements such as standby letters of credit and performance guarantees to support its clients. Table 16 below details significant guarantees. Note 29 to the Consolidated Financial Statements also provides additional information.

TABLE 16
CREDIT COMMITMENTS AND GUARANTEES

In thousands of dollars	2022	2021
Undrawn amounts under approved credit facilities[1]	$ 6,221,409	$ 6,029,352
Standby letters of credit and performance guarantees	227,957	203,406
Documentary letters of credit	2,533	8,166

(1) Excluding credit facilities revocable at the Bank's option totalling $3.9 billion as at October 31, 2022 ($4.0 billion as at October 31, 2021)

STRUCTURED ENTITIES

Securitization

The Bank uses structured entities to securitize residential mortgage loans, finance lease receivables and personal investment loans in order to optimize and diversify sources of funding and to enhance its liquidity position. The Bank consolidates certain of the intermediary structured entities when it has control over the entities and underlying assets, whereas certain structured entities are not consolidated when the Bank does not have control. The Bank sells mortgage loans through the Canada Mortgage Bond (CMB) program and to third-party investors under the National Housing Act (NHA) Mortgage-Backed Securities (MBS) program set-up by the CMHC, as well as through other third-party multi-seller conduits set up by Canadian banks. Notes 7 and 14 to the Consolidated Financial Statements provide additional information on these transactions.

The Bank does not act as an agent for clients engaged in this type of activity and has no other significant involvement, such as liquidity and credit enhancement facilities, with any other securitization conduit.

Covered bonds

In 2021, the Bank received approval from Canada Mortgage and Housing Corporation ("CMHC") to establish a $2.0 billion legislative covered bond programme ("Programme") pursuant to Canadian Registered Covered Bond Programs Guide. The Bank periodically transfers mortgages to LBC Covered Bond (Legislative) Guarantor Limited Partnership (the Guarantor LP) to support funding activities and asset coverage requirements under the Programme. The Guarantor LP was created to guarantee payment of the principal and interest owed to the bondholders. The covered bonds guaranteed by the Guarantor LP are direct, unsecured and unconditional obligations of the Bank; therefore, investors have a claim against the Bank which will continue if the covered bonds are not paid by the Bank and the mortgage assets in the Guarantor LP are insufficient to satisfy the obligations owing on the covered bonds. Note 7 to the Consolidated Financial Statements provides additional information on the covered bond programme.

CAPITAL MANAGEMENT

CAPITAL MANAGEMENT FRAMEWORK

Management seeks to maintain an adequate level of capital that considers the Bank's targeted capital ratios and internal assessment of required capital that is aligned with the Bank's risk appetite, strategic plan and shareholders' expectations. The framework is also consistent with the Bank's target credit ratings and underscores the Bank's capacity to cover risks and ensure depositor confidence.

In order to achieve these objectives, the Bank leverages its capital management framework. This framework is underpinned by the Bank's Capital Management and Adequacy Policy which outlines the mechanisms for capital planning, management and adequacy assessment. A key component of the capital management framework, the Internal Capital Adequacy Assessment Process (ICAAP) evaluates capital adequacy relative to the Bank's risk profile and establishes the appropriate capital level for the year ahead. In setting its capital targets, management considers the ICAAP which takes into account results from the integrated stress tests using severe scenarios, as well as its assessment of the Bank's risk exposures using a building block approach wherein capital is assigned to each risk component. Both approaches rely on the Bank's risk registry to ensure all material risks are considered.

The capital targets established through the ICAAP set the minimum requirements incorporated in the Bank's Capital Plan.

Various bodies within the organization are involved in optimizing the Bank's capital.

- The *Board of Directors* annually approves the Capital Management and Adequacy Policy, the Capital Plan, as well as the Business Plan and Multi-Year Financial Plan.
- The *Risk Management Committee of the Board of Directors* reviews and approves, annually, capital-related documents, including the ICAAP and the integrated stress testing program. It also reviews the overall capital adequacy of the Bank on a quarterly basis.
- The *Corporate Risk Committee*, mandated by the Executive Committee, reviews the Bank's capital adequacy under internal and external measures and approves risk management processes and approaches supporting this objective.
- The *Asset-Liability Management Committee*, mandated by the Corporate Risk Committee, monitors regulatory capital ratios on a monthly basis.

- *Corporate Risk Management* provides oversight of the Bank's capital management framework. This includes monitoring capital limits and adequacy, developing and implementing the Capital Management and Adequacy Policy, the ICAAP and the integrated stress testing exercise, as well as measuring regulatory capital ratios.
- *Corporate Finance* annually develops the Business Plan which includes the Multi-Year Financial Plan and the Capital Plan. It is also responsible for managing capital and updating the Capital Plan on an ongoing basis. In addition, Corporate Finance has responsibility for maintaining compliance with regulatory capital adequacy requirements for each of the subsidiaries.

REGULATORY CAPITAL

The Office of the Superintendent of Financial Institutions (OSFI) requires banks to meet minimum risk-based capital ratios drawn on the Basel Committee on Banking Supervision (BCBS) capital framework, commonly referred to as the Basel III Accord. Under OSFI's "Capital Adequacy Requirements" guideline, the Bank must maintain minimum levels of capital depending on various criteria. Tier 1 capital, the most permanent and subordinated forms of capital, consists of two components: Common Equity Tier 1 capital and Additional Tier 1 capital. Tier 1 capital is predominantly composed of common equity to ensure that risk exposures are backed by a high-quality capital base. Tier 2 capital consists of supplementary capital instruments and contributes to the overall strength of a financial institution as a going concern. Institutions are expected to meet minimum risk-based capital requirements for exposure to credit risk, operational risk and, where they are internationally active, market risk. Banks are also obligated to assess the internal capital adequacy to cover all other risks under Pillar 2 of the framework. Under OSFI's guideline, minimum Common Equity Tier 1, Tier 1 and Total capital ratios are set at 7.0%, 8.5% and 10.5% respectively including a 2.5% capital conservation buffer.

The Basel III Accord also introduced a non-risk-based leverage ratio requirement to act as a supplementary measure to the risk-based capital requirements. Under OSFI's Leverage Requirements Guideline, federally regulated deposit-taking institutions are expected to maintain a Basel III leverage ratio that always meets or exceeds 3%. The leverage ratio is defined as the Tier 1 capital divided by unweighted on-balance sheet assets and off-balance sheet commitments, derivatives and securities financing transactions, as defined within the requirements.

Some banks in Canada have been designated by OSFI as Domestic Systemically Important Banks (D-SIBs). Under this designation, these banks must hold a further 1% of Common Equity Tier 1 capital. OSFI also required D-SIBs to hold a Pillar 2 Domestic Stability Buffer (DSB) to protect against risks associated with systemic vulnerabilities. On December 8, 2022, OSFI announced that the Domestic Stability Buffer (DSB) level will be set at 3.0% of risk-weighted assets as of February 1, 2023. In addition, OSFI has increased the DSB's range from 0 to 4%, instead of the previous 0 to 2.5%. This change reflects OSFI's assessment that systemic vulnerabilities remain elevated, as well as their views that globally, persistent inflation and rising interest rates, along with geopolitical tensions, have exacerbated vulnerabilities and led to increased economic uncertainty. As the Bank has not been designated as a D-SIB, these measures do not apply to the Bank.

The Basel III Accord suggests a range of approaches of varying complexity, the choice of which determines the sensitivity of capital to risks. The Bank is using the less complex Standardized Approach, which relies on regulatory weightings, while other larger banks generally use the more complex AIRB approach which uses internal estimates of risk components to establish risk-weighted assets and calculate regulatory capital.

The Bank is pursuing the adoption of the AIRB approach to credit risk, subject to regulatory approval which will use the Bank's internal estimates of risk components to establish risk-weighted assets and calculate regulatory capital. The AIRB approach will strengthen the Bank's credit risk management, optimize regulatory capital and provide a level playing field for credit underwriting activities. As the Bank is currently implementing the Basel III Reforms described below, the adoption of the AIRB approach is not expected to be completed before 2025.

Regulatory capital developments

Changes to Capital, Leverage and Liquidity Requirements and related Disclosures – the Basel III Reforms.

In December 2017, the BCBS issued the Basel III: Finalising post-crisis reforms standard in response to the global financial crisis. It addressed shortcomings of the pre-crisis regulatory framework and provided a new regulatory foundation for a resilient banking system. A key objective of the revisions incorporated into the framework was to reduce excessive variability of risk-weighted assets (RWA) and to restore credibility in the calculation of RWA, as well as to improve comparability and transparency among bank capital ratios.

On March 11, 2021, OSFI released for public consultation revisions to the Capital Adequacy Requirements (CAR) Guideline, Leverage Requirements (LR) Guideline, and Liquidity Adequacy Requirements (LAR) Guideline (together, "the Guidelines"). The proposed revisions to the CAR and LR Guidelines reflected OSFI's domestic implementation of the final Basel III reforms as set out in the consolidated Basel Framework published by the BCBS. In addition, proposed revisions to these guidelines, as well as those proposed to the LAR Guideline, included changes to reflect specific capital and liquidity requirements applicable to small and medium sized deposit-taking institutions (SMSBs). These changes aligned to the draft new SMSB Capital and Liquidity Requirements Guideline (the SMSB Capital and Liquidity Guideline) that was also released on the same date for public consultation.

Concurrent with the consultation, OSFI was consulting on proposed changes to the Pillar 3 Disclosure Guideline applicable to Domestic Systemically Important Banks (D-SIBs). These enhanced disclosure requirements incorporated revisions to the Guidelines to support transparency and promote market discipline. On August, 5, 2021, continuing its initiative to develop tailored requirements for the Canadian Small and Medium-Sized Banks (SMSBs), OSFI issued for Public Consultation the Draft Pillar 3 Disclosure Guideline for SMSBs. The Draft Guideline listed the disclosures required by SMSBs and their respective implementation dates.

On January 31, 2022, OSFI released revised capital, leverage, liquidity and disclosure rules that incorporate the final Basel III banking reforms with additional adjustments to make them suitable for federally regulated deposit-taking institutions (DTIs). The revised rules include the new Capital Adequacy Requirements (CAR) Guideline, the Leverage Requirements (LR) Guideline, the Liquidity Adequacy Requirements (LAR) Guideline, the Capital and Liquidity Requirements specifically for Small and Medium-Sized Deposit-Taking Institutions (SMSBs) Guideline, as well as separate Pillar 3 Disclosure Requirements for D-SIBs and SMSBs. Most of these revised rules will take effect in the second fiscal quarter of 2023 for the Bank, with those related to the credit valuation adjustment risk taking effect in early 2024. The Bank is finalizing its assessment of these new regulatory requirements and, in parallel, gradually implementing changes to systems and processes.

Regulatory capital developments in support of COVID-19 efforts
In March 2020, OSFI set out a series of regulatory and supervisory adjustments to support the financial and operational resilience of federally regulated financial institutions following the onset of the COVID-19 pandemic. Among these measures were temporary expectations that institutions not increase regular dividends, undertake common share repurchases or raise executive compensation. On November 4, 2021, OSFI announced that institutions may again increase regular dividends and executive compensation. Additionally, subject to the existing requirement for Superintendent approval, they may once again repurchase shares.

As part of these measures, OSFI also introduced transitional arrangements applicable to the expected credit loss (ECL) provisioning method set out in the Basel framework. Under the arrangement, a portion of allowances that would otherwise have been included in Tier 2 capital is included in CET1 capital, subject to a scaling factor. The scaling factor were set at 70% for fiscal 2020, at 50% for fiscal 2021, at 25% for fiscal 2022 and at 0% for fiscal 2023.

Assurance on Capital, Leverage and Liquidity Returns
On November 7, 2022, OSFI issued a new Assurance on Capital, Leverage and Liquidity Returns guideline. The guideline lays out OSFI's three-step approach to enhancing and aligning assurance expectations over capital, leverage and liquidity returns, including an external audit opinion on the numerator and denominator of key regulatory ratios, senior management attestation on regulatory returns, and an internal audit opinion on the processes and controls followed in preparing these returns. The requirements related to the internal audit opinion, the senior management attestations and the external audit opinion will become effective as of fiscal 2023, 2024 and 2025 respectively. The Bank is currently assessing the impact of this guideline on its regulatory returns processes.

Clarification on the Treatment of Innovative Real Estate Secured Lending Products under Guideline B-20
On June 28, 2022, OSFI has provided additional guidance on the B-20 Residential Mortgage Underwriting Practices and Procedures guideline (B-20) related to combined mortgage and HELOC loan programs which may impact some provisions the banking industry has allowed with regard to automatically increasing HELOC credit capacity above certain loan to value thresholds. The Bank is currently finalising its assessment of the impact of this advisory and will be working with its customers for any required transition.

Regulatory capital ratios

The Common Equity Tier 1 capital ratio stood at 9.1% as at October 31, 2022, compared with 10.2% as at October 31, 2021, in excess of the minimum regulatory requirement and the Bank's target management levels. The decrease since the beginning of the year mainly results from growth in risk-weighted assets, given the strong growth in commercial loans, partly offset by internal capital generation. This level of capital provides the necessary flexibility to support the Bank's strategic plan. The Bank complied with OSFI's capital and leverage requirements throughout the year.

The graph below shows the change in Common Equity Tier 1 (CET1) capital ratio from October 31, 2021 to October 31, 2022.

CHANGE IN COMMON EQUITY TIER 1 CAPITAL RATIO
(In percentage)

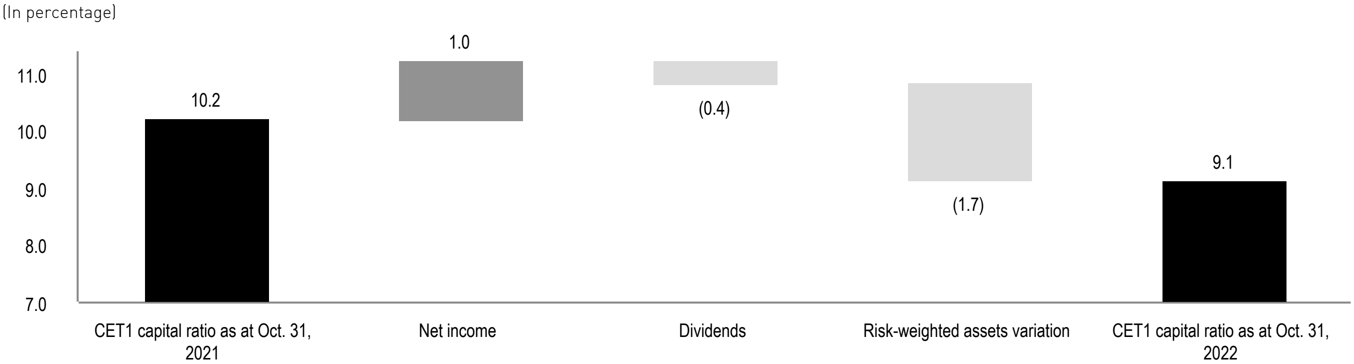


TABLE 17

REGULATORY CAPITAL AND LEVERAGE RATIOS

In thousands of dollars, except percentages	2022	2021
Regulatory capital		
Common shares	$ 1,167,549	$ 1,172,722
Retained earnings	1,322,381	1,195,264
Accumulated other comprehensive income, excluding cash flow hedge reserve	19,438	(18,561)
Share-based compensation reserve	4,725	3,667
Transitional arrangements for expected credit losses in response to COVID-19[1]	15,609	19,006
Deductions from Common Equity Tier 1 capital[2]	(362,389)	(333,337)
Common Equity Tier 1 capital	2,167,313	2,038,761
Qualifying preferred shares and limited recourse capital notes	244,403	245,683
Total regulatory adjustments to Additional Tier 1 capital	—	(1,147)
Additional Tier 1 capital	244,403	244,536
Tier 1 capital	2,411,716	2,283,297
Qualifying subordinated debt	336,553	349,782
Collective allowances	133,658	97,000
Deductions from Tier 2 capital[3]	—	(74)
Tier 2 capital	470,211	446,708
Total capital	$ 2,881,927	$ 2,730,005
CET1 risk-weighted assets	$ 23,909,169	$ 20,007,010
Total exposure	$ 52,170,897	$ 44,973,981
Capital ratios		
Common Equity Tier 1 capital ratio	9.1 %	10.2 %
Tier 1 capital ratio	10.1 %	11.4 %
Total capital ratio	12.1 %	13.6 %
Leverage ratio	4.6 %	5.1 %

(1) Represents ECL transitional arrangements provided by OSFI in April 2020 to afford financial institutions further flexibility in addressing economic conditions due to COVID-19. The Common Equity Tier 1, Tier 1 and Total capital ratios excluding the ECL transitional arrangements were 9.0%, 10.0% and 12.1% respectively as at October 31, 2022.

(2) Comprised of deductions for software and other intangible assets, goodwill, pension plan assets and other.

(3) Investments in own Tier 2 capital instruments.

TABLE 18

RISK-WEIGHTED ASSETS

In thousands of dollars		2022			2021	
	Total exposure	Risk-weighted assets[1]	Capital requirements	Total exposure	Risk-weighted assets[1]	Capital requirements
Exposure Class (after risk mitigation)						
Corporate	$ 13,655,824	$ 13,594,466	$ 951,613	$ 10,246,647	$ 10,249,948	$ 717,496
Sovereign	10,055,727	81,156	5,681	9,280,483	76,868	5,381
Bank	445,994	107,947	7,556	465,366	108,178	7,572
Retail residential mortgage loans	19,627,048	2,915,459	204,082	19,057,830	2,862,426	200,370
Other retail	1,286,440	832,508	58,276	1,433,824	870,813	60,957
Small business entities treated as other retail	2,232,722	1,668,775	116,814	1,797,355	1,341,087	93,876
Equity	266,334	266,334	18,643	339,195	339,195	23,744
Securitization	4,639	1,491	104	2,440	2,132	149
Other assets	1,950,134	751,159	52,581	1,375,006	747,272	52,309
	49,524,862	20,219,295	1,415,350	43,998,146	16,597,919	1,161,854
Derivatives	320,436	165,966	11,618	204,812	100,294	7,021
Credit commitments	1,785,015	1,744,245	122,097	1,633,413	1,597,084	111,796
Operational risk		1,779,663	124,576		1,711,713	119,820
	$ 51,630,313	$ 23,909,169	$ 1,673,641	$ 45,836,371	$ 20,007,010	$ 1,400,491

(1) To determine the appropriate risk weight, credit assessments by OSFI-recognized external credit rating agencies of Standard & Poor's, Moody's and DBRS are used. Under the Standardized approach, the Bank assigns the risk weight corresponding to OSFI's standard mapping. For most of the Bank's exposures to sovereign and bank counterparties, which are predominantly domiciled in Canada, these risk weights are based on Canada's AAA rating. In addition, the Bank relies on external ratings for certain rated exposures, mainly in the corporate class. For unrated exposures, mainly in the retail and corporate classes, the Bank generally applies prescribed risk weights taking into consideration certain exposure specific factors including counterparty type, exposure type and credit risk mitigation techniques employed.

OUTSTANDING CAPITAL INSTRUMENTS

As at November 30, 2022, there were 5,000,000 outstanding Preferred Shares Series 13, 43,334,488 outstanding common shares and 1,202,283 outstanding stock options.

NON-VIABILITY CONTINGENT (NVCC) CAPITAL INSTRUMENTS AND OTHER BAIL-IN REGULATIONS

As required under the Basel III Accord, OSFI requires that regulatory capital instruments other than common equity have a non-viability contingent capital (NVCC) clause to ensure that investors bear losses before taxpayers should the government determine that it is in the public interest to rescue a non-viable financial institution. NVCC provisions require the conversion of the capital instrument into a variable number of common shares in the event that OSFI deems a bank to be non-viable or a federal or provincial government in Canada publicly announces that a bank has accepted or agreed to accept a capital injection. If a NVCC trigger event was to occur, NVCC capital instruments as at October 31, 2022, which are the Class A Preferred Shares Series 13, the subordinated debentures due on June 15, 2032, as well as the Limited Recourse Capital Notes (LRCN) Series 1 would be converted into common shares pursuant to an automatic conversion formula with a conversion price based on the greater of: (i) a contractual floor price of $5.00, and (ii) the current market price of the Bank's common shares at the time of the trigger event (10-day weighted average). Based on a floor price of $5.00 and assuming no accrued interest and no declared and unpaid dividends, these NVCC capital instruments would convert into a maximum of 120,000,000 common shares, in aggregate, which would represent a dilution impact of 73.5% based on the number of common shares outstanding as at October 31, 2022.

Furthermore, in the regulations of the Canadian 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 D-SIBs (collectively the Bail-In Regulations). The Bail-In regulations provide for the conversion of certain shares and liabilities of a bank into common shares when a bank has ceased, or is about to cease, to be viable. At last, OSFI's Total Loss Absorbing Capacity (TLAC) guideline, which also applies to D-SIBs under the federal government's Bail-In Regulations, aims to ensure that a D-SIB has sufficient loss-absorbing capacity to support its recapitalization in the unlikely event it becomes non-viable. As the Bank has not been designated as a D-SIB, these measures do not apply to the Bank.

NORMAL COURSE ISSUER BID

On December 10, 2021, the Bank announced that it had received the approval of the Toronto Stock Exchange and OSFI to launch a normal course issuer bid ("NCIB") to repurchase for cancellation up to 875,000 of its common shares, being approximately 2% of the total number of its shares outstanding as at December 1, 2021.

In 2022, the Bank repurchased 401,200 common shares under its NCIB at an average price of $42.91 per share for a total amount of $17.2 million, of which $10.8 million reduced common shares and $6.4 million reduced retained earnings. The NCIB will terminate on December 14, 2022.

DIVIDENDS

The Board of Directors must approve dividend payments on preferred and common shares on a quarterly basis. The declaration and payment of dividends are subject to certain legal restrictions, as explained in Note 16 to the Consolidated Financial Statements. The level of dividends declared on common shares reflects management and Board views of the Bank's financial outlook and takes into consideration market and regulatory expectations, as well as the Bank's growth objectives in its strategic plan. Table 19 summarizes dividends declared for the last three years.

TABLE 19
SHARE DIVIDENDS AND PAYOUT RATIO

In thousands of dollars, except per share and percentage amounts		**2022**		2021		2020
Dividends declared on preferred shares	**$**	**5,154**	$	10,638	$	12,466
Dividends declared per common share	**$**	**1.78**	$	1.60	$	2.14
Dividends declared on common shares	**$**	**77,115**	$	69,407	$	91,630
Dividend payout ratio		**35.9 %**		154.9 %		90.2 %
Adjusted dividend payout ratio[1]		**34.2 %**		34.9 %		72.9 %

(1) Refer to the Non-GAAP Financial and Other Measures section on page 28.

On December 8, 2022, the Board of Directors declared a quarterly dividend of $0.46 per common share, payable on February 1, 2023, to shareholders of record on January 4, 2023. This quarterly dividend increased by 2% compared with the dividend declared in the previous quarter and is 15% higher compared with the dividend declared in the previous year. The Board also determined that shares attributed under the Bank's Shareholder Dividend Reinvestment and Share Purchase Plan will be made in common shares issued from Corporate Treasury with a 2% discount.

RISK APPETITE AND RISK MANAGEMENT FRAMEWORK

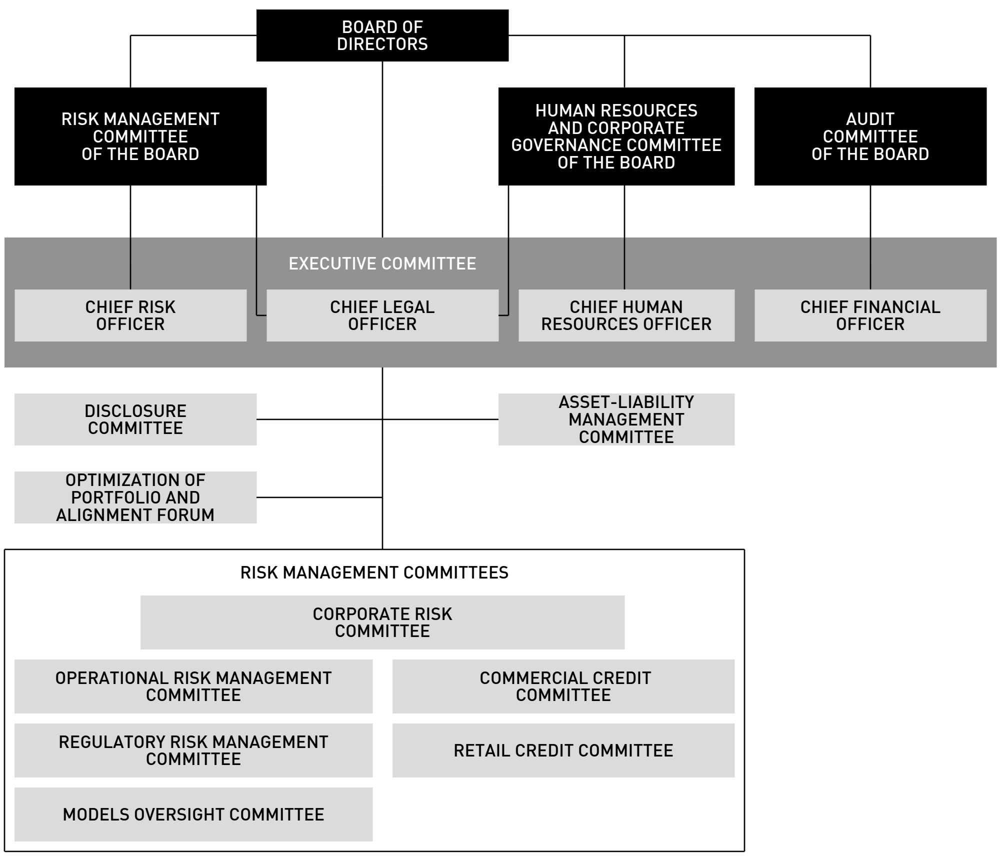
The shaded areas in the following sections of this MD&A represent a discussion on risk management policies and procedures relating to credit, market, and liquidity and funding risks as required under IFRS 7, *Financial Instruments - Disclosures*, which permits these specific disclosures to be included in the MD&A. Therefore, these shaded areas form an integral part of the Consolidated Financial Statements for the years ended October 31, 2022 and 2021.

RISK CULTURE

The Bank's management is dedicated to promoting a risk management culture throughout the Bank. This is achieved by setting a "tone-from-the top" that focuses on the importance of risk culture and delivering this message through a comprehensive risk governance structure and risk appetite framework. Together, these instill a sense of responsibility for risk management throughout the Bank.

RISK GOVERNANCE STRUCTURE

The Board of Directors has ultimate responsibility for risk management. Each year, the Risk Management Committee of the Board reviews the risk appetite and approves the risk management policies. It thereafter delegates to senior management the responsibility for defining their parameters and communicating and implementing them accordingly. The Executive Committee plays an active role through the Corporate Risk Committee in identifying, assessing and managing risk. Business unit managers are responsible for applying the policies and, in collaboration with Corporate Risk Management, keeping the Corporate Risk Committee informed about any changes in risk profile.



Roles and responsibilities of the Board of Directors' committees

The *Board of Directors* ensures that the Bank maintains an appropriate strategic management process that takes risk into consideration. Moreover, based on the certifications and consolidated reports prepared by management, the Board of Directors assesses annually whether the Bank's operations are carried out in an environment with appropriate and sufficient internal controls.

The *Risk Management Committee of the Board* assures whether the Framework has been properly implemented and periodically reviews its effectiveness. The Committee must also ensure that the Framework provides an appropriate risk management process for identifying, measuring, quantifying and managing risks, as well as implementing appropriate risk management policies.

The *Human Resources and Corporate Governance Committee of the Board* is constituted by the Board of Directors to support it in exercising its oversight of human resources risk and driving its corporate governance practices.

The *Audit Committee of the Board* is responsible for supporting the Board of Directors in overseeing the integrity of the Bank's financial statements, the relevance and effectiveness of its internal financial controls, the qualifications and independence of the external auditor and the performance of the internal audit function and of the external auditor.

Roles and responsibilities of other risk management committees of the Bank

The *Executive Committee*, chaired by the President and Chief Executive Officer, is the Bank's ultimate risk management committee. It ensures that the Risk Management Framework is properly implemented. Senior management plays an active role in identifying, assessing and managing risk and is responsible for implementing the necessary framework for the management of all material risks.

The *Disclosure Committee*, chaired by the Chief Financial Officer, is responsible for reviewing and approving the Bank's financial information subject to public or regulatory disclosure.

The *Asset-Liability Management Committee*, chaired by the Chief Financial Officer, is responsible for evaluating the structural risks associated with the Bank's assets and liabilities. The committee reviews and monitors interest rate risk while ensuring adequate returns and liquidity. The committee is also responsible for capital funding.

The *Optimization of Portfolio and Alignment Forum*, co-chaired by the Vice President, Initiative Management and Project Management Office and the Vice President, Solution Delivery, is responsible to carry out portfolio management governance functions, including providing recommendations to prioritize and schedule key strategic programs and projects. The forum also provides ongoing oversight of the overall health status of the portfolios, discusses underlying issues or risks and escalates to the Executive Committee as required

The *Corporate Risk Committee*, chaired by the Chief Risk Officer, is mandated to monitor and oversee the management of all material risks of the Bank. The objective of the committee is to assist the Executive Committee in its ultimate responsibility for risk management. The Corporate Risk Committee ensures that the Bank maintains and adheres to a robust and current suit of risk policies, including a risk appetite framework, and recommends such policies for approval by the Executive Committee.

The *Operational Risk Management Committee*, chaired by the Vice President, Operational Risk, reviews the operational risk management policies and the reports on operational losses incurred. Furthermore, it reviews and approves tools for identifying and assessing the frequency and the impact of operational risks. The Operational Risk Management Committee is responsible for monitoring key operational risks including potential threats. The Operational Risk Management Committee reports into the Corporate Risk Committee.

The *Regulatory Risk Management Committee*, chaired by the Chief Compliance Officer, is responsible for the oversight of the Regulatory Risk Management program. It is mandated to monitor and review all activities related to the regulatory risks compliance to which the Bank may be exposed. The Regulatory Risk Management Committee reports into the Corporate Risk Committee.

The *Retail and Commercial Credit Committees*, chaired by the Chief Risk Officer, are responsible for approving loans within set limits. They also review delinquency on all types of loans, supervise the impaired loan resolution process and ensure the adequacy of the provisions for credit losses. The Credit Committees report into the Corporate Risk Committee.

The *Models Oversight Committee*, chaired by the Chief Risk Officer, is responsible for the Bank's model risk management, overseeing all the stages of the model management life cycle.

RISK MANAGEMENT FRAMEWORK

Risk management is essential for the Bank to achieve its financial objectives while keeping the Bank's risk profile within its stated risk appetite. The main objective of the Bank's Risk Management Framework (the "Framework") is to promote and maintain a strong risk management culture enterprise-wide, enabling senior management to ensure the existence of sound practices necessary for the efficient and prudent management of the Bank's operations and major risks.

The Framework defines the risk governance structure, risk management processes and major risks the Bank may encounter. The internal control structure and corporate governance that promotes sound integrated risk management is also presented in the Framework. The Framework is updated regularly to reflect the Bank's changing business environment.

The main objective of the Framework is to promote and maintain a risk management culture in the Bank's business units and subsidiaries. Other objectives of the Framework include:

- Communicate key principles which support the Bank's approach to managing risk across the organization and establish the appropriate tone for desired behaviours;
- Adopt sound and prudent risk management policies;
- Define the committees' roles and responsibilities regarding risk management;
- Ensure risk management processes align with strategic, financial and capital plans;
- Establish processes to continuously identify, understand and assess material risks as well as internal control mechanisms.

The Framework outlines the Bank's process for identification of material risks. This process is achieved using a central risk registry that is applicable to the entire enterprise. By using a common taxonomy, the risk registry facilitates risk-related discussions throughout the Bank. Tolerances are established within the Framework for each identified material risk.

RISK APPETITE

Risk taking is a necessary part of the Bank's business. As such, its business strategies incorporate decisions regarding the risk/reward trade-offs the Bank is willing to make and the means with which it will manage and mitigate those risks. The Bank has determined a risk appetite, which is defined in the Risk Appetite Framework Policy, and continuously attempts to maintain a balance between its risk appetite and risk capacity. Risk Appetite is dynamic and may be influenced by changes in the regulatory and macroeconomic environments. The Board of Directors is responsible for the annual review and approval of the Bank's risk appetite.

Risk appetite is defined as the risk level that the organization is prepared to accept to achieve its financial and strategic objectives. It is defined by business niche, type and level of risk, performance objectives, capital, liquidity, and external ratings. It is achieved through the imposition of limits and thresholds on various key risk indicators to ensure that the Bank's risk profile remains in line with its risk appetite.

Main objectives of the Risk Appetite Framework include:

- Communicate the Bank's expectations regarding acceptable risk levels in the pursuit of its strategic and business objectives;
- Align with the Bank's strategic, financial and capital plans to ensure coherence between the processes.

INTEGRATED STRESS TESTING PROGRAM

Stress testing is a risk management technique that helps the Bank understand and assess its vulnerability and resilience to exceptional but plausible events. As a forward-looking tool, stress testing complements other quantitative risk management techniques and is used by senior management for strategic decision making. Stress testing is a fundamental part of the Bank's risk management and risk appetite framework and is incorporated in the Bank's ICAAP. As such, it helps in setting and achieving internal capital targets that are consistent with the Bank's strategic plan, risk profile and operating environment.

In developing scenarios, the Bank's enterprise-wide stress testing program brings together the views of experts from various departments, including Economic Research, Corporate Finance, Corporate Treasury and Corporate Risk Management. These experts evaluate scenarios that display a range of severities, including scenarios that challenge the viability of the Bank (reverse stress testing).

The Corporate Risk Committee oversees the execution of the stress testing program, including the design of scenarios and contingency planning. The results are reviewed by Corporate Risk Committee and presented to the Board, which is responsible for the overall stress testing program.

CRISIS RECOVERY PLAN

The Bank maintains a Crisis Recovery Plan that describes a range of actions to be taken in the event of a financial stress: capital or liquidity situations. The primary goal of such a Plan is to develop a list of possible actions that would enable the Bank to respond promptly to a wide range of internal and external stresses, to return to normal operating conditions as fast as possible and maintain the confidence of its stakeholders. This Plan is reviewed and approved annually by the Board of Directors.

FUNCTIONS SUPPORTING RISK MANAGEMENT

The following table presents the Bank's corporate control, which includes several governance functions designed to enhance risk management. The corporate functions are designed in respect of the "three lines of defence" model. This corporate control is divided into three distinct areas: operations, control environment and internal audit:

- *Operations* are key to risk management as business unit managers take risks and are accountable for their ongoing management. Business unit managers are on the front lines to identify and actively manage risks by applying the risk policies and implementing controls and risk mitigation measures. They are the first line of defence.
- The *Control Environment* hinges on five functions: risk management, legal and regulatory compliance risk management, financial certification, human resources and strategic planning. Together these groups provide independent oversight, effective challenge, and independent assessment of risk management practices. The risk management, legal and regulatory compliance management, and select corporate functions constitute the second line of defence of the Bank.
- The *Internal Audit* function also plays a key role as a third line of defence. It is responsible for implementing and maintaining a reliable and comprehensive system to adequately monitor the effectiveness of controls exercised within the different Framework functions.

In addition, regulatory and statutory requirements are an integral part of the Bank's Framework.

OPERATIONS (FIRST LINE OF DEFENCE)	CONTROL ENVIRONMENT (SECOND LINE OF DEFENCE)	INTERNAL AUDIT (THIRD LINE OF DEFENCE)
Business activities and corporate functions	**Risk management and oversight functions**	**Independent assurance function**
- Policy implementation - Risk identification, detection and management - Disclosure of risks and losses - Control implementation - Business continuity plans - Application of the regulatory risk management framework	- Designing and developing policies and frameworks - Determining risk management thresholds - Development of risk measurement and self-assessment tools - Risk reporting and disclosure - Assessment of business continuity plans - Independent review of risk management practices.	- Providing an independent assurance to the Executive Committee and to the Board of Directors on the effectiveness of risk management practices

RISK MANAGEMENT PROCESS

The Bank's risk management processes are closely tied to the strategic planning process from which the Bank's strategic and business plans are derived. These processes converge during the development of the Bank's integrated financial plan. Policies approved by the Board are implemented by the business units and their application is monitored by the appropriate risk management committees.

Risk management is carried out across departments by various business unit managers who actively oversee the management of risks related to their activities, as well as by risk management and internal control professionals.

CREDIT RISK MANAGEMENT

Credit risk

Credit risk is the risk of a financial loss occurring if a counterparty (including a debtor, an issuer or a guarantor) in a transaction fails to fully honour its contractual or financial obligations towards the Bank.

Credit risk management

Credit risk management is independent of operations, thus protecting the independence and integrity of risk assessment.

The Credit Committees and the Corporate Risk Committee are responsible for operational oversight of overall credit risk management. The Chief Risk Officer report, presented quarterly to the Executive Committee and to the Risk Management Committee of the Board, provides a summary of key information on credit risks. The credit risk management policies adopted by the Bank provide for appropriate risk assessments. These policies cover approval of credit applications by authority level, assignment of risk ratings, management of impaired loans, establishment of individual and collective allowances, and risk-based pricing. The policies are periodically reviewed and approved by the Risk Management Committee of the Board.

Through its Credit Risk Management Department, the Bank monitors its credit portfolios on a qualitative and quantitative basis through: (i) mechanisms and policies governing the review of the various types of files; (ii) risk rating systems; and (iii) pricing analysis.

The Bank uses expert systems to support the decision-making process for most underwriting of consumer credit, residential mortgage loans and credit cards, as well as for small commercial loans. Regarding commercial loans, applications are also analyzed on a case-by-case basis by specialized teams.

The Bank has various risk management tools at its disposal. These namely include a 19-level risk rating system used to evaluate all types of commercial credit. Above a specific rating, files are under credit watch and are managed per specific procedures. Regarding portfolio quality, a loan or a group of loans are impaired and impairment losses are incurred if there is objective evidence of impairment as a result of one or more loss events that occurred after the initial recognition of the asset and that has an impact on the estimated future cash flows of the loan or a group of loans that can be reliably estimated.

The Bank's risk management 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 function. Each month, the Bank's Retail Credit Committee reviews analyses on various credit metrics to identify risks and trends that might affect the retail portfolios. The Bank's Commercial Credit Committee also reviews material impaired loans as well as analyses on other impaired loans where payment is past due by 90 days or more. Collection processes are centralized and are based on specialized expertise. Complex questions on measurement methodologies and assumptions are reviewed by a group of experts from various functions. Furthermore, the inputs and assumptions used to determine expected credit losses are reviewed on a regular basis by the risk management function.

Individual allowances for losses are established to adjust the carrying amount of material impaired loans to the present value of estimated expected future cash flows. Allowances for impaired loans to businesses are revised on an individual basis, as part of a continuous process.

A collective allowance is calculated for all individually insignificant loans for which no individual impairment tests are performed. In addition, a collective allowance is calculated for loans that have been assessed for impairment individually and found not to be impaired. These loans are assessed collectively, in groups of assets with similar risk characteristics, to determine whether a provision should be made due to incurred but not identified loss events. To establish collective allowances, the Bank uses credit risks models based on the internal risk rating of credit facilities. The key parameters driving these models are:

- Probability of default (PD): An estimated percentage that represents the likelihood of default within a given time period of an obligor for a specific rating grade or for a specific pool of exposure.
- Exposure at default (EAD): An amount expected to be owed by an obligor at the time of default.
- Loss given default (LGD): An estimated percentage of EAD that is not expected to be recovered during the collections and recovery process.

Forward-looking macroeconomic factors such as gross domestic product (GDP), unemployment rates, housing price indices and S&P/TSX index forecasts are also considered for these risk parameters.

Each credit facility is assigned an LGD rate that is largely driven by factors that impact the extent of losses anticipated in the event the obligor defaults. These factors mainly include seniority of debt, collateral security, and the industry sector in which the obligor operates. Estimated LGD rates draw primarily on internal loss experience, supplemented by external data. EAD is estimated based on the current exposure to the obligor and the possible future changes in that exposure driven by factors such as the nature of the credit commitment. Estimates of PD, LGD and EAD are validated by an independent validation team within the Bank, on a regular basis.

Diversification is one of the fundamental principles of risk management. To this effect, the Credit Policy establishes guidelines to limit concentration of credit by counterparty and sector of activity, and identifies sectors considered too risky and thus outside the Bank's risk appetite. Concentration of credit risk may also exist where several counterparties engaged in similar activities are in the same geographic area or have comparable economic characteristics and where their ability to meet contractual obligations could be compromised by changing economic, political or other conditions.

Derivative-related credit risk

Most of the Bank's credit concentration in derivatives lies with financial institutions, primarily Canadian banks. Credit risk in derivative transactions arises from a potential counterparty default on contractual obligations when one or more transactions have a positive replacement cost for the Bank. Replacement cost represents what it would cost to replace transactions at prevailing market conditions in the event of a default. The credit equivalent amount arising from a derivative transaction is defined as the sum of the replacement cost plus an estimated amount reflecting the potential change in market value of the transaction through to maturity.

Derivative-related credit risk is generally managed using the same credit approval, limit and monitoring standards as those used for managing other credit transactions. Moreover, the Bank negotiates derivative master netting agreements with all significant counterparties with which it contracts. These agreements reduce credit risk exposure in the event of a default by providing for the simultaneous netting of all transactions with a given counterparty. These contracts also allow the Bank to require the counterparty to pay, collateralize or guarantee the current market value of its positions when the value exceeds a given threshold. For all significant financial counterparties, the Bank actively manages these rights and requires collateral to be posted daily.

Wrong-way risk

Wrong-way risk is the risk that exposure to a counterparty or obligor is adversely correlated with the credit quality of that counterparty. There are two types of wrong-way risk:

- Specific wrong-way risk, which exists when our exposure to a specific counterparty is positively and highly correlated with the probability of default of the counterparty due to the nature of our transactions with them (e.g., loan collateralized by shares or debt issued by the counterparty or a related party); and
- General wrong-way risk, which exists when there is a positive correlation between the probability of default of counterparties and general macroeconomic or market factors. This typically occurs with derivatives (e.g., the size of the exposure increases) or with collateralized transactions (e.g., the value of the collateral declines).

Exposure to credit risk

The amount that best represents the Bank's exposure to credit risk as at October 31, 2022 and 2021 without factoring in any collateral held or other credit enhancements, represents the sum of financial assets in the Bank's consolidated balance sheet, plus credit commitments as set out below.

TABLE 20
EXPOSURE TO CREDIT RISK

In millions of dollars		2022		2021
Financial assets, as stated in the consolidated balance sheet[1]	$	49,618	$	43,975
Credit commitments[2]		6,224		6,038
	$	55,842	$	50,013

(1) Excluding equity securities.
(2) Excluding credit facilities revocable at the Bank's option totalling $3.9 billion as at October 31, 2022 ($4.0 billion as at October 31, 2021).

Loan portfolio mix

The Bank's loan portfolio consists of personal loans, residential mortgage loans and commercial loans, including customers' liabilities under acceptances. The personal loan portfolio includes a range of consumer credit products such as investment loans, home-equity lines of credit (HELOCs), credit cards, personal lines of credit and other consumer loans. The residential mortgage loan portfolio includes retail mortgage loans secured by one- to four-unit dwellings. The commercial loan portfolio, including customers' liabilities under acceptances, comprises commercial loans in specific markets where the Bank can efficiently compete across Canada, as well as in the U.S.

Personal loans and residential mortgage loans represented 52% of the Bank's total loan portfolio as at October 31, 2022, compared with 58% a year ago. Commercial loans accounted for 48% of total loans as at October 31, 2022, compared with 42% a year ago.

Industry distribution of commercial loans

The commercial loan portfolio covers a wide range of industries, with no specific industry accounting for more than 17% of total loans and acceptances as at October 31, 2022 (17% as at October 31, 2021), demonstrating good diversification and risk management.

TABLE 21

DISTRIBUTION OF LOANS BY CREDIT PORTFOLIO AND INDUSTRY

In thousands of dollars

2022

	Gross amount of loans	Gross amount of impaired loans	Allowances on impaired loans (Stage 3)	Net impaired loans[1]	Provision for credit losses[2]
Personal	$ 3,266,635	$ 12,826	$ 3,476	$ 9,350	$ 16,134
Residential mortgage	16,157,480	47,560	2,591	44,969	2,583
Commercial					
Real estate, renting and lease	6,559,118	29,254	3,999	25,255	3,508
Construction[3]	4,702,534	18,958	9,076	9,882	15,777
Wholesale and retail	3,575,500	1,456	1,456	—	5,705
Transportation and communication	1,083,791	5,132	632	4,500	(3,534)
Other services and government	799,803	15,149	12,836	2,313	6,497
Financial services	632,390	10,340	9,733	607	7,653
Manufacturing	346,637	2,918	1,451	1,467	1,859
Public utilities	179,029	6,096	300	5,796	—
Transformation and natural resources	127,514	436	85	351	264
Agriculture	93,519	7,412	6,529	883	902
Other	57,111	152	140	12	(470)
	18,156,946	97,303	46,237	51,066	38,161
Total	$ 37,581,061	$ 157,689	$ 52,304	$ 105,385	$ 56,878

2021

	Gross amount of loans	Gross amount of impaired loans	Allowances on impaired loans (Stage 3)	Net impaired loans[1]	Provision for credit losses[2]
Personal	$ 3,681,341	$ 16,201	$ 9,471	$ 6,730	$ 27,106
Residential mortgage	15,856,999	58,192	4,209	53,983	4,212
Commercial					
Real estate, renting and lease	5,642,961	36,595	4,780	31,815	394
Construction[3]	3,238,936	28,214	2,747	25,467	3,350
Wholesale and retail	2,164,462	21,861	17,898	3,963	(6,204)
Transportation and communication	1,006,757	14,738	4,095	10,643	(804)
Other services and government	741,856	19,362	9,904	9,458	4,434
Financial services	503,125	26	1	25	(4)
Manufacturing	312,593	14,459	2,361	12,098	(661)
Public utilities	216,951	33,516	26,488	7,028	18,259
Transformation and natural resources	119,189	134	43	91	(900)
Agriculture	82,666	17	10	7	576
Other	76,927	7,595	4,985	2,610	(258)
	14,106,423	176,517	73,312	103,205	18,182
Total	$ 33,644,763	$ 250,910	$ 86,992	$ 163,918	$ 49,500

(1) Net impaired loans are calculated as gross impaired loans less allowances for credit losses on impaired loans.
(2) Recorded in the consolidated statement of income.
(3) Including loans to developers of revenue-generating properties.

Geographic distribution of loans

The Bank operates across Canada and in the U.S. As at October 31, 2022, the geographic distribution of total loans was as follows: 8% in British Columbia and Territories, 9% in Alberta and the Prairies, 31% in Ontario, 38% in Quebec, 3% in the Atlantic provinces and 11% in the United States.

TABLE 22
GEOGRAPHIC DISTRIBUTION OF LOANS BY CREDIT PORTFOLIO

In thousands of dollars, except percentage amounts

2022

	Personal loans	Residential mortgage loans	Commercial loans	Gross amount of loans	Gross amount of loans (in %)
British Columbia and Territories	$ 528,176	$ 1,654,076	$ 665,967	$ 2,848,219	7.6 %
Alberta and Prairies	295,747	2,307,079	926,134	3,528,960	9.4
Ontario	1,186,462	6,029,953	4,272,272	11,488,687	30.6
Quebec	1,167,058	5,533,430	7,701,122	14,401,610	38.3
Atlantic provinces	89,192	632,942	286,576	1,008,710	2.7
United States	—	—	4,304,875	4,304,875	11.5
	$ 3,266,635	$ 16,157,480	$ 18,156,946	$ 37,581,061	100.0 %

2021

	Personal loans	Residential mortgage loans	Commercial loans	Gross amount of loans	Gross amount of loans (in %)
British Columbia and Territories	$ 537,945	$ 1,608,768	$ 700,400	$ 2,847,113	8.5 %
Alberta and Prairies	327,323	2,123,293	825,978	3,276,594	9.7
Ontario	1,328,564	5,728,980	3,684,226	10,741,770	31.9
Quebec	1,369,153	5,867,391	6,553,743	13,790,287	41.0
Atlantic provinces	118,356	528,567	411,431	1,058,354	3.1
United States	—	—	1,930,645	1,930,645	5.7
	$ 3,681,341	$ 15,856,999	$ 14,106,423	$ 33,644,763	100.0 %

Measurement uncertainty of expected credit loss estimates

The Bank updates quarterly its forward-looking economic scenarios to assess its allowances for credit losses. The three scenarios, "base", "downside" and "upside", were probability weighted as part of the Bank's approach to determining the expected credit losses as at October 31, 2022 and are further described in Note 6 to the Consolidated Financial Statements.

The allowance for credit losses is sensitive to the inputs used in models, including macroeconomic variables used in the forward-looking scenarios and their respective weights. The comprehensive impact of recent macro-economic developments on the Canadian and U.S. economies is uncertain. Therefore, it remains difficult to predict whether these factors may result in write-offs in the future, or if the Bank will need to recognize additional increases or release portions of its allowances for credit losses in subsequent periods.

Provision for credit losses

Total provision for credit losses of $56.9 million increased by $7.4 million compared with the year ended October 31, 2021, mainly as a result of higher provisions on performing loans, partly offset by lower provisions on impaired loans. Releases of allowances on performing loans had also been recorded in the year ended October 31, 2022

The provision for credit losses on performing loans was $31.5 million for the year ended October 31, 2022 compared with $7.6 million for the year ended October 31, 2021, mainly as a result of higher provisions on performing commercial loans due to volume growth and less favourable forward-looking macro-economic scenarios. The prior year also included releases of allowances on commercial loans of $11.1 million. This was partly offset by lower provisions on performing personal loans, as the Bank had recorded a $19.3 million provision in 2021 in relation to its investment loan portfolio, following the Bank's strategic review. Provisions on performing residential mortgage loans remained low.

The provision for credit losses on impaired loans of $25.3 million decreased by $16.6 million for the year ended October 31, 2022 compared with the year ended October 31, 2021, due to lower provisions in the commercial and residential mortgage loan portfolios.

TABLE 23
PROVISION FOR CREDIT LOSSES

In thousands of dollars, except percentage amounts	2022	2021
Personal loans		
Performing (Stage 1 and 2)	$ 3,923	$ 17,822
Impaired (Stage 3)	12,211	9,284
	16,134	27,106
Residential mortgage loans		
Performing (Stage 1 and 2)	2,154	835
Impaired (Stage 3)	429	3,377
	2,583	4,212
Commercial loans(1)		
Performing (Stage 1 and 2)	25,464	(11,086)
Impaired (Stage 3)	12,697	29,268
	38,161	18,182
Total loans		
Performing (Stage 1 and 2)	31,541	7,571
Impaired (Stage 3)	25,337	41,929
Provision for credit losses	$ 56,878	$ 49,500
As a % of average loans and acceptances	0.16 %	0.15 %

(1) Including customers' liabilities under acceptances.

Allowances for credit losses

Allowances for loan losses amounted to $193.5 million as at October 31, 2022, a decrease of $1.6 million compared with October 31, 2021. Allowances for loan losses on performing loans amounted to $141.2 million as at October 31, 2022, up $33.1 million compared with October 31, 2021, mainly as a result of higher provisions on commercial loans due to volume growth and less favourable forward-looking macro-economic scenarios. Allowances for loan losses on impaired loans of $52.3 million decreased by $34.7 million compared with October 31, 2021, mainly due to write-offs of previously provisioned accounts in the commercial loan portfolio.

TABLE 24
ALLOWANCES FOR CREDIT LOSSES (ACL)

In thousands of dollars	2022	2021
Allowances for loan losses		
Personal	$ 51,264	$ 53,086
Residential mortgages	15,994	15,404
Commercial	126,218	126,566
Total allowances for loan losses	193,476	195,056
Allowances for off-balance sheet exposures losses	7,675	7,522
Total allowances for credit losses	$ 201,151	$ 202,578
ACL on performing loans (Stage 1 and 2)	$ 141,172	$ 108,064
ACL on impaired loans (Stage 3)	52,304	86,992
Total allowances for loan losses	$ 193,476	$ 195,056

Impaired loans

The Bank's definition of impairment follows its definition of debtor default. Debtor default occurs in the context of one or both of the following events:

- The Bank considers the obligor unlikely to pay their credit obligations to the banking group in full, without recourse to actions such as realizing a security (if held);
- The obligor is more than 90 days past due on any credit obligation to the banking group. Overdrafts are considered past due once the client has breached the authorized limit or been advised of a limit lower than current outstanding.

Gross impaired loans amounted to $157.7 million as at October 31, 2022, down $93.2 million or 37% compared with October 31, 2021, mainly due to favourable repayments and write-offs of previously provisioned accounts in the commercial loan portfolio. See Note 6 to the Consolidated Financial Statements for additional information.

TABLE 25

IMPAIRED LOANS

In thousands of dollars, except percentage amounts	2022	2021
Gross impaired loans (GIL)		
Personal	$ 12,826	$ 16,201
Residential mortgages	47,560	58,192
Commercial	97,303	176,517
	$ 157,689	$ 250,910
Allowances for loan losses on impaired loans (Stage 3)		
Personal	$ (3,476)	$ (9,471)
Residential mortgages	(2,591)	(4,209)
Commercial	(46,237)	(73,312)
	$ (52,304)	$ (86,992)
Net impaired loans		
Personal	$ 9,350	$ 6,730
Residential mortgages	44,969	53,983
Commercial	51,066	103,205
	$ 105,385	$ 163,918
Impaired loans as a % of loans and acceptances		
Gross	0.42 %	0.75 %
Net	0.28 %	0.49 %

TABLE 26

GEOGRAPHIC DISTRIBUTION OF IMPAIRED LOANS BY CREDIT PORTFOLIO

In thousands of dollars, except percentage amounts

2022

	Personal loans	Residential mortgage loans	Commercial loans	Gross amount of impaired loans	Gross amount of impaired loans (in %)
British Columbia and Territories	$ 605	$ 348	$ 2	$ 955	0.6 %
Alberta and Prairies	1,204	5,933	7,691	14,828	9.4
Ontario	3,514	6,328	8,672	18,514	11.7
Quebec	7,364	33,939	74,060	115,363	73.2
Atlantic provinces	139	1,012	—	1,151	0.7
United States	—	—	6,878	6,878	4.4
	$ 12,826	$ 47,560	$ 97,303	$ 157,689	100.0 %

2021

	Personal loans	Residential mortgage loans	Commercial loans	Gross amount of impaired loans	Gross amount of impaired loans (in %)
British Columbia and Territories	$ 480	$ 1,094	$ 32,236	$ 33,810	13.5 %
Alberta and Prairies	2,079	6,130	16,019	24,228	9.7
Ontario	4,963	4,347	10,053	19,363	7.7
Quebec	7,345	45,888	116,133	169,366	67.5
Atlantic provinces	1,334	733	—	2,067	0.8
United States	—	—	2,076	2,076	0.8
	$ 16,201	$ 58,192	$ 176,517	$ 250,910	100.0 %

Insurance and guarantees held in respect of loan portfolios

A significant proportion of the Bank's residential mortgage loan portfolio is insured by the CMHC, or by Sagen and Canada Guaranty Mortgage Insurance Company (the Mortgage Insurers). In addition, the Bank's loan portfolios are to a large extent, secured by assets pledged as collateral by borrowers or, for finance lease receivables, directly owned by the Bank.

Mortgage Insurers offer mortgage loan insurance programs which reduce the overall credit risk associated with the residential mortgage loan portfolio. The Bank also insures pools of mortgage loans through a specific CMHC insurance program. Moreover, by maintaining insured residential mortgage loans, the Bank retains its capacity to engage in securitization operations to finance its activities at optimal cost and manage its cash resources. By the end of fiscal 2022, 56% of residential mortgage loans secured by one- to four-unit dwellings were insured, compared to 57% a year ago. The Bank also holds guarantees in respect of the real estate property for the other conventional mortgage loans, including HELOCs. In accordance with legal requirements, the non-amortizing HELOC component of a residential mortgage is limited to a maximum authorized loan-to-value ratio of 65%. Additional mortgage credit (beyond the loan-to-value ratio limit of 65% for HELOCs) can be extended to a borrower. However, the loan portion over the 65% loan-to-value ratio threshold must be amortized. The total loan value of the Bank's conventional mortgage loans never exceeds 80% of the initially estimated value of the property, in accordance with legal requirements.

As at October 31, 2022, the estimated average loan-to-value ratio was 62% for insured residential mortgage loans and 48% for uninsured residential mortgage loans, including the authorized limit for related HELOCs.

In accordance with the Bank's credit risk management policies, the residential mortgage and HELOC portfolios are regularly reviewed to ensure that the level of risk associated with these portfolios remains in line with the Bank's risk appetite and its strategic objectives. As part of this oversight, the portfolios are stressed to reflect the effects of a potential economic downturn creating a decline in property values. Due to the large portion of insured loans and the relatively low loan-to-value ratio of uninsured mortgage loans, the Bank believes that loan losses under such a scenario would remain largely manageable.

Commercial lending is generally collateralized, secured by a range of assets such as real estate, equipment, inventories, receivables and the cash flows they generate. Within Commercial lending, Commercial Real Estate financing comprises construction and term lending and is secured by real property such as residential multi-family (condos, rental), commercial rental properties, retail properties and other asset classes. Recourse to shareholders or other parties is also available. In general, the value of these loans represents 60% to 75% of the initial estimated value of the property (depending on asset class); in the case of construction financing this is represented by the stabilized or "as-completed" value.

The Bank's personal loan portfolio consists mainly of investment loans. The loan underwriting process for those specifically takes into consideration client's credit risk. Authorizations are based on clients' loan servicing ability and overall financial strength, mainly based on credit scoring. In addition, loans are collateralized by a comprehensive list of eligible mutual and segregated funds. Stricter credit criteria must be met as loan-to-value ratios increase. For loans where disbursements are significant, additional personal income and net worth information are usually required.

Loan underwriting for HELOCs allows for the assessment of client credit risk. In addition, real estate assets and other assets collateralize these loans. Finally, 6% of the Bank's personal loan portfolio as at October 31, 2022 consisted of student loans and loans granted under the Immigrant Investor Program, which are guaranteed by the federal or provincial government.

Guarantees held on other financial instruments

When entering activities such as reverse repurchase agreements and derivative transactions, the Bank requires counterparties to pledge collateral that will protect the Bank from losses in the event of a counterparty's default. Collateral transactions are conducted under terms that are usual and customary in standard trading activities. The following are examples of general terms and conditions on collateral assets that the Bank may sell, pledge or repledge:

- The risks and rewards of the pledged assets reside with the pledger;
- The pledged asset is returned to the pledger when the necessary conditions have been satisfied;
- The right of the pledgee to sell or repledge the asset is dependent on the specific agreement under which the collateral is pledged; and
- If there is no default, the pledgee must return the comparable asset to the pledger upon satisfaction of the obligation.

As at October 31, 2022, the approximate market value of collateral pledged to the Bank related to assets purchased under reverse repurchase agreements was $6.0 billion ($6.7 billion as at October 31, 2021).

As at October 31, 2022, the approximate market value of collateral pledged to the Bank related to derivatives was $528.8 million ($42.1 million as at October 31, 2021).

MARKET RISK MANAGEMENT

Market risk is the financial loss that the Bank may incur due to unfavourable fluctuations in the value of financial instruments as a result of changes in the underlying factors used to measure them, such as interest rates, currency exchange rates or equity prices. This risk is inherent to the Bank's financing, investment, trading and asset and liability management (ALM) activities.

Interest rate risk is created by the potential adverse impact of interest rate movements. The section covering ALM activities describes the global management of interest rate risk. Structural interest rate risk arises mainly from the differences in maturity dates or re-pricing dates of balance sheet and off-balance sheet items, as well as from the options embedded in certain banking products, such as loan repayment and deposit redemption clauses.

Foreign exchange risk is the risk of losses from adverse fluctuations in currency exchange rates. Assets and liabilities that are denominated in foreign currencies have foreign exchange risk.

Equity price risk represents financial losses that the Bank may incur subsequent to adverse fluctuations in equity prices or stock market instability in general, as well as from options embedded in certain banking products, such as equity-linked GICs.

Market risk governance: policies and standards

The primary objective of effective market risk management is to measure significant market risks and ensure that these risks stay within the Bank's accepted risk tolerance thresholds. The Bank has thus adopted policies and limits to oversee exposure to market risks arising from its trading, investment and ALM activities and related management practices. The policies and limits establish the Bank's management practices pertaining to various risks associated with its capital markets and treasury activities. These policies and limits are approved by the Executive Committee and the Risk Management Committee of the Board at least annually, to ensure their alignment to principles, objectives and management strategies.

Detailed risk level and limit monitoring reports are produced regularly and are presented as follows:

- Daily for investment portfolios, to Corporate Risk Management and portfolio managers;
- Weekly for structural interest rate risk, to Corporate Risk Management, Corporate Treasury managers and Executive Committee;
- Monthly for structural foreign-exchange risk, to Corporate Risk Management, Corporate Treasury managers and Executive Committee; and,
- Quarterly, to the Executive Committee and the Risk Management Committee of the Board.

Market risk assessment and management

Market risk assessment is based on the key risk drivers in the business and can include, per the complexity and nature of its activities:

- Limits on notional amount;
- Expected shortfall; and
- Stress testing and other sensitivity measures.

Limits on notional amount

The Bank sets limits that are consistent with its business plan and its risk appetite for market risk. In setting limits, the Bank considers market volatility, market liquidity, organizational experience and business strategies. Limits are set at the aggregate Bank level and then are apportioned to the different lines of business and at the portfolio level and are monitored daily.

Expected shortfall

The Bank's reference market risk measure is the expected shortfall. The expected shortfall represents the average trading loss beyond a 97.5% confidence interval. While statistically equivalent to a 99% Value at Risk (VaR) under a normal distribution, the expected shortfall puts more emphasis on tail risk than the VaR measure. For an historical expected shortfall with 300 scenarios, this represents the average of the seven worst days of trading for the Bank. Expected shortfall is calculated daily for all financial market activities. These calculations are conducted for each specific business unit and each risk factor, as well as for the entire trading portfolio. The theoretical change in profits and losses is generated using the daily price movements, and on the assumption, that there is no change in the composition of the trading portfolio.

Stress testing and other sensitivity measures

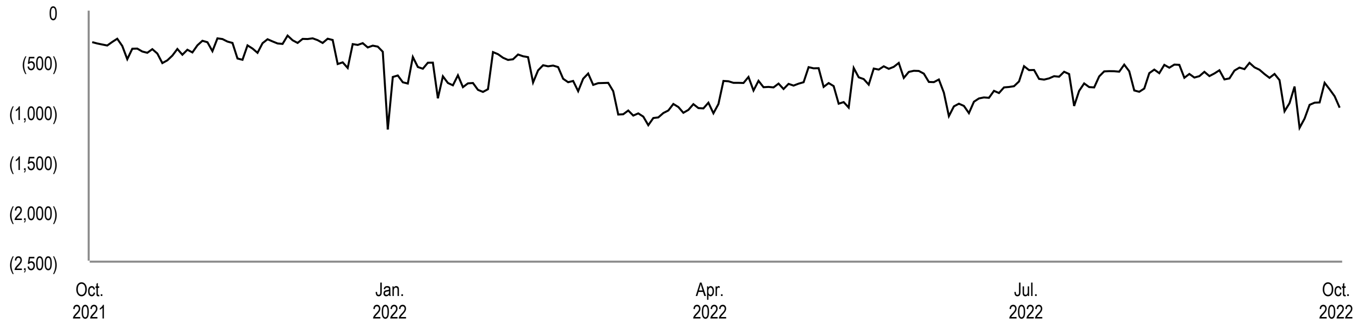
Parallel to expected shortfall calculations, the impact of stress tests on profits and losses is assessed for the trading and investment portfolios and the ensuing results are used to assess the impact of exceptional but plausible market situations. Stress tests constitute a complementary risk measure to expected shortfall and are designed to provide an estimate of the worst losses the Bank could incur under multiple scenarios. The Bank's stress testing program combines historical and hypothetical scenarios to simulate the impact of significant changes in risk factors on the portfolios' market value. The Bank also produces daily sensitivity measurements, including measurements of volatility and parallel yield curve shifts on specific business units and the Capital Markets group.

Trading activities

Trading activities are aligned with the needs of the Bank and its customers. The market risk associated with trading activities ensues from activities for which the Bank acts as the principal or agent for its customers. The graph below presents the daily total expected shortfall of the trading portfolio for the 2022 fiscal year.

DAILY TRADING EXPECTED SHORTFALL

For the year ended October 31, 2022 (in thousands of dollars)



Asset and liability management activities

The purpose of ALM activities is to control the interest rate risk in the banking book (IRRBB), which corresponds to the potential impact of interest rate movements on the Bank's net interest income (NII) and economic value of equity (EVE).

IRRBB management requires monitoring of three distinct portfolio groups:

- Banking activities, which are affected by customer choices, product availability and term-dependent pricing strategies;
- Investment activities, comprising marketable securities and institutional funding and ;
- A hedging portfolio that helps the Bank maintain overall interest rate risk within strict internal limits.

Dynamic management of IRRBB is intended to enhance the Bank's profitability by maximizing NII and EVE, while considering the risk appetite established by the Board.

To attain this objective, various treasury and derivative instruments, mainly interest rate swaps, are used to modify the interest rate characteristics of the instruments underlying the Bank's balance sheet and specifically manage mismatches between asset and liability repricing dates, expected cash flows and reference rates. The risk inherent in options embedded in loan and deposit products such as loan prepayment rates, term deposit redemption rates, expected funding ratios on mortgage rate commitments and non-maturity product behaviour are also considered. These product behaviours are modelled considering historical observations and product pricing through a formal process.

To ensure sound management of IRRBB, duration and repricing gap reports are produced weekly. Interest rate simulations are also performed to assess the impact of various interest rate variation scenarios on NII and on EVE. One of the simulation exercises consists of subjecting the Bank's balance sheet to a sudden parallel and sustained 100 bps increase and decrease in interest rates, as shown in the table below. The sensitivities shown below represent the Bank's assessment of the change to a hypothetical base case NII, assuming a static balance sheet and no management actions. Other dynamic simulations are performed on a regular basis to assess the impact of market rate scenarios on NII and EVE. The simulations includes maturities, renewals, and new originations, and various behavioural assumptions, including the prepayment of mortgages.

Governance

IRRBB is globally managed by the Bank's Corporate Treasury. The Asset-Liability Management Committee (ALCO) and the Executive Committee provide ongoing governance of IRRBB measurement and management through risk policies, limits, operating standards and other controls in accordance with the Treasury and Capital Market Risks Policy. This policy, which is approved by the Risk Management Committee of the Board, defines limits relative to the measurement of the economic value of shareholders' equity and net interest income risks.

Risk limits are based on measures calculated by simulating the impact of immediate and sustained parallel movements of 100 bps in rates for all maturities. NII risk measures the impact on NII from interest rate movements over the next 12 months. EVE risk measures the net impact on the present value of balance sheet and off-balance sheet assets and liabilities.

IRRBB exposures are reviewed regularly by the ALCO, which is responsible for monitoring the Bank's positioning regarding anticipated interest rate movements. In addition, risk monitoring reports are presented regularly to the Corporate Risk Committee and the Risk Management Committee of the Board. All behavioural models used to measure IRRBB are updated periodically and are subject to independent oversight and validation by the Integrated Risk Management team and to ALCO's approval.

Current interest rate environment

Central banks have increased interest rates in most financial markets as economic activity drove higher inflation across the world. The current level of interest rates remains high and further rate hikes are expected due to the current high level of inflation, although the pace of hikes may slowdown. As such, compressed margins between Prime-linked rate assets and hedging derivatives may persist and continue to challenge interest rate margins performance until the end of the Bank of Canada tightening cycle. A recession in North America in 2023 is becoming more probable and lower economic activity may challenge the profitability of the banking sector. These factors are considered as part of our strategic planning.

TABLE 27

SENSITIVITY ANALYSIS OF THE INTEREST RATE RISK OF THE BANKING BOOK

In thousands of dollars	**2022[1]**		2021[1]	
	Effect on NII[2]	**Effect on EVE[3]**	Effect on NII[2]	Effect on EVE[3]
Change in interest rates				
Increase of 100 basis points	**$ 3,189**	**$ (29,762)**	$ 15,635	$ (33,774)
Decrease of 100 basis points	**$ (4,217)**	**$ 30,734**	$ (1,989)	$ 29,315

(1) As of January 1, 2022, the Bank adopted OSFI's revised Guideline B-12, *Interest Rate Risk in the Banking Book*. The amounts presented as at October 31, 2021 have been modified from those previously reported to conform to the revised guideline requirements.

(2) Over the next 12 months.

(3) Net of income taxes.

Foreign exchange risk

Structural foreign exchange risk

Foreign exchange risk is monitored using notional limits and other sensitivity analysis for trading operations as described above. The Bank is exposed to foreign exchange risk mainly through its investment in a U.S. foreign operation. These exposures can have an impact on earnings, shareholders' equity and capital ratios. The Bank uses derivative financial instruments to minimize this impact. When the Canadian dollar fluctuates against the U.S. dollar, unrealized translation gains or losses on the net investment in foreign operations, net of related hedges, impact accumulated other comprehensive income in shareholders' equity. In addition, the Canadian dollar equivalent of risk-weighted assets denominated in U.S. dollars and capital deductions is impacted.

The Bank is also exposed to foreign exchange risk through foreign exchange positions related to commercial activities in its Canadian operations, as well as through positions held to support the supply of products and services in currencies other than the Canadian dollar and through trading operations. In the normal course of business, the Bank uses foreign exchange derivative financial instruments to hedge its exposure to structural foreign exchange risk.

For non-trading activities, as at October 31, 2022, assets and liabilities carried in Canadian entities and denominated in U.S. dollars amounted to $698.3 million ($594.3 million as at October 31, 2021) and $274.5 million ($288.2 million as at October 31, 2021) respectively. As at October 31, 2022, regarding these positions, the effect of a sudden 5% change in foreign exchange rates would have no significant impact on net income and shareholders' equity.

Currencies other than U.S. dollars are generally bought and sold solely to meet specific customer needs. Thus, the Bank has very limited exposure to these currencies. Assets and deposit liabilities in other foreign currencies were primarily denominated in British pounds and Euros and amounted to $21.8 million ($22.4 million as at October 31, 2021) and $11.1 million ($16.9 million as at October 31, 2021) respectively as at October 31, 2022.

Trading activities

The Bank is also exposed to foreign exchange risk as a result of trading activities as discussed above, including with foreign exchange derivative financial instruments.

Equity price risk

The Bank's equity positions consist primarily of Canadian and U.S. publicly traded securities and, thus, portfolio sensitivity generally correlates to Canadian and U.S. stock market performance. A portion of the Bank's equity positions is used to hedge index-linked deposits. In addition, the Bank has equity exposures through its pension plans. As at October 31, 2022, a fluctuation in the stock markets of 10% would have had a $13.7 million impact on the Bank's shareholders' equity ($17.0 million as at October 31, 2021).

LIQUIDITY AND FUNDING RISK MANAGEMENT

Liquidity and funding risk is the possibility that the Bank may not be able to gather sufficient cash resources when required and on reasonable conditions, to meet its financial obligations. Financial obligations include obligations to depositors and suppliers, as well as lending commitments, investments and posting collateral requirements.

The Bank's overall liquidity risk is managed by Corporate Treasury with oversight by Corporate Risk Management and by the Asset-Liability Management Committee, and ultimately by the Risk Management Committee of the Board in accordance with the policies governing funding and liquidity and collateral management. The main purpose of these policies is to ensure that the Bank has sufficient liquidity resources to meet its current and future financial obligations, under both normal and stressed conditions.

The Bank's balance sheet is well diversified, both in terms of assets and funding sources. To maintain sound diversification, funding sources are subject to concentration limits developed and monitored by Corporate Risk Management. Those limits are established, taking into consideration, among other things, the volatility of the funding sources. Of note, the Bank's retail and commercial deposits are largely composed of term deposits, which significantly improve their quality regarding liquidity risk.

The stability of the funding sources is also taken into consideration when measuring liquidity requirements under the Bank's methodology. Run-off factors used in the liquidity stress tests are derived from the historical stability of the various funding sources. The monitoring process is conducted daily by Corporate Risk Management and is overseen by the Asset-Liability Management Committee and the Risk Committee of the Board of Directors.

As a complement to stress tests, the Bank has developed internal models to forecast potential outflows on non-maturing deposits, which are used in liquidity gap reports and funding plans. Behavioural and modeling assumptions are regularly reviewed by Corporate Treasury according to the model management cycle, validated by Corporate Risk Management and approved by the Asset-Liability Management Committee.

The Bank also conducts additional liquidity stress-test scenarios monthly. Outflows on non-maturing deposits and redeemable term deposits are stressed in different scenarios and over different time horizons to provide management with various views on the Bank's liquidity. Results are reported to the Asset-Liability Management Committee monthly.

The Bank's liquid assets held to satisfy liquidity requirements must be high quality securities that the Bank believes can be monetized quickly in stress conditions with minimum loss in market value. More than 94% of the Bank's high-quality liquid assets are invested in Level 1 assets as at October 31, 2022. These assets are Central Bank eligible and can be easily sold or given as collateral during a time of stress. A liquidity contingency plan is prepared and reviewed on a regular basis. It guides the Bank's actions and responses to potential liquidity crises.

The Bank also manages its liquidity to comply with the regulatory liquidity metrics in the OSFI domestic Liquidity Adequacy Requirements (LAR) Guideline. These regulatory metrics include the Liquidity Coverage Ratio (LCR), drawn on the BCBS international Basel III liquidity framework, and the OSFI-designed Net Cumulative Cash Flow (NCCF) supervisory tool. The LCR requires that banks maintain sufficient high-quality liquid assets to meet net short-term financial obligations over a thirty-day period in an acute stress scenario. The Bank remained compliant with the LAR Guideline throughout the year ended October 31, 2022.

Regulatory developments concerning liquidity

In January 2022, OSFI issued the final version of its Guideline for Small and Medium-Sized Banks (SMSB) Capital and Liquidity Requirements and of its Liquidity Adequacy Requirements (LAR) Guideline, as noted in the Regulatory capital developments section on page 44 of this MD&A. These revised rules further strengthen liquidity requirements to protect depositors and creditors in case of adverse events.

Liquid assets

The Bank's liquid assets consist of cash and non-interest-bearing deposits with banks, interest-bearing deposits with banks, securities, as well as securities purchased under reverse repurchase agreements. They are mainly composed of high-quality liquid direct investments in or transactions secured by marketable securities issued or guaranteed by the Canadian government, provinces or municipal corporations. As at October 31, 2022, these assets totalled $11.8 billion, an increase of $1.9 billion compared to the level held on October 31, 2021.

The level of liquidity reflects deposit gathering from multiple sources and funding from securitization activities used to finance the Bank's expected loan growth. Overall, the Bank continues to prudently manage the level of liquid assets and to hold sufficient cash resources from various sources to meet its current and future financial obligations, under both normal and stressed conditions. These liquid assets provide the Bank with flexibility to manage its loan and deposit portfolio maturities and commitments and to meet other current operating needs. Management of the liquid assets, both in terms of optimizing levels and mix, contributes significantly to the Bank's results.

Funding

The Bank's lending operations primarily rely on Personal, Business and Institutional customers, and on an access to wholesale financing from diversified sources. Personal deposits are sourced through multiple channels including the Quebec Retail Network, Advisors and Brokers, as well as the Digital Channel. Wholesale funding options include loan securitization and the issuance of equity or debt instruments through capital markets. Limits on funding sources are monitored by the Asset-Liability Committee, the Executive

Committee and the Board of Directors. This funding strategy is well aligned with regulatory requirements in the LAR Guideline, which recognizes that personal deposits are the most stable funding source.

Personal deposits
Personal deposits include notice, demand and term deposits sourced through the Bank's Quebec branches, a digital platform and the Advisors and Brokers channel. A significant proportion of these deposits are insured by the Canada Deposit Insurance Corporation, up to $100,000 per client, per regulated deposit-taking financial institution, which contributes to their stability. Deposits sourced through the Advisors and Brokers channel are mainly drawn from brokers affiliated with all major Canadian banks, as well as by a well-established network of independent financial advisors. As well, 64% of personal deposits are term deposits as at October 31, 2022.

Business, banks and other deposits
Deposits from businesses, banks and other contribute to the diversification of the Bank's funding sources and to the active management of its liquidity levels. They are sourced from an institutional clientele and the Bank's network of account managers serving commercial clients.

TABLE 28
DEPOSITS

In thousands of dollars, except percentage amounts	2022		2021	
Personal				
Notice and demand				
Quebec Branch Network	**$ 2,495,125**	**9.2 %**	$ 2,592,409	11.3 %
Advisors and Brokers	**5,371,480**	**19.8**	2,983,581	13.0
Digital Direct to Customers	**206,389**	**0.8**	490,163	2.1
	8,072,994	**29.8**	6,066,153	26.4
Term				
Quebec Branch Network	**4,565,401**	**16.8**	4,292,761	18.7
Advisors and Brokers	**9,473,105**	**34.9**	7,735,007	33.7
Digital Direct to Customers	**122,536**	**0.5**	57,123	0.2
	14,161,042	**52.2**	12,084,891	52.6
	22,234,036	**81.9**	18,151,044	79.0
Business, banks and other				
Notice and demand	**1,779,544**	**6.6**	1,736,294	7.6
Term				
Institutional	**2,385,193**	**8.8**	2,306,978	9.9
Other	**733,033**	**2.7**	793,913	3.5
	3,118,226	**11.5**	3,100,891	13.4
	4,897,770	**18.1**	4,837,185	21.0
Deposits	**$ 27,131,806**	**100.0 %**	$ 22,988,229	100.0 %

Credit ratings

Personal deposits constitute the most important source of financing for the Bank. The Bank also accesses wholesale markets to obtain financing through securitization and unsecured funding. The Bank's capacity to obtain such financing, especially wholesale funding, is tied to the credit ratings set by rating agencies such as DBRS Morningstar ("DBRS") and S&P Global Ratings ("S&P"). Revisions of the Bank's credit ratings may therefore influence financing operations, as well as other collateral obligations.

Changes to credit ratings could also impact the Bank involvement with other operational banking arrangements. The Bank regularly monitors the impact of a hypothetical downgrade of its credit rating on collateral requirements. As at October 31, 2022, additional collateral that would be required in the event of a one-to-three-notch rating downgrade was not significant.

Table 29 presents the Bank's credit ratings as established by the rating agencies.

TABLE 29
CREDIT RATINGS
As at October 31, 2022

	DBRS[1]	S&P[2]
Long-term deposits and debt	A (low)	BBB
Covered bonds	AAA	n/a
Short-term instruments	R-1 (low)	A-2
NVCC Subordinated debt	BBB (low)	BB+
NVCC Limited recourse capital notes	BB (high)	BB-
NVCC Preferred Shares	Pfd-3	BB-
Outlook	Stable	Stable

(1) Each DBRS rating category is appended with one of three rating trends —"Positive," "Stable," "Negative"— in addition to "Under Review." The rating trend helps to give investors an understanding of DBRS's opinion regarding the outlook for the rating in question. However, investors must not assume that a positive or negative trend necessarily indicates that a rating change is imminent.
(2) The S&P rating outlook assesses the potential direction of a long-term credit rating over the intermediate term (typically six months to two years). In determining a rating outlook, consideration is given to any changes in the economic and/or fundamental business conditions. An outlook is not necessarily a precursor of a rating change or future action. The S&P rating outlooks have the following meanings: "Positive" means that a rating may be raised; "Negative" means that a rating may be lowered; "Stable" means that a rating is not likely to change; "Developing" means a rating may be raised or lowered.

Contractual obligations

In the normal course of its activities, the Bank enters into various types of contractual agreements. Its main obligations result from the issuance of debt instruments, including deposits written with individuals, businesses and other institutions. This financing, combined with the issuance of capital, is used primarily to finance loan and investment operations. Note 29 to the Consolidated Financial Statements provides further information on other contractual obligations.

The Bank is also exposed to liquidity risk when it provides credit commitments to clients. As at October 31, 2022, these commitments amounted to approximately $6.2 billion ($6.0 billion as at October 31, 2021), excluding credit facilities unconditionally revocable at the Bank's option.

Contractual maturities of assets and liabilities

The following tables provide remaining contractual maturity profiles of assets and liabilities at their carrying value (e.g., amortized cost or fair value) as at October 31, 2022 and 2021. Details of contractual maturities and commitments to extend funds are a source of information for the management of liquidity risk and does not represent how the Bank manages its interest rate or its liquidity risk and funding needs. These details form a basis for assessing a behavioural balance sheet with effective maturities to calculate liquidity risk measures.

TABLE 30
CONTRACTUAL MATURITIES OF ASSETS AND LIABILITIES

									2022
	Term								
In thousands of dollars	0 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 specific maturity	Total
Assets									
Cash and non-interest-bearing deposits with banks	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ 79,702	$ 79,702
Interest-bearing deposits with banks	1,558,135	—	—	115,076	—	—	—	138,010	1,811,221
Securities	1,036,610	367,940	231,537	355,781	728,357	1,802,686	1,493,445	168,105	6,184,461
Securities purchased under reverse repurchase agreements	3,643,373	84,379	—	—	—	—	—	—	3,727,752
Loans[1]									
Personal loans	44,805	20,536	17,786	16,005	23,044	7,539	2,276	3,134,644	3,266,635
Residential mortgages	550,979	519,069	518,897	506,027	2,423,273	11,475,197	54,115	109,923	16,157,480
Commercial loans	2,564,042	980,166	1,195,928	1,022,650	2,932,514	3,000,823	1,475,625	4,885,398	18,057,146
Customers' liabilities under acceptances	99,800	—	—	—	—	—	—	—	99,800
Allowances for loan losses	—	—	—	—	—	—	—	(193,476)	(193,476)
	3,259,626	1,519,771	1,732,611	1,544,682	5,378,831	14,483,559	1,532,016	7,936,489	37,387,585
Others	1,334	1,774	2,434	1,589	5,640	387	—	1,512,879	1,526,037
Total assets	$9,499,078	$1,973,864	$1,966,582	$2,017,128	$6,112,828	$16,286,632	$3,025,461	$ 9,835,185	$50,716,758
Liabilities and equity									
Deposits									
Personal deposits[1]	$1,822,426	$2,089,821	$2,193,072	$1,555,054	$3,335,620	$ 3,204,988	$ 44,933	$ 7,988,122	22,234,036
Business, Banks and other deposits[1]	100,803	70,442	127,181	158,560	168,233	120,811	410	1,766,137	2,512,577
Wholesale deposits	362,000	20,000	408,000	21,700	348,394	676,451	—	—	1,836,545
Covered bonds	—	—	—	—	—	548,648	—	—	548,648
	2,285,229	2,180,263	2,728,253	1,735,314	3,852,247	4,550,898	45,343	9,754,259	27,131,806
Obligations related to securities sold short[2]	794,012	17,863	21,630	75,365	582,828	777,254	952,321	85	3,221,358
Obligations related to securities sold under repurchase agreements	2,924,295	—	—	—	—	—	—	—	2,924,295
Other liabilities	103,107	3,325	3,243	3,185	26,557	23,407	67,364	1,899,033	2,129,221
Debt related to securitization activities[3]	522,028	151,667	388,161	332,749	1,696,174	7,622,614	1,744,956	(265,927)	12,192,422
Subordinated debt	—	—	—	—	—	336,553	—	—	336,553
Equity	—	—	—	—	—	—	—	2,781,103	2,781,103
Total liabilities and equity	$6,628,671	$2,353,118	$3,141,287	$2,146,613	$6,157,806	$13,310,726	$2,809,984	$14,168,553	$50,716,758

(1) Amounts collectible on demand are considered to have no specific maturity.
(2) Amounts are disclosed according to the remaining contractual maturity of the underlying security.
(3) Personal loan securitization cash flows are based on a behavioural prepayment model.

In thousands of dollars	Term 0 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 specific maturity	2021 Total
Assets									
Cash and non-interest-bearing deposits with banks	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ 69,002	$ 69,002
Interest-bearing deposits with banks	472,093	—	—	25,000	—	—	—	101,028	598,121
Securities	700,462	236,520	545,582	95,149	1,306,974	1,658,171	1,631,214	325,121	6,499,193
Securities purchased under reverse repurchase agreements	2,216,738	311,441	94,118	91,988	49,996	—	—	—	2,764,281
Loans[1]									
Personal loans	35,591	16,087	17,350	29,578	81,966	27,021	6,729	3,467,019	3,681,341
Residential mortgages	854,713	834,365	1,058,118	910,309	1,789,023	10,246,094	47,017	117,360	15,856,999
Commercial loans	2,456,796	922,397	1,163,813	752,675	2,539,074	2,462,739	1,484,525	2,324,404	14,106,423
Allowances for loan losses	—	—	—	—	—	—	—	(195,056)	(195,056)
	3,347,100	1,772,849	2,239,281	1,692,562	4,410,063	12,735,854	1,538,271	5,713,727	33,449,707
Others	2,524	594	1,344	213	628	396	—	1,691,021	1,696,720
Total assets	$ 6,738,917	$2,321,404	$2,880,325	$1,904,912	$5,767,661	$14,394,421	$3,169,485	$ 7,899,899	$45,077,024
Liabilities and equity									
Deposits									
Personal deposits[1]	$ 1,857,632	$1,689,257	$1,718,259	$1,531,813	$3,337,987	$ 1,932,861	$ 38,926	$ 6,044,309	$18,151,044
Business, Banks and other deposits[1]	78,551	177,233	224,022	132,476	135,507	36,978	1,214	1,744,226	2,530,207
Wholesale deposits	507,500	232,000	243,270	346,341	401,908	327,422	—	—	2,058,441
Covered bonds	—	—	—	—	—	248,537	—	—	248,537
	2,443,683	2,098,490	2,185,551	2,010,630	3,875,402	2,545,798	40,140	7,788,535	22,988,229
Obligations related to securities sold short[2]	164,118	370,808	28,237	190,432	354,891	918,046	1,200,660	24,490	3,251,682
Obligations related to securities sold under repurchase agreements	1,620,728	627,277	189,573	187,288	146,608	—	—	—	2,771,474
Other liabilities	4,052	4,020	3,956	3,876	25,167	19,072	59,998	1,699,316	1,819,457
Debt related to securitization activities[3]	567,601	180,014	523,331	338,379	1,472,184	6,490,459	1,658,956	24,606	11,255,530
Subordinated debt	—	—	349,782	—	—	—	—	—	349,782
Equity	—	—	—	—	—	—	—	2,640,870	2,640,870
Total liabilities and equity	$ 4,800,182	$3,280,609	$3,280,430	$2,730,605	$5,874,252	$ 9,973,375	$2,959,754	$12,177,817	$45,077,024

(1) Amounts collectible on demand are considered to have no specific maturity.
(2) Amounts are disclosed according to the remaining contractual maturity of the underlying security.
(3) Personal loan securitization cash flows are based on a behavioural prepayment model.

OPERATIONAL RISK MANAGEMENT

Operational risk is defined as the result of an inadequacy or failure attributed to processes, people, systems or external events, excluding legal and regulatory compliance, strategic and reputational risks. Operational risk is inherent in all the Bank's activities and can lead to significant impacts on the business, including financial loss, reputational harm and/or regulatory 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. Given the large volume of transactions processed on a daily basis, and the complexity and speed of business operations, there is a possibility that certain operational or human errors may be repeated or compounded before they are discovered and rectified. The Operational Risk Management Framework determines how that risk is identified, evaluated and the decisions made to accept, mitigate or transfer the risk.

Operational risk is further broken down into the following categories:

- Fraud;
- Information Security and Protection;
- Human Resources Management and Workplace Health and Safety;
- Customer Products and Practices;
- Damage to Physical Assets and Business Continuity;
- Information Technology;
- Execution, Delivery and Process Management;
- Data Management; and
- Suppliers and Vendors.

The Operational Risk Management Framework and Policy describe the operational risk management program based on the "three lines of defence" model and specify the roles and responsibilities of the various stakeholders. As the first line of defence, the business units own the risks generated by their day-to-day activities and are accountable for their effective management. Operational Risk Management, as part of the second line of defence, establishes the operational risk management framework, provides independent oversight of risk-taking by the first line of defence and conducts an effective objective assessment of their risk profile. Internal Audit, as the third line of defence, examines the approach and effectiveness of the operational risk management program.

The Operational Risk Management Framework outlines how operational risk is managed. Key elements of this framework include:

- The *Operational risk appetite* is aligned to the overall risk appetite of the organization establishing boundaries of permitted risk taking.
- *Risk and control assessment* is performed by the various business units and aims to identify and assess the key operational risks related to their sectors and their key processes.
- *Risk and control assessment related to initiative management* is performed to ensure that the key risks related to important initiatives are identified, assessed and effectively mitigated.
- *Internal and external risk events* provide useful information to assess the Bank's overall operational risk exposure and to reduce the likelihood of future risk events. Business units are required to produce root cause analyses of major events to prevent their re-occurrence.
- *Key risk indicators* provide objective measurements that facilitate the facilitate the monitoring and management of operational risks.
- *Scenario analysis* provides insight to the potential impact of low probability but severe impact risk events and insight into how they may be potentially mitigated.
- *Sound business continuity management* aims to ensure that key activities are maintained in the event of a disruption to reduce the negative impacts on our customers, counterparties and other stakeholders.
- *Supervision of the supplier risk management* implements robust control mechanisms so that the use of a third party proving to be more efficient, competent or less expensive, does not create undue risk for the Bank.
- *Reporting of the operational risk profile* is performed on a quarterly basis incorporating all the operational risk tools into the assessment. These risk profiles are discussed and challenged via the various governance committees and ultimately consolidated to provide an enterprise view of operational risk.
- A *corporate insurance program* protects against unexpected material losses and is used to satisfy requirements under the law, regulations or contractual agreements.

LEGAL AND REGULATORY COMPLIANCE RISK MANAGEMENT

The success of the Bank's business is dependent on our successful ability to manage our exposure to legal and regulatory compliance risk. The financial services industry is highly regulated and subject to strict enforcement of legal and regulatory requirements. Under the direction of the Chief Legal Officer, our Legal Affairs & Regulatory Compliance team maintain enterprise-wide frameworks that identify, assess, manage, monitor and report on legal and regulatory issues. We identify applicable laws and regulations and potential risks, recommend mitigation strategies and actions, conduct internal investigations, and oversee legal proceedings and enforcement actions.

We define Legal Risk as the potential for loss or harm arising from how requirements or contractual obligations apply to the Bank, including laws, regulations, rules, prescribed practices and fiduciary obligations. It does not include non-conformance with ethical standards. Failing to identify and manage Legal risk may result in civil or criminal litigation, administrative penalties, supervisory findings, enforcement actions, financial loss, reputational damage, restricted business activities, increased regulatory supervision or intervention or the imprisonment or regulatory examination of employees, officers and directors.

We define Regulatory Compliance Risk as the potential for loss or harm that arise from, or is caused by, the unintentional or negligent failure to comply with laws, regulations, rules, guidelines, other prescribed regulatory directives or requirements. Failure to identify and manage Regulatory Compliance Risk may impact the Bank's ability to meet its strategic objectives and may result in civil or criminal litigation, administrative penalties, supervisory findings, enforcement actions, financial loss, reputation damage, restricted business activities, increased regulatory supervision or intervention or the imprisonment or regulatory examination of employees, officers and directors or cause reputational harm. The Regulatory Risk Management Framework Policy implements the Bank's Regulatory Risk Management Program, which includes the following elements:

- Identification of the regulatory requirements applicable to the Bank and regulatory compliance risk assessment;
- Definition of key risk indicators to measure and monitor exposure to regulatory compliance risk;
- Risk and control assessments are performed by the various business units to assess compliance with applicable regulatory requirements;
- Development, documentation, application of risk mitigation measures and self-assessment of the effectiveness of controls to ensure compliance with regulatory requirements;
- Independent assessment of the effectiveness of controls performed by the Office of the Chief Compliance Officer;
- Identification and reporting of regulatory issues and situations of non-compliance as appropriate; and
- Reinforcement of controls and correction of regulatory issues and situations of non-compliance.

Regulatory Compliance Risk management includes among other things, regulatory requirements related to Anti-Money Laundering and Terrorist Activity Financing (AML), Sanctions, Anti-bribery/Anti-corruption and personal information protection, which are governed by specific policies. Risk management reports are submitted quarterly to the Corporate Risk Committee and the Risk Management Committee of the Board.

The Regulatory Risk Management Committee, chaired by the Chief Compliance Officer, is responsible for the oversight and annual assessment of the Regulatory Risk Management Program. A specific Anti-Money Laundering and Terrorist Financing (AMLTF) Program Coordination Committee oversees applicable AMLTF requirements. The effectiveness of the AMLTF Program is assessed annually.

STRATEGIC RISK MANAGEMENT

We define Strategic Risk as the potential for loss or harm that arise from, or is caused by inadequate business plans, strategies or decision-making processes and the improper allocation and use of the Bank's resources. It also arises from the potential adverse effects of any changes in the economic, competitive, regulatory, tax or accounting environment on the Bank's results and/or the unintentional or negligent failure to respond appropriately to these changes as a result of inaction, ineffective strategies or poor implementation of strategies. Strategies include merger and acquisition activities.

The Executive Committee is responsible for managing the Bank's Strategic Risks. Each year, a strategic planning process is carried out to analyze strengths, weaknesses, opportunities, and threats to determine the profitability and risk profiles of the Bank. The Bank's overall strategy is established by the Executive Committee and submitted to the Board of Directors for approval.

The Executive Committee is responsible for the execution of the Bank's strategic plan and monitoring the Bank's ability to meet its objectives and its strategic vision for growth and modernization, while protecting profitability.

REPUTATIONAL RISK MANAGEMENT

We define Reputational Risk as the risk that perceptions of stakeholders, whether true or not, regarding the Bank's business practices, actions or inactions will negatively impact the Bank's image, value, goodwill, brand, revenues, operations, liquidity, or client base, or require costly litigation or other measures to remediate.

Reputational Risk most often results from, or exists in parallel with the inadequate management of other risks, and may affect almost every activity of undertaken by a financial institution, even when operations are, from a technical point of view, in compliance with legal, accounting and regulatory requirements. The Bank's reputation is a valuable business asset that is essential to its continued growth and shareholder value and therefore, is constantly at monitored for potential risk.

The Corporate Risk Committee controls and supervises reputational risk management through the application of a Reputational Risk Policy. This policy is an integral part of the Risk Management Framework. Throughout the execution of the Bank's strategies, officers, administrators, managers and every employee are responsible for ensuring the Bank's reputation remains adequate. The Code of Conduct and other policies also enable the adequate management of potential threats that could have a direct or indirect impact on the Bank's reputation.

MODEL RISK MANAGEMENT

The Bank uses various models to inform business, risk and capital management decision-making. Model risk is the potential for loss or harm arising from models, and other estimation approaches and their outputs, not performing or capturing risk as expected. It also arises from the inappropriate use of a model. It can lead to financial loss, reputational risk, or incorrect business and strategic decisions. The Model Risk Management Policy establishes a formal framework to identify, assess, manage, and control the risk inherent in the usage of models. Models are updated on a regular basis to incorporate current trends. In addition, the models are validated by a validation group that is independent of both the specialists who developed the models and the concerned business units.

OTHER RISKS THAT MAY AFFECT FUTURE RESULTS

In addition to the major business risks described above, there are other risks, many of which are beyond the Bank's control and the effects of which can be difficult to predict or measure, that could cause the Bank's actual results to differ significantly from its plans, objectives and estimates or other forward-looking statements. All forward-looking statements, including those in this document, are, by their very nature, subject to inherent risks and uncertainties, general and specific, which may cause the Bank's actual results to differ materially from the expectations expressed in the forward-looking statements. Some of these factors are discussed below and others are noted in the "Caution Regarding Forward-Looking Statements" section of this document.

The following section presents a summary of the other risks that may affect results.

General economic and business conditions

The Bank operates, and serves customers and clients, in Canada and the U.S. The Bank's financial performance is significantly affected by the general economic and business conditions in these countries, and such conditions could have an adverse impact on the Bank's results, business, financial condition, or liquidity, and could result in changes to the way the Bank operates.

These conditions include, inflation, rising interest rates, fluctuations in financial markets and market liquidity, exchange rates, sovereign debt risks, employment and unemployment levels, real estate prices, consumer spending, mortgage and household debt levels, evolving consumer trends, business investment, fiscal policy, tax policy, government spending, the strength of the economy, threats of terrorism, civil unrest, natural disasters, extreme weather, reputational risk associated with increased regulatory, public, and media focus, pandemics, epidemics, or other public health emergencies, cyberattacks, disruptions to public infrastructure, governmental policy, international trade and political relations.

Geopolitical Risks

Government policy, international trade, supply chain, and political relations across the world may, directly and indirectly, impact market and economic stability in the countries where the Bank operates. Geopolitical risks in 2022 included the war in Ukraine and the ripple effect it is having on oil, commodity, energy and agricultural markets; growing concern for other potential global tensions including the continuation of the zero-COVID policy in China; uncertainty related to the post-Brexit relationship between the United Kingdom and European Union; policy changes by the U.S. administration; and shifting global dynamics including protectionist measures adopted by some countries that directly or indirect affect Canada and the U.S.

Impact of COVID-19

Significant advances in medical science were made during 2021 with the introduction of COVID-19 vaccines and booster shots. During 2022, government-ordered restrictive measures were gradually lifted, and the pandemic became an epidemic. Some adverse effects of COVID-19 are likely to continue such as the emergence of new waves or variants and their effects on the global and Canadian economies, and on Canadian households and businesses, which in turn, may have an adverse effect to some degree on the Bank's financial and operating results:

A new wave of COVID-19 or a variant may affect the physical and mental health of the Bank's personnel, including members of its management team. The implementation of work-from-home and various safety measures may not be sufficient to mitigate the risk of infection and could result in increased illness among the Bank's employees and lead to employee absenteeism. COVID-19 may also have the effect of heightening other risks and uncertainties disclosed and described in the section entitled "Risk Appetite and Risk Management Framework", such as, but not limited to, those related to operational, reputational, and human capital risk.

Reliance on technology and third parties

The Bank recognizes the added value of using third parties to provide access to leading applications, cloud platforms, innovative products and specialized support to carry our strategy This has led the Bank to rely on third parties as part of its technological, cloud and operational infrastructures for critical services. An interruption in the availability of any one of these services, regardless of its downtime, can have an adverse impact on the Bank's ability to operate in the normal course of business. Such an interruption can also adversely impact the Bank's service quality and reputation, and our employees and their ability to continue working in-office or remotely.

To mitigate against related risks, the Bank's risk management framework includes, a number of preventive measures, such as requirements to have third parties and their products and services vetted and validated in accordance with the Bank's risk management procedures before agreements are executed and monitored after they are on-boarded. Despite the Bank's efforts to manage and mitigate third party risks, there remains the possibility that certain risks will materialize that may be beyond the Bank's control or ability to manage, effectively, timely, or otherwise.

Technology, information systems and cybersecurity

Technology, which is now omnipresent in daily lives, is at the heart of banking services and has become the main driver of innovation in the financial sector and how banking services are now delivered. As such, the security, networks, systems, and performance of the Bank's information and technology infrastructure are critical to the Bank's operations, ensuring the integrity of its systems and records and for maintaining the confidence of the Bank's clients and other stakeholders. Due to the nature of the Bank's operations, its reliance on technology to conduct day-to-day activities, and its evolving technological infrastructure, the Bank is and remains subject to increased and evolving threats in the form of cyber-attacks, such as ransomware, data exfiltration, malicious attacks, phishing, compromised assets, malicious insiders and possible denial of service attacks. Threats are not only increasing in volume but in their sophistication as adversaries use ever evolving technologies and attack methodologies. The Bank's use of and reliance on third-party service providers, which are also subject to these attacks and compromises, increases the Bank's risk of a potential attack, breach or disruption as it does not have immediate oversight over their systems and control environment and business continuity plans.

Processes are in place to protect the Bank's network and operations from cyber incidents and emerging cyber threats, and the Bank continues to make strategic investments to maintain its cyber defences in accordance with industry accepted standards and practices. Nonetheless, the Bank is exposed to risks related to cybersecurity and the increasing sophistication of cyber-attacks. Losses in connection with these evolving risks include those relating to reputational damage, the misappropriation or unauthorized release of confidential financial of personal information, corporate espionage, loss of business opportunities, damage to computer systems and those of our customers and counterparties, violations of privacy laws, as well as disruption to operations. Furthermore, such attacks may result in client attrition, regulatory sanctions or penalties, litigation, compliance costs, remediation costs, loss of revenue, additional regulatory scrutiny, litigation and reputational damage

Technological disruption, competition and strategic plan

The increasing pace of technological innovation continues to impact the financial services industry and its customers. Non-financial institutions continue to offer banking products and services in competition with traditional banks in certain segments of banking including retail payments, consumer and commercial lending, foreign exchange and investment advisory services using new technologies, and advanced data and analytical tools. Such non-traditional service providers may operate with less stringent regulatory requirements and oversight and without the costs associated with brick-and-mortar businesses. Failure to keep pace with these competitors and the competition they enable could impact short-term and long-term revenues and earnings over time, if customers choose the products and services they offer. Increased competition from non-traditional service providers, both incumbent and new entrants, requires the Bank to make additional short-term and long-term investment in order to meet clients' changing expectations, acquire and retain customers, streamline operations and to remain competitive, which may increase expenses. In addition, the Bank's pricing of products and services may be impacted and may cause it to lose revenue and/or market share. The capacity of the Bank to manage these risks or to innovate and develop technology or keep pace with evolving technologies can affect prospective results. Furthermore, failure to properly review critical changes within the business before and during the implementation and deployment of key technological systems or failure to align client expectations with the Bank's client commitments and operating capabilities could adversely affect the Bank's operating results or financial position.

Over the past few years, the Bank launched various initiatives with the objective of building a stronger foundation and modernizing the Bank in order to improve financial performance. There can be no assurance that these initiatives will succeed in whole or in part. Implementation of these initiatives present various managerial, organizational, administrative, operational and other challenges, and the Bank's organizational, administrative and operational systems may require adjustments. If the Bank is unable to successfully execute on any or all of the initiatives, the Bank's revenues, operating results and profitability may be adversely affected. Even if the Bank successfully implements its initiatives, there can be no guarantee that it will achieve its intended objectives of improved revenues, operating results and/or profitability. A renewed strategic direction may also be required to achieve such objectives.

The Bank is delivering personalized banking experiences for its customers, through mobile technologies. The Bank is also looking at emerging business trends that may further improve banking experiences. In this regard, the Bank is considering various options, including making strategic investments to keep pace with market and emerging trends, exploring strategic partnership opportunities, and experimenting with emerging technologies and processes, internally. However, there can be no assurance that such initiatives will be successful or will achieve the desired results.

Economic climate in the U.S. and Canada

The Bank's operations are mainly carried on in Canada and in the U.S. Consequently, the Bank has limited direct exposure outside of North America although a large scope of global events can have a spillover effect on economic and financial conditions in both the U.S. and Canada. As a result, the Bank's earnings are significantly affected by the general business and North American economic conditions. Economic factors including the path of monetary and fiscal policies, exchange rates variations, CPI inflation, labour market conditions, momentum in real estate market conditions, households' and businesses' indebtedness, savings and spending behaviours may have an effect on overall revenue and earnings. Furthermore, financial market developments including market liquidity and fluctuations of market interest rates may influence revenue and earnings. Also, non-economic domestic and global factors can have an indirect impact on broad economic and financial conditions, and/or the specific performance of loan portfolios and/or particular regions in which the Bank operates. These include natural disasters, geopolitical events, civil unrest, infectious diseases and trade protectionism.

Accounting policies, estimates and developments

The Bank's accounting policies and estimates are important to understanding its Consolidated Financial Statements. Some accounting policies require management to apply judgment to make particularly significant estimates that, by their very nature require complex judgments and estimates and relate to matters that are inherently uncertain. Changes in these estimates could materially affect the Bank's Consolidated Financial Statements. In addition, changes in accounting standards, including their effect on the Bank's accounting policies, estimates and judgments may affect the Bank's Consolidated Financial Statements when a new standard becomes applicable. Procedures have been established to ensure accounting policies are applied consistently and the process for adopting new accounting standards is well controlled. Please refer to the sections "Critical Accounting Policies and Estimates" and "Future Changes to Accounting Policies" for further details.

Legal and regulatory compliance

The Bank operates in a complex legal and regulatory environment and the Bank is from time to time subject to a variety of legal proceedings, including civil claims and lawsuits, criminal charges, regulatory examinations, investigations, audits and requests for information by various governmental regulatory agencies and law enforcement authorities in various jurisdictions.

The Bank's Legal Affairs & Regulatory Compliance teams ensure that the Bank complies with applicable laws, regulations, rules and prescribed practices, and its contractual and fiduciary obligations. However, it remains possible that the Bank may receive an adverse judicial, administrative or regulatory judgment or decision that results in fines, administrative monetary penalties, damages, penalties, or other costs or injunctions, criminal convictions, or loss of licenses or registrations that would damage the Bank's reputation, and negatively impact its earnings and ability to conduct some of its businesses. In addition, the Bank is subject to litigation risk arising from the ordinary course of its business and as such the adverse resolution of any litigation could have a significant adverse effect on its results or could give rise to significant reputational damage, which in turn could impact its future business prospects. 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.

For example, in June 2020, a plaintiff filed an application seeking leave to institute a class action in the Superior Court of Québec against the Bank, as well as former executives. The application alleges that the Bank and executives violated the Quebec Securities Act and Civil Code through alleged misrepresentations and non-disclosures regarding the Bank's and a subsidiary's mortgage loan securitization activities, and related mortgage underwriting procedures. A date for the court hearing of the application to authorize the proposed class action has not yet been scheduled and the Bank intends to vigorously defend the proceeding.

The Bank is subject to extensive regulations, regulatory oversight, and regulatory changes. Changes to laws, including tax laws, regulations or regulatory policies, as well as uncertainty in how they are interpreted, implemented or enforced, could adversely affect the Bank, for example, by lowering barriers to entry in the industries and sectors in which the Bank operates; increasing costs of compliance or limiting the Bank's products and activities, and ability to execute its strategic plan.

Capital and liquidity requirements under the Basel Committee on Banking Supervisions global standards (Basel III), will continue to affect the Bank's activities.

There are a number of government-led initiatives underway in Canada that may impact financial institutions, including regulatory initiatives relating to payments evolution and modernization, open banking, consumer protection, protection of customer data, dealing with vulnerable persons, and anti-money laundering. The Bank has invested in, and will continue to invest in, operational and compliance costs resulting from these initiatives and changes.

Although the Bank devotes substantial legal, regulatory compliance and operational resources toward monitoring applicable regulatory developments, ensuring compliance with regulations and regulatory developments, and ensuring that compliance deadlines are met, the Bank may not be able to predict with certainty the impact of a regulatory development, or how such regulatory development will impact the Bank, or how such regulatory development will be interpreted by governments, regulators, and courts once it becomes effective. These developments require considerable mobilization of technical, human and financial resources in a very short span of time and therefore increase ongoing operational, compliance, and technology costs and therefore impact the complexity of operations and profitability.

Money laundering, terrorist financing, economic sanctions and data privacy violations represent material risks, including regulatory, legal, financial and reputational exposure. The global anti-money laundering and economic sanctions landscape continues to experience regulatory change, with significant, complex new laws and regulations that have, or are anticipated to come into force in the short and medium-term in many of the jurisdictions in which the Bank operates. Significant changes to AML regulatory reporting requirements continue to challenge the financial reporting industry and add complexity to the implementation schedule. It is widely recognized that financial institutions are uniquely positioned and possess the means to assist in the fight against money laundering, terrorist financing, and criminal activity through prevention, detection, deterrence and the exchange/reporting of information. In addition, the global data and privacy landscape continues to undergo significant regulatory change, with new legislation and amendments to existing legislation anticipated in Canada and other jurisdictions in which the Bank does business.

Interbank offered rate (IBOR) transition

Certain interest rates and other indices that are deemed to be "benchmarks" (including IBOR benchmarks) are undergoing change as result of benchmark reform initiatives, designed to transition the market away from IBORs to alternative reference rates ("ARR"). The transition from IBORs to ARRs may result in market dislocation and have other adverse consequences to the Bank, its customers, market participants, and the financial services industry.

The Bank has significant contractual rights, obligations and exposures referenced to IBOR benchmarks and such discontinuance of, or changes to, benchmark rates could adversely affect the Bank's business and results of its operations. The Bank is undertaking an enterprise-wide, cross functional initiative with senior management and Board oversight to evaluate and monitor the impact of these changes on its products, services, systems, models, documents, processes, and risk management frameworks with the aim of managing such impact through appropriate mitigation. In addition, market risks also arise as the new reference rates are likely to differ from the prior benchmark rates resulting in differences in the rate calculation or payment amount. This could result in different financial performance for previously booked loans, require alternative or additional hedging strategies, or affect the Bank's capital and liquidity planning and management. The Bank continues to monitor industry and regulatory developments and is incorporating working group and regulator best practice guidance on its transition activities.

Fraud and criminal activity

As a financial institution, the Bank is inherently exposed to various types of fraud and other financial crime. The sophistication, complexity, and materiality of these crimes evolves quickly, and these crimes can arise from numerous sources, including potential or existing clients or customers, agents, third parties, including suppliers, service providers and outsourcers, other external parties, contractors or employees. In deciding whether to extend credit or enter into other transactions with customers or counterparties, the Bank may rely on information furnished by or on behalf of such customers, counterparties or other external parties including financial statements and financial information and authentication information. The Bank may also rely on the representations of customers, counterparties, and other external parties as to the accuracy and completeness of such information. In order to authenticate customers, whether through the Bank's phone or digital channels or in its branches, the Bank may also rely on certain authentication methods which could be subject to fraud. In addition to the risk of material loss (financial loss, misappropriation of confidential information or other assets of the Bank or its customers and counterparties) that could result in the event of a financial crime, the Bank could face legal action and client and market confidence in the Bank could be impacted.

Human capital

The Bank's future performance is largely dependent on its ability to attract, develop and retain key talent. Within the financial industry, competition for employees and senior executives is intense, and there can be no assurance that the Bank will be able to attract and retain these individuals, which could impact its operations and competitiveness. If the skill sets and diversity of the Bank's workforce, including senior management, do not match the operational requirements of the Bank and foster a winning culture, the Bank will likely not be able to sustain its performance. The ability to retain and motivate the Bank's management team or attract suitable replacements should any members of the management team leave is dependent on, among other things, the competitive nature of the employment market and the career opportunities and compensation that the Bank can offer. The loss of key employees, through attrition or retirement or any deterioration in overall employee morale and engagement resulting from organizational changes could have an adverse impact on the Bank's operations and financial results. Failure to establish a complete and effective succession plan, including preparation of internal talent and identification of potential external candidates, where relevant, for key roles, could impair business until qualified replacements are found.

Insurance risk

Insurance risk is the risk of loss that may occur when assumptions related to insurance risks assumed by the Bank, particularly about formulating assumptions used to set premiums or for the valuation of reserves, differ from actual insurance results. The Bank assumes certain insurance risks, mainly regarding creditor insurance products. Insurance risk is managed within an independently managed program overseen by insurance experts and by Bank representatives. Reinsurance coverage is underwritten to reduce the Bank's exposure arising from significant claims and catastrophes, including terrorist events. In addition, the design and pricing of insurance products distributed by the Bank are reviewed by actuarial consultants, based on best practices.

Business continuity

Unexpected external events such as natural disasters, pandemics and epidemics and other crises are factors that can impact the Bank's ability to operate it businesses, including providing clients access to products and services. Resources, processes and results of the Bank could be affected by the ability to activate a business continuity plan in a timely manner. Contingency planning for such events has been considered in the Bank's Risk Management Framework and is managed through the Business Continuity Management Policy, which provides us with the capability to restore, maintain and manage critical operations and processes in the event of a business disruption.

Business infrastructure

The Bank deals with third parties to secure the components essential to its business infrastructure, such as internet connections and various communication and database services. Disruption of such services could adversely affect the Bank's ability to provide its products and services to its clients, disrupt operations and/or cause reputational harm.

Environmental and social risk

Environmental and social (E&S) risk is the potential for an E&S issue associated with the Bank, a client, transaction, product, supplier or activity, to have a negative impact on the Bank's financial position, operations, legal and regulatory compliance, or reputation. Environmental issues include, but are not limited to, climate change, pollution and waste management, land and natural resource use, biodiversity, water quality and availability, and environmental regulation. Climate risk is a component of Environmental risk and refers to physical and transition impacts of climate change. Social issues include, but are not limited to, human rights (including, but not limited to, Indigenous Peoples' rights), equity, diversity and inclusion, and community and employee health, safety and well-being.

In 2022, the Bank established an Environmental and Social Risk Management group, operating under Operational Risk Management, that has E&S risk oversight accountabilities. This includes developing and implementing an E&S risk management framework, policies, processes, and governance to proactively identify, assess, manage, and report on these risks. We are working on advancing our E&S risk management capabilities and understanding of the potential direct impacts on our own business and operations, as well as indirect impacts on our customers and suppliers.

The Bank recognizes the importance of E&S risk management practices and processes and is committed to regular and transparent disclosure. The Bank supports and has committed to adopting the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) recommendations. We have developed and continue to execute against our TCFD roadmap that defines the Bank's short, medium and long-term climate-related priorities which are aimed at enhancing our understanding and disclosure of the evolving impact of climate-related risks. As recommended by the TCFD, the risks and opportunities related to climate change were considered by Laurentian Bank as part of our enterprise strategic review. Given our low exposure and the high climate risks associated with these industries, the Bank has determined that going forward Laurentian Bank will not directly finance the exploration, production or development of coal or oil and gas.

The TCFD has structured its recommendations around four pillars that represent an organization's operating fundamentals: governance, strategy, risk management and metrics and targets. These four major classes of recommendations are intended to provide a framework for the publication of climate-financial information.

Governance

The Board and its Committees oversee senior management who is responsible for the execution of the management of E&S risks and opportunities, which include climate change. The Board provides oversight of the Bank's strategic approach to climate change and its E&S risks, which includes how the Bank manages climate-related risks and opportunities. Each of the three Committees of the Board, the Risk Management Committee, the Human Resources and Corporate Governance Committee, and the Audit Committee, have oversight of climate-related risks and opportunities that are specific to their respective oversight responsibilities. The Bank's Chief Executive Officer acts as ESG champion and chairs the ESG Steering Committee, which includes all Executive Committee members. The ESG Steering Committee regularly receives updates on ESG topics, including climate change.

The TCFD Taskforce is chaired by the Chief Financial Officer and includes the Chief Risk Officer, as well as representatives from the Executive Office, Finance, and Risk Management. The TCFD Taskforce makes decisions on key elements of the TCFD roadmap and climate-related financial disclosures. The dedicated E&S risk management team develops approaches to identify, assess, monitor and report on climate-related risks, as appropriate.

Strategy

The Bank recognizes that it has a role to play in accelerating the transition to a low carbon economy and mitigating the risks associated with climate change. The Bank is spearheading initiatives to expand and build new environmental policies, putting practices into place to reduce greenhouse gas emissions and improving sustainability efforts in its day-to-day operations.

Risk management

Climate change is an important business issue, particularly after the ratification of the Paris Agreement and the Canadian government's commitment to take steps to tackle climate change by creating a low-carbon, climate-resilient economy. COP26 and the Glasgow Climate Pact have further emphasized the importance of financial institutions in supporting this transition. A shift to a low-carbon economy will require detailed planning and competent execution, which presents transition risks, many of which are yet to be determined and what their impact would be on the Bank and its operations and performance.

Climate change presents a number of other risks for the Bank such as those resulting from more frequent and more intense extreme weather events and may be a driver of other types of risks including operational, regulatory compliance, strategic, reputation, credit and market risk. The Bank may also be exposed to climate-related risk through emerging regulatory and legal requirements, disruptions to our operations and services, and the products and services it provides to its clients.

Climate-related risks are currently managed through the Bank's Business Continuity Management Program, which provides the capability to restore, maintain and manage critical operations and processes in the event of a business disruption, and through the Bank's Lending Practices and Policies, in order to evaluate the risks associated with credit counterparty transactions and exposures. The Bank has developed an initial climate risk heatmapping framework and conducted a climate risk identification and assessment on our commercial loan and residential mortgage portfolios at the sector level. This initial risk assessment helped us identify portfolios and industries that are most susceptible to climate-related risks. The framework will continue to evolve and will assist with the integration of climate risks into our overall risk management approach, and guide the Bank's strategy and serve as a basis for the Bank's climate scenario analysis of these industries for the years to come. In 2022, we've added climate risk to the enterprise risk registry, which is used to identify all risks that the Bank could be exposed to and their materiality for Laurentian Bank. We recognize that climate-related risks can have a wide range of impacts on our business activities. As part of our enterprise climate risk identification and assessment process, we've developed an initial climate risk inventory to identify the impacts that climate change may have on the Bank, our assets and clients. Over time, the Bank will be implementing the necessary actions to manage and mitigate these risks.

Legal and regulatory, business or reputational risks could arise from actual or perceived actions, or inaction, in our operations and those of our customers in relation to climate change and other environmental and social risk issues, or our disclosures related to these matters. Risks related to these issues could also affect our customers, suppliers or other stakeholders, which could heighten business or reputation risks. Globally, climate-related litigation or enforcement measures could arise from new and more detailed obligations to manage and report climate-related risks.

Metrics and targets

The Bank is committed to identifying metrics and targets as part of its TCFD roadmap. In 2020, the Bank initiated the calculation of its carbon footprint – scope one and two – based on WRI/ WBCSD Greenhouse Gas (GHG) Protocol. This initial step will allow the Bank to better understand its emissions and focus on GHG reduction opportunities, as well as to establish targets in the short to medium term.

The Bank is also committed to reducing its environmental footprint by implementing, on a voluntary basis, various eco-responsible measures aimed at reducing its GHG emissions. The Bank applies best practices when it comes to energy and waste management in its operations and encourages its employees to also consider the environment in their daily actions. For example, the Bank offsets CO2 emissions in its corporate office locations by way of a partnership with Bullfrog Power, which ensures that electricity put onto the grid on our behalf is from renewable sources. The Bank's corporate offices are located in LEED-certified buildings.

Other factors

Other factors, which are not under the Bank's control, could affect results, as discussed in the Caution Regarding Forward-Looking Statements on page 26 of this MD&A. It should be noted that the foregoing list of factors is not exhaustive.

DISCLOSURE CONTROLS AND PROCEDURES AND INTERNAL CONTROLS OVER FINANCIAL REPORTING

The Bank's disclosure controls and procedures (DC&P) are designed to provide reasonable assurance that all relevant information has been collected and submitted to the Bank's senior management which ensures adequate disclosure of such information. Internal Control over Financial Reporting (ICFR) is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with IFRS.

The President and Chief Executive Officer, and the Executive Vice-President and Chief Financial Officer are responsible for the implementation and maintenance of DC&P and ICFR, as set out in Regulation 52-109 respecting Certification of Disclosure in Issuers' Annual and Interim Filings (National Instrument 52-109). They are assisted in this task by the Disclosure Committee, which is comprised of members of the Bank's senior management.

As at October 31, 2022, the President and Chief Executive Officer and the Executive Vice-President and Chief Financial Officer caused to be evaluated under their supervision the effectiveness of DC&P, in accordance with National Instrument 52-109, and based on that evaluation, concluded that they were effective and adequately designed at that date.

Also, as at October 31, 2022, the President and Chief Executive Officer and the Executive Vice-President and Chief Financial Officer caused to be evaluated under their supervision the design and effectiveness of ICFR, in accordance with Regulation 52-109, and based on that evaluation, concluded that it was effective at that date and adequately designed.

The DC&P evaluation was performed using the control framework established in 2013 by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The evaluation of the design and effectiveness of ICFR was performed in accordance with the COSO control framework for entity level and financial controls, and Control Objectives for Information and related Technologies (COBIT) for general IT controls.

Given the inherent limitations of any control systems, management's evaluation of controls can only provide reasonable, not absolute assurance that all control issues that may result in material misstatement, if any, have been detected.

Changes to Internal Control over Financial Reporting

During the fourth quarter ended October 31, 2022, there have been no changes to ICFR that affected materially or are reasonably likely to materially affect ICFR.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The significant accounting policies followed by the Bank are outlined in Notes 2 and 3 of the Consolidated Financial Statements. Some of these accounting policies are deemed critical as they require management to apply judgment or to make particularly significant estimates that, by their very nature, involve uncertainties. Changes in these judgments or estimates could materially affect the Bank's Consolidated Financial Statements. The critical accounting policies and estimates are described below.

Management has established controls and procedures to ensure that accounting policies are applied consistently and that the processes for determining estimates are controlled and reviewed.

In view of the inherent uncertainties and the high level of subjectivity involved in the recognition or measurement of the items listed below, it is possible that the outcomes in future reporting periods could materially differ from those reflected in the financial statements.

Economic conditions impact on judgments, estimates and assumptions

The preparation of financial information requires the use of estimates and judgments about future economic conditions. The recent macro-economic developments, including high inflation and interest rate increases, have amplified uncertainty on the assumptions used by management in making its judgments and estimates. The comprehensive impact that recent macro-economic developments will have on the Canadian and U.S. economies and the Bank's business remain uncertain and difficult to predict.

FAIR VALUE OF FINANCIAL INSTRUMENTS

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 between market participants at the measurement date under current market conditions.

The fair value of a financial instrument on initial recognition is normally the transaction price, that is, the fair value of the consideration given or received. In certain circumstances, the initial fair value may be based on other observable market transactions for the same instrument or on a valuation technique.

Subsequent to initial recognition, the fair value of financial instruments is best evidenced by quoted prices in active markets when available. This fair value is based on the quoted price within the bid-offer prices that is most representative of fair value in the circumstances. Otherwise, fair value is measured using valuation techniques that maximize the use of relevant observable inputs and minimize the use of unobservable inputs. Determining which valuation technique and inputs to apply requires judgment. Valuation techniques include cash flow discounting, comparison with current market prices for financial instruments with similar characteristics and risk profiles and option pricing models. The inputs, among other things, include contractual prices of the underlying instruments, yield curves and volatility factors. The valuations may also be adjusted to reflect the uncertainty in these parameters. Valuation adjustments may specifically be made with respect to the liquidity or counterparty credit risk of financial instruments that have no available quoted prices in active markets. Fair value reflects market conditions on a given date and for this reason cannot be representative of future fair values.

Fair value measurements are categorized into levels within a fair value hierarchy based on the valuation inputs used. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect the Bank's market assumptions. These two types of inputs create the following fair value hierarchy:

- Level 1 — Quoted prices in active markets for identical financial instruments.
- Level 2 — Quoted prices for similar instruments in active markets; quoted prices for identical or similar financial instruments in markets that are not active; and model-derived valuations in which all significant inputs and significant value drivers are observable in active markets.
- Level 3 — Valuations derived from valuation techniques in which one or more significant inputs or significant value drivers are unobservable.

Establishing fair value is an accounting estimate and has an impact on Securities at fair value through profit or loss, Securities at fair value through other comprehensive income, Derivatives and Obligations related to securities sold short on the Consolidated Balance Sheet. This estimate also has an impact on Income from financial instruments in the Consolidated Statement of Income. Lastly, this estimate has an impact on Other comprehensive income in the Consolidated Statement of Comprehensive Income.

Refer to Note 22 to the Consolidated Financial Statements for additional information.

ALLOWANCES FOR CREDIT LOSSES

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 FVOCI, on loan commitments and financial guarantees that are not measured at fair value and on lease receivables. 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 6 to the Consolidated Financial Statements.The allowance for credit losses is sensitive to the inputs used in models, including macroeconomic variables used in the forward-looking scenarios and their respective weights. The comprehensive impact of recent macro-economic developments on the Canadian and U.S. economies is uncertain. Therefore, it remains difficult to predict whether these factors may result in write-offs in the future, or if the Bank will need to recognize additional increases or release portions of its allowances for credit losses in subsequent periods.

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, at 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, at an amount equal to lifetime expected credit losses is recorded. In subsequent reporting periods, if the credit risk of the financial instrument improves such that there is no longer a significant increase in credit risk since initial recognition, the ECL model requires reverting to Stage 1, i.e. recognition of 12-month expected credit losses. When one or more events that have a detrimental impact on the estimated future cash flows of a financial asset have occurred, the impaired financial asset is migrate to the stage 3, an allowance equal to the lifetime expected losses continues to be recorded or the financial asset is written off. Interest income is calculated on the gross carrying amount of the financial assets in stages 1 and 2 and on the net carrying amount of the 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 and external risk ratings. To assess whether the credit risk of a financial instrument has increased significantly, the 12-month probability of default (PD) at the reporting date is compared with the 12-month PD at the date of initial recognition, and reasonable and supportable information indicative of significant increases in credit risk since initial recognition is considered. 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 expected cash shortfalls over the remaining expected life of the financial instrument, and reasonable and supportable information about past events, current conditions and forecasts of future events and economic conditions is considered. The estimation and application of forward-looking information requires significant judgment. The cash shortfall is the difference between all contractual cash flows owed to the Bank and all the cash flows that the Bank expects to receive.

The measurement of ECLs is based primarily on the product of the instrument's PD, loss given default (LGD), and exposure at default (EAD) credit risk model parameters. Forward-looking macroeconomic factors such as interest rates, unemployment rates, gross domestic product (GDP) forecasts and housing price indices are incorporated into the risk parameters. The estimate of expected credit losses reflects an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes. The Bank incorporates three forward-looking macroeconomic scenarios in its ECL calculation process: a base scenario, an upside scenario, and a downside scenario. Probability-weights are attributed to each scenario. The scenarios and probability weights are reassessed quarterly and subject to management review. The Bank applies experienced credit judgment to adjust the modeled ECL results when it becomes evident that known or expected risk factors and information were not considered in the credit risk rating and modeling 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 FVOCI, ECLs are recognized in provisions for credit losses in the Consolidated Statement of Income, and a corresponding amount is recognized in Other comprehensive income with no reduction in the carrying amount of the asset on the Consolidated Balance Sheet. As for debt instruments measured at amortized cost, they are presented net of the related allowance for credit losses on the Consolidated Balance Sheet. Allowances for credit losses for off-balance-sheet credit exposures that are not measured at fair value are included in other liabilities on the Consolidated Balance Sheet.

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

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 as credit impaired when one or more events that have a detrimental impact on the estimated future cash flows of a financial asset have occurred or when contractual payments are 90 days past due.

Write-offs
The Bank writes off an impaired financial asset and its related allowance for credit losses in whole or in part when it considers the probability of recovery to be non-existent and when all guarantees and other remedies available to the Bank have been exhausted and balances owing are not likely to be recovered.

Modified loans
In some cases, the original terms of a financial asset may be renegotiated or otherwise modified, affecting the contractual cash flows. In the event of a substantial change in terms from the original financial asset, the financial asset is derecognized, and a new financial asset is recognized. If the modification of contractual terms does not result in derecognition of the financial asset, the carrying amount of the financial asset is recalculated according to the present value of the renegotiated or modified contractual cash flows, discounted at the original effective interest rate and a gain or loss is recognized.

GOODWILL, OTHER INTANGIBLE ASSETS AND OTHER LONG-LIVED ASSETS

Goodwill

As at October 31, 2022, goodwill stood at $83.7 million. Goodwill is subject to an impairment test at least annually as described in Note 3 to the Consolidated Financial Statements.

For the purpose of impairment testing, goodwill is allocated to the Bank's cash generating units (CGUs), which represent the lowest level within the Bank at which goodwill is monitored for internal management purposes. Goodwill as at October 31, 2022 and October 31, 2021 has been entirely allocated to the Commercial Banking CGU, which encompasses services provided to small and medium-sized enterprises across Canada and the United States. Prior to being written-off as of August 1, 2021, goodwill was also allocated to the Personal Banking CGU, which caters to the financial needs of retail clients. These CGUs are also operating segments, as described in Note 31 to the Consolidated Financial Statements.

The annual impairment test compares the recoverable amount of the CGU to its carrying amount. If the recoverable amount is less than the carrying value, an impairment loss is charged to income. The impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the CGU and then to the other non-financial assets of the CGU pro rata to the carrying amount of each asset considering that he carrying amount of an asset cannot be reduced below its fair value less costs of disposal.

Management uses several significant estimates to determine the recoverable amount of CGUs, including projected net income growth rates, future cash flows, the number of years used in the cash flow model and the discount rate of future cash flows. For the impairment test, the recoverable amount of the CGUs was estimated using a value in use calculation that was primarily based on the Bank's four-year business plan and projected investments. Forecast cash flows were discounted at an after-tax rate of 9.8% in 2022 (9.5% in 2021). Management considers that these estimates are reasonable and reflect management's best estimates, but include inherent uncertainties that are not under its control. Changes in estimates and assumptions could significantly impact the impairment test results.

Commercial Banking CGU

As at October 31, 2022, goodwill of $83.7 million was allocated to the Commercial Banking CGU. In 2022 and 2021, management determined that the estimated recoverable amount of the Commercial Banking segment was in excess of its carrying amount. As a result, no impairment charges were recognized in 2022 and 2021 for this segment.

Personal Banking CGU

Prior to being written-off as of August 1, 2021, goodwill was also allocated to the Personal Banking CGU. As a result of the 2021 annual impairment test, management determined that the estimated recoverable amount of the Personal Banking CGU was below its carrying amount. Consequently, the Bank recorded in 2021 an impairment charge of $93.4 million which affected assets as follows: goodwill for an amount of $34.9 million; software and intangible assets for $52.7 million; and premises and equipment for $5.8 million. The allocation of the impairment loss to the assets of the Personal Banking CGU, other than goodwill, was done based on the relative carrying amount of these assets. The impairment loss allocated to each asset did not reduce the carrying amount of assets below the greater of their fair value less costs of disposal, their value in use or zero. The fair value was mainly estimated using a depreciated replacement costs approach.

Refer to Note 10 to the Consolidated Financial Statements for additional information.

Other intangible assets and other long-lived assets

Other intangible assets with finite lives are also tested for impairment whenever circumstances indicate that the carrying value may not be fully recoverable. As it conducts this test, management evaluates the future cash flows it expects to realize from these assets. When the net carrying amount exceeds the estimated discounted future net cash flows, intangible assets with finite lives are considered impaired and are written down to their recoverable amount. Similar tests are performed at least annually for IT projects and other programs under development. For software and other intangible assets that do not generate separate cash inflows, the recoverable amount is determined for the CGU to which the corporate asset is allocated.

In 2021, indicators of impairment were identified for the Personal Banking CGU's assets. As noted above, the annual goodwill impairment test led the Bank to record an impairment charge of $93.4 million, including on software and intangible assets for $52.7 million and on premises and equipment for $5.8 million; refer to the Goodwill section above for details. These charges were recorded on the Impairment and restructuring charges line item.

In 2021, indicators of impairment were also identified for the Bank's leased corporate office premises given the shift to work-from-home resulting from the pandemic and the Bank's future of work plans. Consequently, the Bank compared the carrying value of its right-of-use assets to its recoverable amount and recorded a $36.7 million impairment charge. The recoverable amounts were determined using a value in use approach based on expected sublease terms over the remainder of the head-leases. The impairment charge, in 2021, was recorded on the Impairment and restructuring charges line item.

In 2022, indicators of potential impairment were also identified for the Bank's assets, which led management to perform an impairment test for all CGUs. As the estimated recoverable amount of the CGUs was in excess of their carrying amount, there was no impairment charge recorded on software and other intangible assets.

Management also periodically reviews the utilization of the Bank's assets, such as its software, fixed assets and other deferred charges. In 2021, impairment of software and other assets of $31.5 million was recorded on the Impairment and restructuring charges line item related to management's decision to cease Phase 2 of the core banking system program. In 2022, other impairment charges of $3.9 million were recorded.

Refer to Notes 8, 9, 10 and 30 to the Consolidated Financial Statements for additional information.

POST-EMPLOYMENT BENEFITS

The Bank sponsors several benefit plans to eligible employees, including registered and supplemental pension plans, and post-retirement medical and dental plans (other post-employment benefit plans). The valuation of employee benefits for defined benefit pension plans and other post-employment benefits are calculated by the Bank's actuaries based on several assumptions such as discount rates, future salary levels, retirement age, mortality rate and health-care cost escalation. The discount rate is determined using a high-quality corporate bond yield curve, whose construction requires significant judgment. Other key assumptions are determined by management and also require significant judgment. Considering the importance of defined benefit obligations and due to the long-term nature of these plans, changes in assumptions could have a significant impact on the defined benefit plan assets (liabilities), as well as on pension plan and other post-employment benefit expenses. Discount rates stood at 5.24% as at October 31, 2022 and 3.37% as at October 31, 2021. Other key assumptions and related sensitivity analysis as well as further information on the Bank's pension plans and other post-employment benefits are presented in Note 18 to the Consolidated Financial Statements.

INCOME TAXES

The Bank is subject to taxation in numerous jurisdictions. There are many transactions and calculations in the ordinary course of business for which the ultimate tax determination is uncertain. The Bank maintains provisions for uncertain tax positions that it believes appropriately reflect the risk of tax positions under discussion, audit, dispute, or appeal with tax authorities, or which are otherwise considered to involve uncertainty. These provisions are made using the Bank's best estimate of the amount expected to be paid based on an assessment of all relevant factors, which are reviewed at the end of each reporting period. However, it is possible that at some future date, an additional liability could result from audits by the relevant taxing authorities.

The Bank uses the liability method of tax allocation and accounts for the deferred income tax assets and liabilities related to loss carry forwards and other temporary differences between the carrying amounts and the tax bases of assets and liabilities, in accordance with tax laws and rates enacted or substantively enacted on the date the differences are expected to reverse. A valuation allowance is established, as needed, to reduce the deferred income tax asset to the amount that is more likely than not to be realized. All amounts resulting from changes in tax rates are recorded in net income, except to the extent that it relates to items previously recognized in equity, in which case they are recorded in equity.

PROVISIONS AND CONTINGENT LIABILITIES

Management exercises judgment in determining whether a past event or transaction may result in the recognition of a provision or the disclosure of a contingent liability, for instance in the case of legal actions or restructuring plans. Provisions are liabilities of uncertain timing or amount. They are recognized when the Bank has a present legal or constructive obligation as a result of a past event, and it is both probable that an outflow of resources will be required to settle the obligation and the amount can be reliably estimated, considering all relevant risks and uncertainties. Contingent liabilities are disclosed when it cannot be determined whether an obligation is probable, or the amount of loss cannot reliably be estimated. Management and internal and external experts are involved in assessing the probability and in estimating any amounts involved.

In the ordinary course of business, the Bank and its subsidiaries are involved in various legal and regulatory proceedings. Such proceedings involve a variety of issues, and the timing of their resolution is varied and uncertain. Legal provisions are recognized when it becomes probable that the Bank will incur an expense related to legal proceedings and the amount can be reliably estimated. Legal provisions are recorded at the best estimate of the amounts required to settle the obligation as at the reporting date, taking into account the risks and uncertainties associated with the obligation. Management and external experts are involved in estimating any legal provision, as necessary. The actual costs of settling some obligations may be substantially higher or lower than the amounts of the provisions. In some cases, it is not possible to either determine whether an obligation is probable or to reliably estimate the amount of loss, in which case no accrual can be made. This is an area of significant judgment and uncertainty, given the varying stages of the proceedings, the fact that the Bank's liability, if any, has yet to be determined and the fact that the underlying matters will change from time to time. As such the extent of our financial and other exposure to such legal proceedings, after taking into account current accruals, could be material to our results of operations in any period.

Refer to Note 29 to the Consolidated Financial Statements for additional information.

FUTURE CHANGES TO ACCOUNTING POLICIES

The International Accounting Standards Board (IASB) has issued new standards and amendments to existing standards which were not yet effective for the year ended October 31, 2022. These future accounting changes are applicable for the Bank in various annual periods beginning on November 1, 2023. Additional information on the new standards and amendments to existing standards can be found in Note 4 of the Consolidated Financial Statements.

Insurance Contracts (IFRS 17)

In May 2017, the IASB issued IFRS 17, *Insurance Contracts*, which sets out the principles for the recognition, measurement, presentation and disclosure of insurance contracts. IFRS 17 replaces the previous insurance contract standard, IFRS 4, *Insurance Contracts*. In March 2020, the IASB has completed its discussions on the amendments to IFRS 17 that were proposed for public consultation in June 2019 and decided that the effective date of the Standard will be deferred to annual reporting periods beginning on or after January 1, 2023. The IASB also decided to extend the exemption currently in place for some insurers regarding the application of IFRS 9, *Financial Instruments* to enable them to implement both IFRS 9 and IFRS 17 at the same time. The Bank is currently assessing the impact of the adoption of this standard on its Consolidated Financial Statements.

GLOSSARY

GENERAL TERMS

Allowances for credit losses (ACL) represent the Bank's estimate of expected credit losses (ECL) at the balance sheet date. ECLs are a probability-weighted estimate of credit losses over the remaining expected life of the financial instrument. These allowances are primarily related to loans and acceptances and off-balance sheet exposures, including letters of guarantee and certain undrawn amounts under approved credit facilities.

Alt-A mortgages represent a classification of mortgages where borrowers have a clean credit history consistent with prime lending criteria. However, characteristics about the mortgage such as loan to value, loan documentation, occupancy status or property type, may cause the mortgage not to qualify under standard underwriting programs.

Bankers' acceptances (BAs) are bills of exchange or negotiable instruments drawn by a borrower for payment at maturity and accepted by a bank. BAs constitute a guarantee of payment by the Bank and can be traded in the money market. The Bank earns a "stamping fee" for providing this guarantee.

Basis point represents one one-hundredth of a percentage point.

Derivatives are contracts whose value is "derived" from movements in interest or foreign exchange rates, or equity or commodity prices. Derivatives allow for the transfer, modification or reduction of current or expected risks from changes in rates and prices.

Earnings per share (EPS) is calculated by dividing net income after deduction of preferred dividends, by the average number of common shares outstanding. Diluted EPS is calculated by adjusting the number of shares outstanding for possible conversions of financial instruments into common shares.

Effective interest rate represents the discount rate applied to estimated future cash payments or receipts over the expected life of the financial instrument to arrive at the net carrying amount of the financial asset or liability.

Fair value is the estimated price that would be received or paid in an orderly transaction between market participants at the measurement date.

Hedging is a risk management technique used to neutralize or manage interest rate, foreign currency, or credit exposures arising from normal banking activities by taking positions that are expected to react to market conditions in an offsetting manner.

Impaired loans consist of loans where one or more events that have a detrimental impact on the estimated future cash flows of a loan have occurred or when contractual payments are 90 days past due.

Net interest income is comprised of earnings on assets, such as loans and securities, including interest and dividend income, less interest expense paid on liabilities, such as deposits.

Notional amount refers to the principal used to calculate interest and other payments under derivative contracts.

Off-balance sheet financial instruments represent a variety of financial arrangements offered to clients, which include for the Bank derivatives, credit commitments and guarantees, and other indemnifications.

Options are contractual agreements between two parties in which the writer of the option grants the buyer the right, but not the obligation, to either buy or sell, at or by a specified date, a specific amount of a financial instrument at a price agreed upon when the agreement is entered into. The writer receives a premium for selling this instrument.

Provision for credit losses (PCL) is an amount charged or credited to income to adjust the allowances for credit losses to the appropriate level, for both performing and impaired financial assets.

Securities purchased under reverse repurchase agreements and obligations related to securities sold under repurchase agreements are short-term purchases of securities under agreements to resell as well as short-term sales of securities under agreements to repurchase at predetermined prices and dates. Given the low risk transfer associated with these purchases and sales, these agreements are treated as collateralized lending.

Swaps are contractual agreements between two parties to exchange a series of cash flows for a specified period of time. The various swap agreements that the Bank enters into are interest rate swaps, cross-currency swaps, foreign exchange swaps and total return swaps.

SUPPLEMENTARY FINANCIAL MEASURES

Allowances for credit losses as a % of total loans and acceptances is defined as allowances for credit losses as a percentage of total loans and acceptances.

Assets under administration mostly refers to assets related to registered and non-registered investment accounts, clients' brokerage assets, mutual funds and loans administered by the Bank that are beneficially owned by clients and therefore not reported on the balance sheet of the Bank.

Average earning assets include the Bank's loans net of allowances, as well as interest-bearing deposits with other banks, securities, securities purchased under reverse repurchase agreements used in the Bank's treasury operations and derivatives, but exclude average earning assets related to trading activities. The averages are based on the daily balances for the period.

Dividend payout ratio is defined as dividends declared on common shares as a percentage of net income available to common shareholders.

Dividend yield is defined as dividends declared per common share divided by the closing common share price.

Efficiency ratio is a measure of productivity and cost control and is defined as non-interest expenses as a percentage of total revenue.

Gross impaired loans as a % of loans and acceptances is defined as impaired loans as a percentage of total loans and acceptances at the end of the period.

Interest-bearing liabilities include the Bank's deposits, debt related to securitization activities and subordinated debt used in the Bank's treasury operations and derivatives, but exclude interest-bearing liabilities related to trading activities.

Liquid assets consist of cash, deposits with banks, securities and securities purchased under reverse repurchase agreements.

Net interest margin is the ratio of net interest income to average earning assets (based on the daily balances for the period), expressed as a percentage or basis points.

Net impaired loans as a % of loans and acceptances is defined as impaired loans less allowances for credit losses for impaired loans, as a percentage of total loans and acceptances at the end of the period.

Operating leverage is a measure of efficiency and is the difference between total revenue and non-interest expenses growth rates.

Provision for credit losses as a % of average loans and acceptances is defined as provision for credit losses as a percentage of average loans and acceptances. For average loans and acceptances, the averages are based on the daily balances for the period.

Price / earnings ratio is defined as closing common share price divided by basic earnings per share.

RISK AND CAPITAL TERMS

Basel II is the second of the Basel Accords, which are recommendations on banking laws and regulations issued by the Basel Committee on Banking Supervision (BCBS). The purpose of Basel II is to create an international standard that banking regulators can use when creating regulations about how much capital banks need to put aside to guard against the types of financial and operational risks banks face. The Basel II Accord also introduced the Advanced Internal-Ratings Based (AIRB) approach for credit risk.

Basel III is a comprehensive set of reform measures, developed by the BCBS, to strengthen the Basel II Accord as well as the supervision and risk management of the banking sector. These measures also introduced liquidity adequacy requirements.

Capital ratios are defined as either Common Equity Tier 1 capital, Tier 1 capital or Total capital divided by risk-weighted assets.

Common Equity Tier 1 (CET1) capital represents, under Basel III, more permanent forms of capital, and primarily consists of common shareholders' equity and accumulated other comprehensive income (AOCI), less a deduction for goodwill, software and other intangibles, net pension assets, cash flow hedge reserves and certain other deductions prescribed by OSFI.

Credit and counterparty risk is the risk of a financial loss occurring if a counterparty (including a debtor, an issuer or a guarantor) in a transaction fails to fully honour its contractual or financial obligation towards the Bank.

Leverage ratio is comprised of Tier 1 capital, divided by unweighted on-balance sheet assets and off-balance sheet commitments, derivatives and securities financing transactions.

Liquidity coverage ratio (LCR) measures the sufficiency of high-quality liquid assets available to meet net short-term financial obligations over a thirty-day period in an acute stress scenario.

Operational risk is the risk of loss or harm resulting from a failure ascribable to human resources, inadequate or failed internal processes or technology and systems, or from external events including legal risk but excluding regulatory, strategic and reputational risks

Probability of default (PD) is an estimated percentage that represents the likelihood of default within a given time period of an obligor for a specific rating grade or for a specific pool of exposure.

Exposure at default (EAD) is an amount expected to be owed by an obligor at the time of default.

Loss given default (LGD) is an estimated percentage of EAD that is not expected to be recovered during the collections and recovery process.

Risk-weighted assets are assets calculated by applying a risk-weight factor to on and off-balance sheet exposure. The Bank uses standardized risk-weight factors as stipulated by OSFI, based on the guidelines developed by the Bank for International Settlement (BIS).

Tier 1 capital primarily consists of CET1 capital and preferred shares.

Total capital includes Tier 1 and Tier 2 capital, net of certain deductions. Tier 2 capital is primarily comprised of subordinated debt and the eligible portion of collective allowances for loan losses.

LAURENTIAN BANK OF CANADA CONSOLIDATED FINANCIAL STATEMENTS

AS AT OCTOBER 31, 2022 AND 2021

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL REPORTING

The management of the Laurentian Bank of Canada is responsible for the integrity and fair presentation of the financial information contained in the Annual Report. The Consolidated Financial Statements have been prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB). The Consolidated Financial Statements also comply with the accounting requirements of the *Bank Act* and the requirements of the Office of the Superintendent of Financial Institutions Canada (OSFI).

The Consolidated Financial Statements include amounts that, where necessary, are based on the best estimates and judgment of management. The financial information presented elsewhere in the Annual Report is consistent with that shown in the Consolidated Financial Statements.

Management is responsible for the implementation of the financial information accounting systems, which support, among others, the preparation of the Consolidated Financial Statements in accordance with IFRS. In discharging its responsibilities, management maintains the necessary internal control systems designed to provide assurance that transactions are properly authorized, assets are safeguarded, and proper accounting records are held. The controls include, among other things, quality standards in hiring and training of employees, written policies, compliance with authorized limits for managers, procedure manuals, a corporate code of conduct, budgetary controls and appropriate management information systems.

The internal control systems are further supported by a regulatory compliance function, which ensures that the Bank and its employees comply with regulatory requirements, as well as by risk management and operational risk management functions that ensure proper risk control including maintaining the related documentation and the measurement of the financial impact of risks. In addition, the internal audit function periodically assesses various aspects of the Bank's operations and make recommendations to management for improvements to the internal control systems.

The Office of the Superintendent of Financial Institutions Canada (OSFI) is mandated to protect the rights and interests of depositor and creditors of the Bank. Accordingly, OSFI examines and inquires into the business and affairs of the Bank, as deemed necessary, to ensure that the provisions of the *Bank Act* are being complied with and that the Bank is in sound financial position.

The Board of Directors is responsible for reviewing and approving the Consolidated Financial Statements, as well as the Management's Discussion and Analysis of results of operations and financial condition included in the Annual Report. It oversees the way management discharges its responsibilities for the preparation and presentation of the Consolidated Financial Statements, the maintenance of appropriate internal controls and risk management, as well as the assessment of significant transactions through its Audit Committee and its Risk Management Committee. Both Board committees are composed solely of directors who are not officers or employees of the Bank.

Ernst & Young LLP, the independent auditor appointed by the shareholders on recommendation of the Board, audits the Bank's Consolidated Financial Statements and their report follows. The auditor has full and unrestricted access to the Audit Committee to discuss audit and financial reporting matters.

Rania Llewellyn

President and
Chief Executive Officer

Yvan Deschamps

Executive Vice President
and Chief Financial Officer

Montréal, Canada

December 8, 2022

INDEPENDENT AUDITOR'S REPORT

To the Shareholders of **Laurentian Bank of Canada**

Opinion

We have audited the consolidated financial statements of **Laurentian Bank of Canada** and its subsidiaries (the "Bank" or the "Group"), which comprise the consolidated balance sheets as at October 31, 2022 and October 31, 2021, and the consolidated statements of income, consolidated statements of comprehensive income, consolidated statements of changes in shareholders' equity and 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 "consolidated financial statements").

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects the consolidated financial position of the Group as at October 31, 2022 and October 31, 2021, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with International Financial Reporting Standards (IFRSs).

Basis for opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the consolidated financial statements section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Canada, and we have fulfilled our 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 consolidated financial statements of the year ended October 31, 2022. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our auditor's opinion thereon, and we do not provide a separate opinion on these matters. For the matter below, our description of how our audit addressed the matter is provided in that context.

We have fulfilled the responsibilities described in the Auditor's responsibilities for the audit of the consolidated financial statements section of our report, including in relation to this matter. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the consolidated financial statements. The results of our audit procedures, including the procedures performed to address the matter below, provide the basis for our audit opinion on the accompanying consolidated financial statements.

Key Audit Matter	How our audit addressed the key audit matter
Allowance for credit losses	
As more fully described in Note 3 and Note 6 to the consolidated financial statements, the Bank's allowance for credit losses related to loans was $201.2 million as at October 31, 2022. The Bank uses an expected credit loss (ECL) model to determine the allowance for credit losses on loans measured on a collective basis. The ECL is an unbiased and probability-weighted amount, which is determined by evaluating a range of possible outcomes and reasonable and supportable information about past events, current conditions and forecasts of future events and economic conditions. The Bank applies a three-stage approach to measure the ECL which is based primarily on the product of the loan's probability of default (PD), loss given default (LGD) and exposure at default (EAD). In establishing ECL, the Bank incorporates three forward-looking macroeconomic scenarios, which represent the Bank's view of a range of possible economic outcomes – a base case scenario being the Bank's view of the most probable outcome, as well as an upside scenario and a downside scenario. Where there has been a significant increase in credit risk (SICR) since initial recognition, lifetime ECL is recorded; otherwise 12 months of ECL is generally recorded. The significant increase in credit risk assessment is based on the change in PD between the origination date and reporting date and is assessed using relative and absolute thresholds. Auditing the allowance for credit losses on loans measured on a collective basis was complex and required the involvement of specialists due to the inherent complexity of the models, the forward-looking nature of key assumptions, and the inherent interrelationship of the critical variables used in measuring the ECL. Key areas of judgement included evaluating: (i) the models and methodologies used for measuring both the 12-month and lifetime expected credit losses; (ii) the determination of when a loan has experienced a SICR; (iii) the assumptions used in the macroeconomic	To test the allowance for credit losses, our audit procedures included, among others, involving our credit risk modelling specialists to assess whether the methodology and assumptions used in significant models that estimate the ECL across various portfolios are consistent with the requirements of IFRS and industry standards. This also included an assessment of management's SICR triggers. With the assistance of our economic specialists, we compared management's FLI and scenarios' weighting to publicly available information. On a sample basis, we independently recalculated the ECL to test the mathematical accuracy of management's models. We tested the completeness and accuracy of data used in the measurement of the ECL by agreeing those to source systems and related documentation. With the assistance of our credit risk modelling specialists, we also evaluated management's methodology and governance over the application of management's experienced credit judgment by evaluating that the amounts recorded were reflective of underlying credit quality and macroeconomic trends. We also reviewed the adequacy of the allowance for credit loss financial statement note disclosures.

scenarios including forward-looking information (FLI) and assigning probability weighting; and (iv) the application of management's experienced credit judgment to adjust the modeled ECL results when known or expected risk factors were not considered in the credit risk rating and modelling process.

Other information included in the Group's 2022 annual report

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

- Management's discussion and analysis
- The information, other than the consolidated financial statements and our auditor's report thereon, included in the Annual Report.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information, and in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

We obtained management's discussion & analysis and the annual report prior to the date of this auditor's report. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of management and those charged with governance for the consolidated financial statements

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

In preparing the consolidated financial statements, management is responsible for assessing the Group'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 Group or to cease operations, or has no realistic alternative but to do so.

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

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated 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 generally accepted auditing standards 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 consolidated financial statements.

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

- Identify and assess the risks of material misstatement of the consolidated 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 Group'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 Group'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 consolidated 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 Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure, and content of the consolidated financial statements, including the disclosures, and whether the consolidated 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 Group to express an opinion on the consolidated 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 consolidated 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 partner in charge of the audit resulting in this independent auditor's report is Michel Bergeron.

Ernst & Young LLP [1]

[1] FCPA auditor, public accountancy permit no A114960

Montréal, Canada

December 8, 2022

CONSOLIDATED BALANCE SHEET

As at October 31 (in thousands of Canadian dollars)	Notes	2022	2021
Assets			
Cash and non-interest bearing deposits with banks		$ 79,702	$ 69,002
Interest-bearing deposits with banks		1,811,221	598,121
Securities	5 and 7		
At amortized cost		3,004,405	3,189,455
At fair value through profit or loss (FVTPL)		2,993,434	3,050,658
At fair value through other comprehensive income (FVOCI)		186,622	259,080
		6,184,461	6,499,193
Securities purchased under reverse repurchase agreements		3,727,752	2,764,281
Loans	6 and 7		
Personal		3,266,635	3,681,341
Residential mortgage		16,157,480	15,856,999
Commercial		18,057,146	14,106,423
Customers' liabilities under acceptances		99,800	—
		37,581,061	33,644,763
Allowances for loan losses		(193,476)	(195,056)
		37,387,585	33,449,707
Other			
Derivatives	25	312,538	263,014
Premises and equipment	8	121,227	100,576
Software and other intangible assets	9	294,438	278,295
Goodwill	10	83,710	78,429
Deferred tax assets	19	71,533	58,492
Other assets	11	642,591	917,914
		1,526,037	1,696,720
		$ 50,716,758	$ 45,077,024
Liabilities and shareholders' equity			
Deposits	12		
Personal		$ 22,234,036	$ 18,151,044
Business, banks and other		4,897,770	4,837,185
		27,131,806	22,988,229
Other			
Obligations related to securities sold short		3,221,358	3,251,682
Obligations related to securities sold under repurchase agreements		2,924,295	2,771,474
Acceptances		99,800	—
Derivatives	25	808,958	153,069
Deferred tax liabilities	19	54,255	48,244
Other liabilities	13 and 29	1,166,208	1,618,144
		8,274,874	7,842,613
Debt related to securitization activities	7 and 14	12,192,422	11,255,530
Subordinated debt	15	336,553	349,782
Shareholders' equity			
Preferred shares	16	122,071	122,071
Limited recourse capital notes	16	122,332	123,612
Common shares	16	1,167,549	1,172,722
Retained earnings		1,322,381	1,195,264
Accumulated other comprehensive income		42,045	23,534
Share-based compensation reserve	17	4,725	3,667
		2,781,103	2,640,870
		$ 50,716,758	$ 45,077,024

The accompanying notes are an integral part of the Consolidated Financial Statements.

Michael Mueller
Chairman of the Board

Rania Llewellyn
President and Chief Executive Officer

CONSOLIDATED STATEMENT OF INCOME

For the years ended October 31 (in thousands of Canadian dollars, except per share amounts)	Notes	2022	2021
Interest and dividend income	26		
Loans		$ 1,336,332	$ 1,118,161
Securities		60,792	45,661
Deposits with banks		14,462	1,821
Other, including derivatives		62,772	87,672
		1,474,358	1,253,315
Interest expense	26		
Deposits		467,810	364,291
Debt related to securitization activities		207,183	175,964
Subordinated debt		20,486	15,208
Other, including derivatives		45,543	5,511
		741,022	560,974
Net interest income		733,336	692,341
Other income			
Lending fees		69,068	69,446
Fees and securities brokerage commissions		50,652	64,226
Income from mutual funds		48,022	49,088
Income from financial instruments	26	31,771	29,590
Service charges		29,815	30,746
Card service revenues		28,834	27,342
Fees on investment accounts		14,094	15,509
Insurance income, net	27	8,978	10,219
Other	28	19,665	13,950
		300,899	310,116
Total revenue		1,034,235	1,002,457
Provision for credit losses	6	56,878	49,500
Non-interest expenses			
Salaries and employee benefits		386,157	370,400
Premises and technology		179,946	193,005
Other		133,730	125,113
Impairment and restructuring charges	30	1,828	191,844
		701,661	880,362
Income before income taxes		275,696	72,595
Income taxes	19	49,113	15,526
Net income		$ 226,583	$ 57,069
Preferred share dividends and limited recourse capital note interest	16	11,779	12,265
Net income available to common shareholders		$ 214,804	$ 44,804
Earnings per share	20		
Basic		$ 4.96	$ 1.03
Diluted		$ 4.95	$ 1.03
Dividends per common share		$ 1.78	$ 1.60

The accompanying notes are an integral part of the Consolidated Financial Statements.

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

For the years ended October 31 (in thousands of Canadian dollars)		2022		2021
Net income	$	**226,583**	$	57,069
Other comprehensive income, net of income taxes				
Items that may subsequently be reclassified to the Consolidated Statement of Income				
Net change in debt securities at FVOCI				
Unrealized net losses on debt securities at FVOCI		**(1,432)**		(1,271)
Reclassification of net (gains) losses on debt securities at FVOCI to net income		**532**		(235)
		(900)		(1,506)
Net change in value of derivatives designated as cash flow hedges		**(19,488)**		(1,498)
Net foreign currency translation adjustments				
Net unrealized foreign currency translation gains (losses) on investments in foreign operations		**68,662**		(35,949)
Net gains (losses) on hedges of investments in foreign operations		**(29,763)**		10,272
		38,899		(25,677)
		18,511		(28,681)
Items that may not subsequently be reclassified to the Consolidated Statement of Income				
Remeasurement gains on employee benefit plans		**16,852**		30,877
Net gains (losses) on equity securities designated at FVOCI		**(20,802)**		39,050
		(3,950)		69,927
Total other comprehensive income, net of income taxes		**14,561**		41,246
Comprehensive income	$	**241,144**	$	98,315

INCOME TAXES — OTHER COMPREHENSIVE INCOME

The following table shows income tax expense (recovery) for each component of other comprehensive income.

For the years ended October 31 (in thousands of Canadian dollars)		2022		2021
Net change in debt securities at FVOCI				
Unrealized net losses on debt securities at FVOCI	$	**(516)**	$	(558)
Reclassification of net (gains) losses on debt securities at FVOCI to net income		**192**		(85)
		(324)		(643)
Net change in value of derivatives designated as cash flow hedges		**(7,022)**		(543)
Net foreign currency translation adjustments				
Net gains (losses) on hedges of investments in foreign operations		**262**		(159)
Remeasurement gains on employee benefit plans		**6,068**		11,119
Net gains (losses) on equity securities designated at FVOCI		**(7,976)**		14,108
	$	**(8,992)**	$	23,882

The accompanying notes are an integral part of the Consolidated Financial Statements.

CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

For the year ended October 31, 2022

(in thousands of Canadian dollars)	Preferred shares (Note 16)	Limited recourse capital notes (Note 16)	Common shares (Note 16)	Retained earnings	Accumulated other comprehensive income: Debt securities at FVOCI	Accumulated other comprehensive income: Cash flow hedges	Accumulated other comprehensive income: Translation of foreign operations	Accumulated other comprehensive income: Total	Share-based compen-sation reserve	Total shareholders' equity
Balance as at October 31, 2021	$ 122,071	$ 123,612	$ 1,172,722	$ 1,195,264	$ 278	$ 42,095	(18,839)	$ 23,534	$ 3,667	$ 2,640,870
Net income				226,583						226,583
Other comprehensive income, net of income taxes										
Unrealized net losses on debt securities at FVOCI					(1,432)			(1,432)		(1,432)
Reclassification of net losses on debt securities at FVOCI to net income					532			532		532
Net change in value of derivatives designated as cash flow hedges						(19,488)		(19,488)		(19,488)
Net unrealized foreign currency translation gains on investments in foreign operations							68,662	68,662		68,662
Net losses on hedges of investments in foreign operations							(29,763)	(29,763)		(29,763)
Remeasurement gains on employee benefit plans				16,852						16,852
Net losses on equity securities designated at FVOCI				(20,802)						(20,802)
Comprehensive income				222,633	(900)	(19,488)	38,899	18,511		241,144
Net purchase of treasury limited recourse capital notes		(1,280)		(203)						(1,483)
Issuance of common shares			5,622							5,622
Repurchase of common shares for cancellation			(10,795)	(6,419)						(17,214)
Share-based compensation									1,058	1,058
Dividends and other										
Preferred shares and limited recourse capital notes				(11,779)						(11,779)
Common shares				(77,115)						(77,115)
Balance as at October 31, 2022	$ 122,071	$ 122,332	$ 1,167,549	$ 1,322,381	$ (622)	$ 22,607	$ 20,060	$ 42,045	$ 4,725	$ 2,781,103

The accompanying notes are an integral part of the Consolidated Financial Statements.

CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY (CONT'D)

For the year ended October 31, 2021

					Accumulated Other Comprehensive Income					
(in thousands of Canadian dollars)	Preferred shares [Note 16]	Limited recourse capital notes [Note 16]	Common shares [Note 16]	Retained earnings	Debt securities at FVOCI	Cash flow hedges	Translation of foreign operations	Total	Share-based compen-sation reserve	Total shareholders' equity
Balance as at October 31, 2020	$ 244,038	$ —	$ 1,159,488	$ 1,152,973	$ 1,784	$ 43,593	$ 6,838	$ 52,215	$ 2,527	$ 2,611,241
Net income				57,069						57,069
Other comprehensive income, net of income taxes										
Unrealized net losses on debt securities at FVOCI					(1,271)			(1,271)		(1,271)
Reclassification of net gains on debt securities at FVOCI to net income					(235)			(235)		(235)
Net change in value of derivatives designated as cash flow hedges						(1,498)		(1,498)		(1,498)
Net unrealized foreign currency translation losses on investments in foreign operations							(35,949)	(35,949)		(35,949)
Net gains on hedges of investments in foreign operations							10,272	10,272		10,272
Remeasurement gains on employee benefit plans				30,877						30,877
Net gains on equity securities designated at FVOCI				39,050						39,050
Comprehensive income				126,996	(1,506)	(1,498)	(25,677)	(28,681)		98,315
Issuance of common shares			13,234							13,234
Issuance of limited recourse capital notes		123,612								123,612
Repurchase of share capital	(121,967)			(3,033)						(125,000)
Share-based compensation									1,140	1,140
Dividends										
Preferred shares				(12,265)						(12,265)
Common shares				(69,407)						(69,407)
Balance as at October 31, 2021	$ 122,071	$ 123,612	$ 1,172,722	$ 1,195,264	$ 278	$ 42,095	$ (18,839)	$ 23,534	$ 3,667	$ 2,640,870

The accompanying notes are an integral part of the Consolidated Financial Statements.

CONSOLIDATED STATEMENT OF CASH FLOWS

For the years ended October 31 (in thousands of Canadian dollars)	Notes	2022	2021
Cash flows relating to operating activities			
Net income		$ 226,583	$ 57,069
Adjustments to determine net cash flows relating to operating activities:			
Provision for credit losses	6	56,878	49,500
Deferred income taxes	19	(6,490)	(22,057)
Impairment of software, intangible assets and premises and equipment		3,886	163,279
Depreciation of premises and equipment	8	17,104	22,013
Amortization of software and other intangible assets	9	35,380	39,504
Change in operating assets and liabilities:			
Loans		(4,301,346)	(495,352)
Acceptances		99,800	—
Securities at FVTPL		57,224	(635,719)
Securities purchased under reverse repurchase agreements		(963,471)	375,947
Accrued interest receivable		(70,871)	5,138
Derivative assets		(49,524)	32,108
Deposits		4,143,577	(931,974)
Obligations related to securities sold short		(30,324)	230,973
Obligations related to securities sold under repurchase agreements		152,821	359,825
Accrued interest payable		22,306	(108,940)
Derivative liabilities		655,889	25,657
Debt related to securitization activities		936,892	1,071,033
Other, net		(89,426)	(144,343)
		896,888	93,661
Cash flows relating to financing activities			
Payment of lease liabilities		(17,370)	(19,720)
Net proceeds from issuance of subordinated debt	15	347,743	—
Repurchase and redemption of subordinated debt	15	(361,779)	—
Repurchase and redemption of preferred shares	16	—	(125,000)
Net proceeds from issuance of limited recourse capital notes	16	—	123,612
Net purchase of treasury limited recourse capital notes	16	(1,280)	—
Net proceeds from issuance of common shares	16	1,911	48
Repurchase of common shares for cancellation	16	(17,214)	—
Dividends and other distributions		(92,718)	(52,698)
		(140,707)	(73,758)
Cash flows relating to investing activities			
Change in securities at amortized cost			
Acquisitions		(3,303,262)	(2,475,572)
Proceeds on sale and at maturity		3,488,358	2,395,815
Change in securities at FVOCI			
Acquisitions		(1,085,853)	(997,899)
Proceeds on sale and at maturity		1,126,144	1,064,557
Proceeds on sale of loan portfolios		291,729	19,529
Additions to premises and equipment and software and other intangible assets	8 and 9	(63,049)	(28,105)
Change in interest-bearing deposits with banks		(1,213,100)	5,060
		(759,033)	(16,615)
Effect of exchange rate changes on cash and non-interest-bearing deposits with banks		13,552	(3,947)
Net change in cash and non-interest bearing deposits with banks		10,700	(659)
Cash and non-interest bearing deposits with banks at beginning of period		69,002	69,661
Cash and non-interest bearing deposits with banks at end of period		$ 79,702	$ 69,002
Supplemental disclosure about cash flows relating to operating activities:			
Interest paid during the year		$ 682,079	$ 680,999
Interest received during the year		$ 1,396,128	$ 1,258,841
Dividends received during the year		$ 12,678	$ 13,067
Income taxes paid during the year		$ 75,442	$ 20,196

The accompanying notes are an integral part of the Consolidated Financial Statements.

Comparative figures have been reclassified to conform to the current year presentation.

1. GENERAL INFORMATION

Laurentian Bank of Canada (the Bank) provides financial services to its personal, commercial and institutional customers. The Bank operates primarily across Canada, with a presence in the United States. Refer to Note 31 for further details on the Bank's operating segments.

The Bank is the ultimate parent of the group. The Bank is a chartered bank under Schedule 1 of the *Bank Act* (Canada) and has its head office in Montreal, Canada, with a registered office in Toronto, Canada. The Bank's common shares (stock symbol: LB) are listed on the Toronto Stock Exchange.

The Consolidated Financial Statements for the year ended October 31, 2022 were approved for issuance by the Board of Directors on December 8, 2022.

2. BASIS OF PRESENTATION

These Consolidated Financial Statements have been prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB). These Consolidated Financial Statements also comply with the *Bank Act* and the requirements of the Office of the Superintendent of Financial Institutions Canada (OSFI).

Unless stated otherwise, the accounting policies described in Note 3, Summary of Significant Accounting Policies have been applied consistently to all periods presented.

These Consolidated Financial Statements were prepared under a historical cost basis, except for certain items carried at fair value as discussed in Note 3.

Unless otherwise indicated, all amounts are expressed in Canadian dollars, which is the Bank's presentation currency. Items included in the financial statements of each of the Bank's entities are measured using their functional currency, which is the currency of the primary economic environment in which they operate.

2.1 BASIS OF CONSOLIDATION

These Consolidated Financial Statements include the assets, liabilities and operating results of the Bank and all the entities which it controls, after elimination of intercompany balances and transactions. The Bank controls an entity when it has the power to direct the activities of the entity which have the most significant impact on the entity's risks and/or returns, it is exposed to significant risks and/or returns arising from the entity, and it is able to use its power to affect the risks and/or returns to which it is exposed.

Subsidiaries

Subsidiaries are consolidated from the date the Bank obtains control and continue to be consolidated until the date when control ceases to exist. The financial statements of the Bank's subsidiaries are prepared for the same reporting period as the Bank, using consistent accounting policies. The Bank's significant subsidiaries are listed in Note 32.

Structured entities

Structured entities are consolidated when the substance of the relationship between the Bank and the structured entity indicates that the structured entity is controlled by the Bank. Structured entities may take the form of a corporation, trust or partnership. They are often created with legal arrangements that impose limits on the decision-making powers of their governing board, trustee, or management over the operations of the entity. When assessing whether the Bank has to consolidate a structured entity, three primary criteria are evaluated: whether the Bank has the power to direct the activities of the structured entity that have the most significant impact on the entity's risks and/or returns; whether the Bank is exposed to significant variable returns arising from the entity; and whether the Bank has the ability to use its power to affect the risks and/or returns to which it is exposed. The Bank consolidates three limited partnerships used for securitization and funding purposes, as shown in Note 32.

2.2 SIGNIFICANT ACCOUNTING JUDGMENTS, ESTIMATES AND ASSUMPTIONS

In preparing these Consolidated Financial Statements, management is required to make significant judgments and subjective estimates and assumptions that affect the reported amounts of certain assets, liabilities, revenues, expenses and related disclosures. Estimates made by management are based on historical experience and other assumptions that are believed to be reasonable.

Significant accounting judgments, estimates and assumptions have been made specifically in the following areas and are further discussed in the Consolidated Financial Statements as follows:

Fair value of financial instruments	Notes 3 and 22	Post-employment benefits	Notes 3 and 18
Allowances for credit losses	Notes 3 and 6	Income taxes	Notes 3 and 19
Goodwill and other intangible assets	Notes 3, 9 and 10	Provisions and contingent liabilities	Notes 3 and 29

In view of the inherent uncertainties and the high level of subjectivity involved in the recognition or measurement of the items listed above, it is possible that the outcomes in future reporting periods could differ from those on which management's estimates are based. This could result in materially different estimates and judgments from those reached by management for the purposes of the Consolidated Financial Statements.

Economic conditions impact on judgments, estimates and assumptions

The preparation of financial information requires the use of estimates and judgments about future economic conditions. The recent macro-economic developments, including high inflation and interest rate increases, have amplified uncertainty on the assumptions used by management in making its judgments and estimates. The comprehensive impact that recent macro-economic developments will have on the Canadian and U.S. economies and the Bank's business remain uncertain and difficult to predict.

2.3 IBOR REFORM

The transition from Interbank Offered Rates ("IBORs") to alternative benchmark interest rates is a global initiative that will impact financial instruments referencing IBOR rates around the world, including in Canada.

In August 2020, the IASB published *Interest Rate Benchmark Reform – Phase 2 (Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16)* (the "Amendments") which completes its work to amend IFRS in response to the IBOR Reform. The Amendments address the accounting issues that arise when financial instruments that reference IBORs transition to nearly risk-free rates (RFRs), including the effects of changes to contractual cash flows or hedging relationships. The Bank early adopted the amendments as at August 1, 2021.

In March 2021, the Financial Conduct Authority (FCA), the regulator of the ICE Benchmark Administration (IBA) which administers the London Interbank Offered Rate (LIBOR), announced the permanent cessation or loss of representativeness of all 35 LIBOR benchmark settings published by the IBA as of December 31, 2021 or June 30, 2023.

In May 2022, Refinitiv Benchmark Services (UK) Limited (RBSL), the administrator of the Canadian Dollar Offered Rate (CDOR) published a CDOR cessation notice stating that the calculation and publication of all tenors of CDOR will permanently cease immediately following a final publication on June 28, 2024.

The Bank has established an enterprise-wide program, aimed at ensuring the transition from IBORs to RFRs. The program has been focused on identifying and quantifying the Bank's exposures to various interest rate benchmarks, providing the capability to trade products referencing alternative RFRs, including assessing system changes and impacts on hedge accounting, as well as evaluating existing contract amendment language. The Bank has in place detailed plans, processes and procedures to support the transition of its IBOR exposure to RFRs.

The IBOR reform exposes the Bank to various risks, which the project is managing and monitoring closely, including but not limited to risks arising from discussions with clients and market counterparties due to the amendments required to existing contracts necessary to effect IBOR reform and operational risks arising from changes to the Bank's IT systems and processes.

The following table discloses the non-derivative financial assets, non-derivative financial liabilities, derivative financial instruments and off-balance sheet commitments subject to the interest rate benchmark reform as at October 31, 2022 that have yet to transition to alternative benchmark rates.

(in millions of dollars)		**2022**
	USD LIBOR[1]	**CDOR**[2]
Non-derivative financial assets[3]	**$ 229**	**$ 600**
Non-derivative financial liabilities[4]	**—**	**628**
Derivative financial instruments[5]	**—**	**9,015**
Off-balance sheet commitments[6]	**—**	**1,028**

(1) Includes non-derivative financial assets indexed at USD LIBOR that will mature after June 30, 2023.

(2) Includes non-derivative financial assets, non-derivative financial liabilities, derivative financial instruments and off-balance sheet commitments indexed at CDOR that will mature after June 28, 2024.

(3) Non-derivative financial assets include debt securities, outstanding balances on loans and customers' liabilities under acceptances.

(4) Non-derivative financial liabilities include deposits, acceptances and obligations related to securities sold short.

(5) Derivative financial instruments include the notional amounts of interest rate swaps and total return swaps. As at October 31, 2022, the notional amount of derivatives indexed to CDOR 1-month and 3-month tenors in qualifying hedge accounting relationships that are maturing after June 28, 2024 and have yet to transition to a RFR was $8.2 billion for those hedging interest rate risk and $22.6 million for those hedging equity price risk. As at October 31, 2022, the notional amount of derivatives indexed to USD LIBOR in qualifying hedge accounting relationships that are maturing after June 30, 2023 and have yet to transition to a RFR was nil.

(6) Contractual amount for undrawn loan commitments, a portion of which can also be drawn in other benchmark rates.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

3.1 FINANCIAL INSTRUMENTS

Classification and measurement of financial assets

At initial recognition, all financial assets are recorded at fair value on the Consolidated Balance Sheet. After initial recognition, financial assets must be measured at: 1) amortized cost 2) FVOCI, or 3) FVTPL.

The Bank determines the classification of debt instruments based on the contractual cash flow characteristics of the financial assets and on the business model it uses to manage these financial assets, as described below. Equity instruments are required to be measured at FVTPL, except where the Bank has elected at initial recognition to irrevocably designate an equity investment, held for purposes other than trading, at FVOCI. Derivatives are required to be measured at FVTPL.

Contractual cash flow characteristics
In order to classify debt instruments, the Bank must determine whether the contractual cash flows associated with the debt instrument are solely payments of principal and interest (SPPI) on the principal amount outstanding. The principal is generally the fair value of the debt instrument 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 debt instrument are not solely payments of principal and interest, the debt instrument must be classified as at FVTPL.

Business model assessment
The Bank determines its business models based on the objective under which each portfolio of financial assets is managed. The business model determination requires the use of judgment and consideration of all the relevant evidence available at the date of determination. In determining its business models, the Bank considers the following:

- Management's intent and strategic objectives and the operation of the stated policies in practice;
- The primary risks that affect the performance of the business model and how these risks are managed;
- How the performance of the portfolio is evaluated and reported to management; and
- The frequency and significance of financial asset sales in prior periods, the reasons for such sales and the expected future sales activities.

A financial asset portfolio is 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 measured at FVTPL if they do not fall within either a "hold to collect" business model or a "hold to collect and sell" business model.

Optional designations
Under the fair value option, debt instruments that fall within a "hold to collect" or "hold to collect and sell" business model may be designated on a voluntary and irrevocable basis as at FVTPL provided that such designation:

- Eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise from measuring assets or liabilities or recognizing the related gains and losses on different bases; or
- Pertains to an asset or liability that is managed and whose performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy, and information about such items is provided internally on that basis to the Bank's key management personnel; and
- Allows for reliable measurement of the fair value of the financial instruments designated at FVTPL.

As at October 31, 2022 and October 31, 2021, the Bank had not designated any debt instrument as at FVTPL.

In addition, it is permitted to irrevocably designate at FVOCI, at initial recognition, an equity instrument that is not held for trading.

Securities at amortized cost
Securities at amortized cost include debt securities for which the contractual terms give rise 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. Securities at amortized cost are initially recorded at fair value on the settlement date on the Consolidated Balance Sheet, including direct and incremental transaction costs. Subsequently, they are measured at amortized cost using the effective interest rate method, net of allowances for expected credit losses. Interest income is recognized in the Consolidated Statement of Income using the effective interest rate method, including the amortization of transaction costs as well as premium or discounts over the security's expected life.

Securities at FVOCI
Securities at FVOCI 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 FVOCI with no subsequent reclassification of gains and losses to net income.

The Bank initially recognizes securities at FVOCI on the Consolidated Balance Sheet at the settlement date, including direct and incremental transaction costs.

For debt securities at FVOCI, unrealized gains and losses are subsequently recognized in Other comprehensive income, net of interest income calculated on the instrument's amortized cost, expected credit losses and income taxes, and if they are not hedged by derivative financial instruments in a fair value hedging relationship. When the securities are sold, realized gains or losses, determined on an average cost basis, are reclassified to Income from financial instruments in the Consolidated Statement of Income. Interest income is recognized in the Consolidated Statement of Income using the effective interest rate method, including the amortization of transaction costs.

For equity securities designated at FVOCI, subsequent 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. Dividend income for these instruments is recorded in Interest Income in the Consolidated Statement of Income.

Securities at FVTPL
Securities at FVTPL include (i) debt securities for which the business model is neither to hold to collect nor hold to collect and sell, (ii) debt securities for which the contractual cash flows are not solely payments of principal and interest on the principal amount outstanding, (iii) debt securities designated at FVTPL under the fair value option, (iv) equity securities held for trading, and (v) equity securities other than those designated at FVOCI.

Securities at FVTPL are initially recorded at fair value on the settlement date on the Consolidated Balance Sheet. Transaction costs and other fees associated with financial instruments at FVTPL are expensed as incurred. Subsequently, these securities are measured at fair value and the realized and unrealized gains and losses are recognized in the Consolidated Statement of Income under Income from financial instruments. For debt and equity securities held for trading, interest income and dividend income are recognized in Income from financial instruments in the Consolidated Statement of Income. For other securities at FVTPL, interest income and dividend income are recognized in Interest Income in the Consolidated Statement of Income.

Loans at amortized cost
Loans at amortized cost include loans originated or purchased by the Bank that are not classified as measured at FVTPL or designated at FVTPL under the fair value option. These loans are held within a business model whose objective is to collect cash flows that are solely payments of principal and interest on the principal amount outstanding. Loans originated by the Bank are recognized at the settlement date on the Consolidated Balance Sheet. Loans are initially measured at fair value plus directly attributable costs and are subsequently measured at amortized cost using the effective interest rate method. Loans are presented net of allowances for credit losses on the Consolidated Balance Sheet.

Interest income is recognized on loans using the effective interest rate, calculated over the loan's expected life. Commissions received, origination fees and costs, as well as other transaction costs are adjustments to the loan yield and are recorded in interest income over the term of the loans. Fees received for loan prepayments are included in interest income for residential mortgage loans and other income for commercial mortgage loans upon prepayment.

Loans at FVOCI
Loans at FVOCI include loans originated or purchased by the Bank that are not classified as measured at FVTPL or designated at FVTPL under the fair value option. These loans are held within a "hold to collect and sell" business model whose objective is to collect cash flows that are solely payments of principal and interest on the principal amount outstanding and to sell them to generate a profit. Loans originated by the Bank are recognized at the settlement date on the Consolidated Balance Sheet. Loans are initially measured at fair value plus directly attributable costs. Interest income on loans at FVOCI is recorded using the effective interest rate method in Interest income in the Consolidated Statement of Income. Changes in the fair value of loans classified as at FVOCI are presented, net of income taxes, in Other comprehensive income. When the securities are sold, realized gains or losses, are reclassified to Other Income.

As at October 31, 2022 and October 31, 2021, the Bank had no loans at FVOCI.

Loans at FVTPL
Loans at FVTPL include loans designated at FVTPL under the fair value option and loans for which the contractual cash flows are not solely payments of principal and interest on the principal amount outstanding. These loans are initially recognized at fair value on the Consolidated Balance Sheet excluding any transaction costs which are recorded in Lending Fees in the Consolidated Statement of Income. Interest income on loans at FVTPL is recorded in Interest income in the Consolidated Statement of Income. Changes in the fair value of loans classified as at FVTPL and loans designated at FVTPL under the fair value option are recognized in Income from financial instruments.

As at October 31, 2022 and October 31, 2021, the Bank had no loans at FVTPL.

Classification and measurement of financial liabilities

At initial recognition, all financial liabilities are recorded at fair value at the settlement date on the Consolidated Balance Sheet. After initial recognition, financial liabilities must be measured as: 1) at amortized cost or 2) at FVTPL.

Financial liabilities at amortized cost
Financial liabilities at amortized cost include deposits, obligations related to securities sold under repurchase agreements, acceptances, subordinated debt, debt related to securitization activities and other liabilities. Financial liabilities at amortized cost are initially recognized at fair value including any transaction costs and subsequently measured at amortized cost. Interest expense on financial liabilities at amortized cost is recognized in the Consolidated Statement of Income, using the effective interest rate method.

Financial liabilities at FVTPL
Financial liabilities at FVTPL are composed of financial instruments held-for-trading including obligations related to securities sold short, derivatives not designated in hedge relationships and financial liabilities designated by the Bank as at FVTPL under the fair value option upon initial recognition. Financial liabilities at FVTPL are initially recorded at fair value at the settlement date on the Consolidated Balance Sheet. Subsequently, these financial instruments are remeasured at fair value and the realized and unrealized gains and losses are immediately recognized in the Consolidated Statement of Income under Income from financial instruments. For financial liabilities designated by the Bank as at FVTPL under the fair value option, changes in the fair value which are attributable to changes in own credit risk are presented in other comprehensive income rather than in the Consolidated Statement of Income, unless it creates a mismatch. Interest expense paid is recognized in the Consolidated Statement of Income. Transaction costs and other fees associated with financial instruments at FVTPL are expensed as incurred.

As at October 31, 2022 and October 31, 2021, the Bank had not designated any financial liabilities at FVTPL.

Reclassification of financial assets and financial liabilities

Financial assets and financial liabilities are not reclassified subsequent to their initial recognition, except for financial assets for which the Bank changes its business model for managing financial assets. The reclassification is applied prospectively from the reclassification date.

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 FVOCI, on loan commitments and financial guarantees that are not measured at fair value and on lease receivables. 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.

For accounts receivables, the Bank applies a simplified impairment approach which does not track the changes in credit risk, but instead recognizes an allowance based on lifetime ECL at each reporting date from the date of initial recognition.

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 performing 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, at an amount equal to 12-month expected credit losses is recorded. When there is a significant increase in credit risk since initial recognition, these performing financial instruments are migrated to Stage 2, and an allowance for credit losses that is measured, at each reporting date, at an amount equal to lifetime expected credit losses is recorded. In subsequent reporting periods, if the credit risk of the financial instrument improves such that there is no longer a significant increase in credit risk since initial recognition, the ECL model requires reverting to Stage 1, i.e., recognition of 12-month expected credit losses. When one or more events that have a detrimental impact on the estimated future cash flows of a financial asset have occurred, the impaired financial asset is migrated to stage 3, an allowance equal to the lifetime expected losses continues to be recorded or the financial asset is written off. Interest income is calculated on the gross carrying amount of the financial assets in stages 1 and 2 and on the net carrying amount of the 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 and external risk ratings. To assess whether the credit risk of a financial instrument has increased significantly, the 12-month probability of default (PD) at the reporting date is compared with the 12-month PD at the date of initial recognition, and reasonable and supportable information indicative of significant increases in credit risk since initial recognition is considered. 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 expected cash shortfalls over the remaining expected life of the financial instrument, and reasonable and supportable information about past events, current conditions and forecasts of future events and economic conditions is considered. The estimation and application of forward-looking information requires significant judgment. The cash shortfall is the difference between all contractual cash flows owed to the Bank and all the cash flows that the Bank expects to receive.

The measurement of ECLs is based primarily on the product of the instrument's PD, loss given default (LGD), and exposure at default (EAD). Forward-looking macroeconomic factors such as interest rates, unemployment rates, gross domestic product (GDP) forecasts and housing price indices are incorporated into the risk parameters. The estimate of expected credit losses reflects an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes. The Bank incorporates three forward-looking macroeconomic scenarios in its ECL calculation process: a base scenario, an upside scenario, and a downside scenario. Probability-weights are attributed to each scenario. The scenarios and probability weights are reassessed quarterly and subject to management review. The Bank applies experienced credit judgment to adjust the modeled ECL results when it becomes evident that known or expected risk factors and information were not considered in the credit risk rating and modeling 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 FVOCI, ECLs are recognized in provisions for credit losses in the Consolidated Statement of Income and a corresponding amount is recognized in Other comprehensive income with no reduction in the carrying amount of the asset on the Consolidated Balance Sheet. As for debt instruments measured at amortized cost, they are presented net of the related allowance for credit losses on the Consolidated Balance Sheet. The allowance for credit losses for off-balance-sheet credit exposures that are not measured at fair value is 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, in subsequent reporting periods the Bank recognizes only the cumulative changes in lifetime expected credit losses since initial recognition as an allowance for credit losses. The Bank recognizes changes in ECLs in provision for credit losses in the Consolidated Statement of Income, even if the lifetime ECLs are less than ECLs that were included in the estimated cash flows on initial recognition.

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 as credit impaired when one or more events that have a detrimental impact on the estimated future cash flows of a financial asset have occurred or when contractual payments are 90 days past due.

Write-offs

The Bank writes off an impaired financial asset and its related allowance for credit losses in whole or in part when it 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. For credit cards, the balances and related allowance for credit losses are generally written off when payment is 180 days past due.

Modified loans

The original terms of a financial asset may be renegotiated or otherwise modified, resulting in changes to the contractual terms of the financial asset that affect the contractual cash flows. The treatment of such modifications depends on the nature and extent of changes. Modifications which are performed for credit reasons, primarily related to troubled debt restructurings, are treated as modifications of the original financial asset and do not result in derecognition. Concessions may include payment deferrals, extension of amortization periods, rate reductions, principal forgiveness, debt consolidation, forbearance and other modifications and are intended to minimize the economic loss and to avoid foreclosure or repossession of collateral.

Substantial modifications which are performed for other than credit reasons are generally considered to be an expiry of the original cash flows; accordingly, such renegotiations are treated as a derecognition of the original financial asset and recognition of a new financial asset based on the new contractual terms.

If the Bank determines that a modification does not result in derecognition, the financial asset continues to be subject to the same assessments for significant increase in credit risk relative to initial recognition and credit-impairment, as described above. Expected cash flows arising from the modified contractual terms are considered when calculating the ECL for the modified asset. For loans that were modified while having lifetime ECLs, such loans can revert to having twelve-month ECLs if the borrower's financial condition that led to it being identified as credit-impaired are no longer present and relate objectively to an event occurring after the original credit-impairment was recognized.

If a modification of terms results in derecognition of the original financial asset and recognition of the new financial asset, the new financial asset will generally be recorded in Stage 1, unless it is determined to be credit-impaired at the time of the renegotiation. For the purposes of assessing for significant increases in credit risk, the date of initial recognition for the new financial asset is the date of the modification.

Securities purchased under reverse repurchase agreements and obligations related to securities sold under repurchase agreements

The Bank enters into short-term purchases of securities under agreements to resell (reverse repurchase agreements) as well as short-term sales of securities under agreements to repurchase (repurchase agreements) at predetermined prices and dates. Given the low-risk transfer associated with these purchases and sales, these agreements are treated as collateralized lending and borrowing.

Securities purchased under agreements to resell are not recognized as securities on the Consolidated Balance Sheet. An asset corresponding to the consideration paid for the securities is recognized in securities purchased under reverse repurchase agreements. Subsequently, the agreements are measured at amortized cost using the effective interest method. Interest income is allocated over the expected term of the agreement by applying the effective interest rate to the carrying amount of the asset.

Securities sold under agreements to repurchase at a specified future date are not derecognized from the Consolidated Balance Sheet. The consideration received is recognized in the Consolidated Balance Sheet and a corresponding liability is recognized in obligations related to securities sold under repurchase agreements. Subsequently, the agreements are measured at amortized cost using the effective interest method. Interest expense is allocated over the expected term of the agreement by applying the effective interest rate to the carrying amount of the liability.

Securities lending and borrowing

Securities lending and borrowing transactions are usually collateralized by securities or cash. The transfer of the securities to counterparties is only reflected on the Consolidated Balance Sheet if the risks and rewards of ownership are also transferred. Cash advanced or received as collateral is recorded as an asset or liability.

Securities sold short

If securities borrowed or purchased under agreements to resell are subsequently sold to third parties, the obligation to deliver the securities is recorded as a short sale within obligations related to securities sold short. These short sales are classified as held-for-trading liabilities and measured at FVTPL with any gains or losses included, depending on the nature of the transaction, in other income under Income from financial instruments.

Derecognition of financial assets

A financial asset is derecognized when the contractual rights to the cash flows from the asset expire or when the contractual rights to the cash flows from the financial asset and substantially all risks and rewards of ownership of the asset are transferred to a third party. When a financial asset is derecognized, a gain or a loss is recognized in the Consolidated Statement of Income for an amount equal to the difference between the carrying amount of the asset and the value of the consideration received.

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 instrument, the transfer of a financial asset does not result in derecognition, the derivative is not recognized on the Consolidated Balance Sheet.

Securitization
The Bank regularly transfers pools of residential mortgage loans under securitization programs. When the Bank retains substantially all the risks and rewards related to these assets, these transactions do not result in derecognition of the assets from the Bank's Consolidated Balance Sheet. As such, securitized residential mortgages continue to be recognized in the Consolidated Balance Sheet and the liabilities for the consideration received from the transfer are recognized in Debt related to securitization activities on the Consolidated Balance Sheet.

In certain securitization transactions, the Bank does not retain substantially all the risks and rewards related to transferred pools of residential mortgage loans. In such transactions, the Bank has a continuing involvement in the securitized asset that is limited to retained rights in future excess interests and the liability associated with servicing these assets. When a securitized asset is derecognized, the related loans are removed from the Consolidated Balance Sheet and a gain or loss is recognized in the Consolidated Statement of Income under Other income. The securitization retained rights in future excess interests is classified at amortized cost and reported as part of Other assets. The servicing liability is reported as part of Other liabilities. Revenues related to retained interests are recognized in the Consolidated Statement of Income under Income from financial instruments.

The Bank also enters into transactions with other structured entities as part of securitization programs for finance lease receivables and personal loans. Structured entities are consolidated if the Bank controls the entity. In assessing control, the Bank evaluates the substance of the relationship, its right or exposure to variable returns and the ability to exercise power to affect the returns.

Refer to Notes 7 and 14 for further details.

Acceptances and customers' liabilities under acceptances

Acceptances represent an obligation for the Bank with respect to short-term negotiable instruments issued by the Bank's customers to third parties and guaranteed by the Bank. Acceptances are measured at amortized cost using the effective interest method. The recourse against the customer in the event that these obligations give rise to a cash outlay is reported as a corresponding asset measured at amortized cost using the effective interest method. Commissions earned are recorded in other income in the Consolidated Statement of Income.

Derivatives and hedges

Derivatives are primarily used to manage the Bank's exposure to interest rate and currency risks, as well as in trading activities or to serve the needs of customers.

All derivatives are measured at fair value in other assets or liabilities, including derivatives embedded in financial instruments or other contracts that are not closely related to the financial instrument or to the host contract. Changes in fair value of derivatives are immediately recognized in the Consolidated Statement of Income under Income from financial instruments, except for derivatives designated as cash flow hedges and net investment hedges as described below. Interest income and expense related to derivatives is recognized in Net interest income in the Consolidated Statement of Income.

Hedge accounting
The Bank elected not to apply the IFRS 9 hedge accounting requirements as at November 1, 2018 and continues to apply the IAS 39 requirements. Information provided in Note 25 for the years ended October 31, 2022 and 2021 reflects the disclosure requirements of IFRS 7, *Financial Instruments: Disclosures*.

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.

Where hedge accounting can be applied, the Bank designates and formally documents each hedging relationship, at its inception, by detailing the risk management objective, the hedging strategy, the item being hedged, the related hedging instrument, and the method for assessing the effectiveness or ineffectiveness of the hedging relationship. Hedge accounting is deemed appropriate where the derivative is highly effective in offsetting changes in the hedged item's fair value attributed to the hedged risk, both at the hedge's inception and on an ongoing basis. Effectiveness is assessed every month using statistical regression models.

The Bank applies temporary reliefs which enable its hedge accounting to continue during the period of uncertainty, before the replacement of an existing interest rate benchmark with an alternative nearly risk-free interest rate. For the purpose of determining whether a forecast transaction is highly probable, the reliefs notably require assuming that the IBOR on which the hedged cash flows are based is not altered as a result of IBOR reform.

Fair value hedges
Fair value hedge transactions predominantly use interest rate swaps to hedge changes in fair value of assets, liabilities or firm commitments.

For these hedging relationships, the changes in the hedged item's fair value attributable to the hedged risk are recognized in Income from financial instruments on the Consolidated Statement of Income. A corresponding adjustment to the carrying amount of the hedged item in the Consolidated Balance Sheet is also recorded, except for hedges of certain equity securities, where the adjustment is recognized in accumulated other comprehensive income. Changes in fair value of the hedged item, to the extent that the hedging relationship is effective, are offset by changes in fair value of the hedging derivative.

When the hedging relationship ceases to be effective or the hedging instrument is sold or terminated early, hedge accounting is discontinued prospectively. The hedged item is no longer adjusted to reflect changes in fair value and the cumulative adjustment 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 net interest income over the remaining life of the hedged item. Hedge accounting is also discontinued on the sale or early termination of the hedged item, whereupon the cumulative adjustment to the hedged item's carrying amount is immediately recognized in Other income.

Cash flow hedges
Cash flow hedge transactions predominantly use interest rate swaps and total return swaps to hedge the variability in cash flows related to a variable rate asset or liability.

For these hedging relationships, the changes in fair value related to the effective portion of the hedge are recognized in other comprehensive income. Changes in fair value related to the ineffective portion of the hedge are immediately recognized in the Consolidated Statement of Income. Changes in fair value recognized in other comprehensive income are reclassified in the Consolidated Statement of Income under Net interest income or Salaries and employee benefits, depending on the hedged item, in the periods during which the cash flows comprising the hedged item affect income.

When the hedging relationship ceases to be effective or the hedging instrument is sold or terminated early, hedge accounting is discontinued prospectively. Changes in fair value recognized in other comprehensive income in respect of a cash flow hedging relationship that ceases to be effective or for which the hedging instrument is sold or terminated early are reclassified in the Consolidated Statement of Income under Net interest income or Salaries and employee benefits, depending on the hedged item, in the periods during which the cash flows comprising the hedged item affect income. Hedge accounting is also discontinued on the sale or early termination of the hedged item, whereupon the changes in fair value recognized in accumulated other comprehensive income are immediately recognized in other income.

Net investment hedges
Cross currency swaps are used to hedge changes in the fair value of the net investment in foreign operations with a functional currency other than the Canadian dollar.

For these hedging relationships, the changes in fair value related to the effective portion of the hedge are recognized in other comprehensive income. Changes in fair value related to the ineffective portion of the hedge are immediately recognized in the Consolidated Statement of Income under Other income. Upon disposal or partial disposal of the net investment in a foreign operation, the related proportion of accumulated changes in fair value previously recognized in other comprehensive income are reclassified in the Consolidated Statement of Income under Other income.

Deposits

Deposits are initially measured at fair value, net of directly attributable transaction costs incurred. Subsequently, they are measured at amortized cost using the effective interest method. Interest expense is allocated over the expected term of the deposit by applying the effective interest rate to the carrying amount of the liability. Commissions paid and other fees are recorded in interest expense over the term of the deposits. Deposits are presented net of unamortized commissions and other fees on the Consolidated Balance Sheet.

Indexed deposit contracts
Certain personal deposit obligations, such as equity-linked guaranteed investment certificates where the deposit obligation varies according to the performance of certain stock market indexes, may be subject to a guaranteed minimum redemption amount, such as the obligation to return the investor's initial investment at maturity. These obligations include an embedded derivative instrument that is accounted for separately and is presented in the Consolidated Balance Sheet under Derivatives.

Debt related to securitization activities

Debt related to securitization activities is initially measured at fair value net of directly attributable transaction costs incurred. Subsequently, the debt is measured at amortized cost using the effective interest rate method. Interest expense is allocated over the expected term of the borrowing by applying the effective interest rate to the carrying amount of the liability.

Subordinated debt

Subordinated debt is a direct unsecured obligation of the Bank and is subordinated in right of payment to the claims of depositors and certain other creditors of the Bank. Subordinated debt is initially measured at fair value net of directly attributable transaction costs incurred. Subsequently, the debt is measured at amortized cost using the effective interest method. Interest expense is allocated over the expected term of the borrowing by applying the effective interest rate to the carrying amount of the liability.

Measuring the fair value of financial instruments

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 between market participants at the measurement date under current market conditions.

The fair value of a financial instrument on initial recognition is normally the transaction price, that is, the fair value of the consideration given or received. In certain circumstances, the initial fair value may be based on other observable market transactions for the same instrument or on a valuation technique.

Subsequent to initial recognition, the fair value of financial instruments is best evidenced by quoted prices in active markets when available. This fair value is based on the quoted price within the bid-offer prices that is most representative of fair value in the circumstances. Otherwise, fair value is measured using valuation techniques that maximize the use of relevant observable inputs and minimize the use of unobservable inputs. Determining which valuation technique and inputs to apply requires judgment. Valuation techniques include cash flow discounting, comparison with current market prices for financial instruments with similar characteristics and risk profiles and option pricing models. The inputs, among other things, include contractual prices of the underlying instruments, yield curves and volatility factors. The valuations may also be adjusted to reflect the uncertainty in these parameters. Valuation adjustments may be made with respect to the liquidity or counterparty credit risk of financial instruments that have no available quoted prices in active markets. Fair value reflects market conditions on a given date and for this reason cannot be representative of future fair values.

Offsetting of financial assets and liabilities

Financial assets and liabilities are offset, and the net amount is presented in the Consolidated Balance Sheet when the Bank currently 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. In all other situations, financial assets and liabilities are presented on a gross basis.

3.2 LEASES

The determination of whether an arrangement is, or contains, a lease is based on the substance of the arrangement at the inception of the contract. The contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period in exchange for consideration, even if that right is not explicitly specified in an arrangement.

The Bank as a lessor

Finance leases
The Bank provides leasing solutions to business customers. Leases in which the Bank transfers substantially all the risks and rewards incidental to ownership of an asset are classified as finance leases. Assets held under a finance lease are presented as a receivable on the line-item Commercial loans in the Consolidated Balance Sheet.

Finance lease receivables are initially recorded at an amount equal to the net investment in the lease at the inception of the lease. This corresponds to the aggregate minimum lease payments receivable plus any unguaranteed residual value accruing to the Bank, discounted at the interest rate implicit in the lease. Finance lease receivables are subsequently recorded at an amount equal to the net investment in the lease at the reporting date, net of allowances for loan losses. Interest income is recognized based on a pattern reflecting a constant periodic rate of return on the Bank's net investment outstanding in respect of the finance lease. Commissions received, origination fees and costs, as well as other transaction costs in respect of finance leases are adjustments to the yield and are recorded in interest income over the term of the lease. For derecognition and impairment of finance lease receivables, the Bank applies accounting policies applicable to financial instruments described in Section 3.1.

Operating leases
Leases in which the Bank does not transfer substantially all the risks and rewards incidental to ownership of an asset are classified as operating leases. The leased assets are classified in the balance sheet in other assets and are carried at cost less accumulated depreciation, which considers their estimated residual value. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognized over the lease term on the same basis as rental income. Rental income arising from operating leases is accounted for on a straight-line basis over the lease term and is included in Other income in the Consolidated Statement of Income.

The Bank as a lessee

The Bank enters into lease agreements as a lessee for its premises.

On the lease commencement date, a right-of-use asset and a lease liability are recognized. The right-of-use asset is initially measured at cost, which corresponds to the value of the lease liability adjusted for any lease payment made at or before the commencement date, less any lease incentives received. The right-of-use asset is subsequently depreciated using the straight-line method over the lease term.

Management assesses at least annually if indicators of impairment exist for its right-of-use assets that generate cash inflows that are largely independent of those from other assets or groups of assets of the Bank. When impairment indicators exist for such right-of-use assets, management compares their carrying value to their recoverable amount, which is determined using a value in use approach based on the expected sublease terms over the remainder of the head-leases. These terms notably include base rent recovery and variable rent recovery, as well as the expected absorption period.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the Bank's incremental borrowing rate for a similar asset. Lease payments included in the measurement of the lease liability comprise fixed payments, reduced by any incentive receivables, and exclude operational costs and variable lease payments. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made.

Short-term leases are leases with a lease term of 12 months or less. For short-term leases and leases of low-value assets. The Bank records the lease payments as an operating expense on a straight-line basis over the lease term.

The Bank presents right-of-use assets in Premises and equipment and lease liabilities in Other liabilities on the Consolidated Balance Sheet. The interest expense is presented under Interest expense, Other and the depreciation is presented under the Premises and technology line item on the Consolidated Statement of Income.

3.3 REVENUE FROM CONTRACTS WITH CUSTOMERS

The Bank provides banking services to its customers. Revenue from contracts with customers is recognized when control of services provided by the Bank is transferred to the customer at an amount that reflects the consideration to which the Bank expects to be entitled in exchange for those services. Revenue associated with the rendering of services is recognized by reference to the satisfaction of performance obligations at the end of the reporting period. The Bank has generally concluded that it is the principal in its revenue arrangements, except for interchange income described below, because it typically controls the services before transferring them to the customer.

The Bank's fee and commission income from services, including those where performance obligations are satisfied over time, are as follow:

Lending fees

Lending fees include commitment fees, stand-by fees and letter of credit fees. These fees are recognized in income over the period in which the service is provided. Lending fees also include fees to guarantee acceptances issued by our customers, which are recognized over the term of the acceptances.

Income from mutual funds

Income from mutual funds mainly include trailer commissions. Trailer commissions are recognized over time and are generally calculated based on the average daily net asset value of the funds during the period.

Service charges

Service charges are earned on personal and commercial deposit accounts and consist of account fees and transaction-based service charges. Account fees relate to account maintenance activities and are recognized in income over the period in which the service is provided. Transaction-based service charges are recognized as earned at a point in time when the transaction is complete.

Fees and securities brokerage commissions

Fees and securities brokerage commissions mainly include commission fees and investment banking fees. Commission fees include sales, trailer and brokerage commissions. Sales and brokerage commissions are generally recognized at a point in time when the transaction is executed. Trailer commissions are recognized over time and are generally calculated based on the average daily net asset value of the fund during the period. Investment banking fees include advisory fees and underwriting fees and are generally recognized at a point in time as income upon successful completion of the engagement.

Card service revenues

Card service revenues include interchange income, as well as card fees such as annual and transactional fees. The Bank also offers credit card loyalty points programs which affect the timing of recognition of card service revenues.

Interchange income
Interchange income is recognized at a point in time when the transaction is authorized and funded. The Bank is acting as an agent in these arrangements.

When another party is involved in providing services to its customer, the Bank determines whether it is a principal or an agent in these transactions by evaluating the nature of its promise to the customer. The Bank is a principal and records revenue on a gross basis if it controls the promised services before transferring them to the customer. However, if the Bank's role is only to arrange for another entity to provide the services, then the Bank is an agent and will record revenue at the net amount that it retains for its agency services.

Card fees
Card fees are recognized as earned at the transaction date except for annual fees, which are recognized over a twelve-month period.

Credit card loyalty points programs
The Bank offers credit card loyalty points programs, which allow customers to accumulate points that can be redeemed for free products or services. The loyalty points give rise to a separate performance obligation as they provide a material right to the customer. A portion of the transaction price is allocated to the loyalty points awarded to customers based on relative stand-alone selling price and recognized as a contract liability until the points are redeemed. Revenue is recognized upon redemption of products or services by the customer.

When estimating the stand-alone selling price of the loyalty points, the Bank considers the monetary value assigned to the loyalty points and the likelihood that the customer will redeem the points. In estimating the value of the points issued, the Bank considers the mix of products that will be available in the future in exchange for loyalty points and customers' preferences. In estimating the redemption rate, the Bank considers breakage which represents the portion of the points issued that will never be redeemed. The Bank applies judgment in its estimation of breakage using customers' historical redemption patterns as the main input. The Bank updates its estimates of the points that will be redeemed on a monthly basis and any adjustments to the contract liability balance are charged against revenue.

As points issued under the programs do not expire, estimates of the stand-alone selling price are subject to uncertainty. Any significant changes in customers' redemption patterns will impact the estimated redemption rate.

Fees on investment accounts

Fees from investment accounts are earned on personal investment accounts under administration and consist of account fees and transaction-based service charges. Account fees relate to account maintenance activities and are recognized in income over the period in which the service is provided. Transaction-based service charges are recognized as earned at a point in time when the transaction is complete.

Contract balances

Accounts receivables
A receivable represents the Bank's right to an amount of consideration that is unconditional (i.e., only the passage of time is required before payment of the consideration is due). The timing of payment of accounts receivable is short term after the satisfaction of the performance obligation. Accounts receivables are measured at amortized cost and included in the Other assets line item.

Contract liabilities
A contract liability is the obligation to transfer goods or services to a customer for which the Bank has received consideration from the customer. If a customer pays consideration before the Bank transfers services to the customer, a contract liability is recognized when the payment is made. Contract liabilities are recognized as revenue when the Bank performs under the contract. Contract liabilities are included in the Other liabilities line item.

3.4 BUSINESS COMBINATIONS AND GOODWILL

Business combinations are accounted for using the acquisition method. At the date of acquisition, the purchase price is measured as the aggregate of the fair value of the consideration transferred and includes the impact of related hedges. Acquisition-related costs are recognized directly in net income, under Costs related to business combinations in the period they are incurred. When the Bank acquires a business, it assesses the financial assets acquired and liabilities assumed for appropriate classification and designation in accordance with the contractual term, economic circumstances and market conditions at the acquisition date.

At the acquisition date, the identifiable assets acquired and liabilities assumed of the acquiree, as well as any contingent consideration to be assumed or received by the Bank, are recognized at their estimated fair value. The excess of the purchase price over the fair value of the net identifiable assets acquired is recorded as goodwill in the balance sheet, while any excess of the fair value of the net identifiable assets over the purchase price is recorded in net income as a gain on acquisition.

Valuation of the identifiable assets and liabilities of the acquiree upon initial recognition are based on a number of assumptions determined by management such as estimates of future cash flows and discount rates as well as contractual provisions. Changes in assumptions could have had a significant impact on the recognized amount of goodwill or gain arising on acquisition.

Purchased financial assets and assumed financial liabilities

The fair value estimate of purchased financial assets and assumed financial liabilities reflects the interest rate premium or discount resulting from the difference between the contractual rates and prevailing market interest rates for financial instruments with similar terms and conditions, as well as the expected credit losses as of the acquisition date. Subsequently, purchased loans and finance lease receivables are recorded at amortized cost using the effective interest method and are subject to impairment assessment, consistent with the Bank's methodology for allowances for credit losses.

Impairment of goodwill

Following initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Bank's cash-generating units (CGUs), which are expected to benefit from the synergies of the combination. Goodwill is monitored for internal management purposes at the operating segment level.

Goodwill is tested for impairment annually, or more frequently, if events or changes in circumstances indicate that the carrying value may be impaired, by comparing the recoverable amount of the CGU with its carrying amount. The recoverable amount of the CGU is the greater of the value in use and its fair value less cost of disposal. If the recoverable amount of the CGU is less than its carrying value, an impairment loss is charged to income. The impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the CGU and then to the other assets of the CGU proportionally based on the carrying amount of each asset. The impairment loss allocated to each asset shall not reduce the carrying amount of assets below its fair value less costs of disposal, its value in use or zero. Impairment losses on goodwill are charged to income in the period they are incurred and are not reversed.

Management uses a number of significant estimates, including projected net income growth rates, future cash flows, the number of years used in the cash flow model and the discount rate of future cash flows to determine the recoverable amount of the CGU. Management considers these estimates to be reasonable and consistent with the Bank's financial objectives. They reflect management's best estimates but include inherent uncertainties that are not under its control. Changes made to one or any of these estimates may significantly impact the calculation of the recoverable amount and the resulting impairment charge. The key assumptions used to determine the recoverable amount for the different CGUs are disclosed and further explained in Notes 9 and 10.

3.5 PREMISES AND EQUIPMENT

Premises and equipment are recorded at cost including expenditure that is directly attributable to the acquisition of the items, less accumulated depreciation and impairment losses. Additions and subsequent expenditures are capitalized only to the extent that they enhance the future economic benefits expected to be derived from the assets.

Depreciation

Depreciation begins when the asset is available for use, i.e., when it is in the location and condition necessary for it to be capable of operating in the manner intended by management. Depreciation is calculated using the straight-line method to write down the cost of premises and equipment to their residual values over their estimated useful lives. Depreciation of premises and equipment is recorded in the Consolidated Statement of Income under the Premises and technology line item. Land is not depreciated. The estimated useful lives are as follows:

	Period
Premises	25-40 years
Equipment and furniture	2-10 years
Computer hardware	2-10 years
Leasehold improvements	Minimum of useful life and term of related leases
Right-of-use assets	Minimum of useful life and term of related leases

The residual values underlying the calculation of depreciation of items of property are kept under review to take account of any change in circumstances. Useful lives and method of depreciation are also reviewed regularly, at a minimum at the end of each fiscal year and adjusted if appropriate. These changes are treated as changes in accounting estimates.

Impairment of premises and equipment

Where the carrying amount of an asset is greater than its estimated recoverable amount, it is considered to be impaired and it is written down to its recoverable amount. Assets are reviewed to determine whether there is any indication of impairment. Assessing whether such indications exist is subject to management's judgment.

3.6 SOFTWARE AND OTHER INTANGIBLE ASSETS

Software and other intangible assets are recorded at cost including expenditure that is directly attributable to the acquisition of the items, less accumulated amortization and impairment losses. Additions and subsequent expenditures are capitalized only to the extent that they enhance the future economic benefits expected to be derived from the assets.

Amortization

Amortization begins when the asset is available for use, i.e. when it is in the location and condition necessary for it to be capable of operating in the manner intended by management. Software is amortized on a straight-line basis over its estimated useful life, which ranges from two to twenty years. Amortization of software is recorded in the Consolidated Statement of Income under the Premises and technology line item. Other intangible assets with finite lives, mainly consisting of contractual relationships with Advisors and Brokers, core deposit intangibles, as well as certain components of the core banking system and of the program to implement the Basel Advanced Internal Ratings Based approach to credit risk currently in use, are amortized on a straight-line basis over their estimated useful life, which ranges from three to twenty years. Amortization of other intangible assets is included in other non-interest expenses.

Impairment of software and other intangible assets

Software and intangible assets with finite lives are tested for impairment whenever there is an indication that the asset may be impaired and at least annually for IT projects and other intangible assets under development. When the carrying amount exceeds its estimated recoverable amount, the assets with finite lives are considered impaired and are written down to their recoverable amount. Software and other intangible assets that do not generate cash inflows that are largely independent of those from other assets or group of assets are tested for impairment at the CGU level. Any impairment arising from a decline in value of intangible assets is charged to income in the period in which the losses are incurred.

3.7 EMPLOYEE BENEFITS

The Bank provides short-term benefits such as salary, health and life insurance, annual leave as well as other incentive plans. The Bank also provides post-employment benefits, including pension plans, as well as, for certain retired employees, health and life insurance.

Short-term benefits

The Bank recognizes a compensation expense as services are rendered by employees.

Post-employment benefits

The Bank has a number of benefit plans, including defined benefit and defined contribution pension plans, as well as other post-employment benefits.

Defined benefit pension plans
Typically, defined benefit plans provide benefits based on years of service, age, contribution and average earnings. The defined benefit asset or liability, recognized on the Consolidated Balance Sheet, corresponds to the present value of the plan obligation less the fair value of the plan assets at the balance sheet date. The present value of the defined benefit obligation is measured using the estimated future cash outflows discounted at the rate of high-quality corporate bonds with a maturity approximating the terms of the related defined benefit obligations. The cost of providing benefits under the plans is determined for each plan using the projected unit credit actuarial valuation method, which incorporates various parameters such as discount rates, future salary levels, retirement age, mortality rates and the general inflation rate. Pension plan assets are measured at fair value.

Actuarial gains and losses arise from changes in actuarial assumptions used to determine the plan obligation. Actuarial gains and losses are recognized as they occur in items of other comprehensive income that may not be reclassified subsequently to the Consolidated Statement of Income and are immediately transferred to retained earnings.

The value of any pension plan asset is restricted to the present value of any economic benefits available in the form of refunds from the plan or reductions in the future contributions to the plan. Any restriction would be recorded as a valuation allowance.

Defined benefit costs recognized in the Consolidated Statement of Income under Salaries and employee benefits consist of a) current year's service cost, b) interest expense on the defined benefit obligation, c) return on plan assets based on the rate used to discount the plan obligation, d) past service cost and e) change in the valuation allowance.

Defined contribution pension plans
As part of the pension plans, the Bank also operates defined contribution pension arrangements. The contribution payable to these defined contribution arrangements is in proportion to the services rendered to the Bank by the employees and is recorded as an expense under Salaries and employee benefits. Unpaid contributions are recorded as a liability.

Other post-employment benefits
The Bank offers other post-employment benefits to its employees such as a salary continuance plan during maternity leave and the payment of group insurance plan premiums during a disability period or maternity leave. In addition, certain retired employees have other retirement benefits, including health and life insurance. The costs related to these benefits are recognized during the employees' service life according to accounting policies like those applied to defined benefit pension plans.

Assumptions

Valuation of employee benefits for defined benefit pension plans and other post-employment benefits are calculated by the Bank's independent actuaries based on a number of assumptions determined by management such as discount rates, future salary levels, retirement age, mortality rates and health-care cost escalation. The discount rate is determined using a high-quality corporate bond yield curve, whose construction requires significant judgment. Other key assumptions also require significant management judgment. Considering the importance of defined benefit obligations and due to the long-term nature of these plans, changes in assumptions could have a significant impact on the defined benefit plan assets (liabilities), as well as on pension plan and other post-employment benefit expenses.

3.8 INCOME TAXES

The Bank uses the liability method of tax allocation and accounts for the deferred income tax assets and liabilities related to loss carry forwards and other temporary differences between the carrying amounts and the tax bases of assets and liabilities, in accordance with tax laws and rates enacted or substantively enacted on the date the differences are expected to reverse. A valuation allowance is established, as needed, to reduce the deferred income tax asset to the amount that is more likely than not to be realized. All amounts resulting from changes in tax rates are recorded in net income, except to the extent that it relates to items previously recognized in equity, in which case they are recorded in equity.

Deferred income tax assets and liabilities reflect management's estimate of temporary differences. Asset values are determined using assumptions regarding the results of operations of future fiscal years, timing of reversal of temporary differences and tax rates on the date of reversals, which may well change depending on governments' fiscal policies. Management must also assess whether it is more likely than not that deferred income tax assets will be realized and determine whether a valuation allowance is required on all or a portion of deferred income tax assets.

Deferred tax liabilities are recognized for all taxable temporary differences, except in respect of taxable temporary differences associated with investments in subsidiaries, where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

In addition, the Bank takes part in the normal course of its business in certain transactions for which the tax impacts are uncertain. Management therefore interprets tax legislation in various jurisdictions and accounts for provisions for uncertain tax positions. The provisions are estimated at the end of each reporting period and reflect management's best estimate of the amounts that may have to be paid. In the case where an audit by tax authorities results in an adjustment to the provision, the difference will impact the income taxes of the period in which the assessment was made.

The use of different assumptions or interpretations could translate into significantly different income tax assets and liabilities, as well as income tax expense or recovery.

3.9 PROVISIONS AND CONTINGENT LIABILITIES

Provisions are liabilities of uncertain timing or amount. They are recognized when the Bank has a present legal or constructive obligation as a result of a past event, and it is both probable that an outflow of resources will be required to settle the obligation and the amount can be reliably estimated, considering all relevant risks and uncertainties. Contingent liabilities are not recognized but are disclosed in the Consolidated Financial Statements when it cannot be determined whether an obligation is probable, or the amount of loss cannot reliably be estimated. The adequacy of provisions is regularly assessed and the necessary adjustments to incorporate new information are made as it becomes available.

Management exercises judgment in determining whether a past event or transaction may result in the recognition of a provision or the disclosure of a contingent liability, for instance in the case of legal actions or restructuring plans. Management and internal and external experts are involved in assessing the probability and in estimating any amounts involved. Furthermore, the actual cost of resolving these obligations may be substantially higher or lower than the amount recognized.

3.10 EARNINGS PER SHARE

The Bank calculates its basic earnings per share by dividing net income for the period, after deduction of preferred share dividends, including applicable income taxes, as well as premiums on redemption of preferred shares, by the weighted-average number of common shares outstanding for the period. Diluted earnings per share are calculated by dividing the basic earnings, adjusted for the effects of potentially dilutive common shares, by the weighted-average number of common shares outstanding adjusted for the period, inclusive of the effect of potentially dilutive common shares.

3.11 INSURANCE

The Bank is engaged in credit life and disability insurance activities. Insurance premiums are recognized as revenue, net of reinsurance, over the terms of the underlying policies. Insurance claims and changes in policy holder benefit estimates are recorded as incurred. These activities are presented in other income under Insurance income, net.

3.12 SHARE-BASED COMPENSATION

The Bank provides share-based compensation to certain employees and directors.

Compensation expense of share purchase options is accrued based on the best estimate of the number of instruments expected to vest, with revisions made to that estimate if subsequent information indicates that actual forfeitures are likely to differ from initial estimates. Share purchase options are expensed over the applicable vesting period with a corresponding increase in share-based payment reserve in equity. Upon exercise of the instruments, corresponding amounts in the share-based payment reserve are transferred to the common share account within shareholders' equity.

Stock appreciation rights, restricted share units, performance share units (PSUs) and deferred share units are accounted for as cash-settled share-based payment awards. These rights and units are recognized as a compensation expense over the applicable vesting period with a corresponding liability accrued based on the fair value of the Bank's common shares and, for PSUs, specific performance conditions. The change in the value of rights and units resulting from changes in the fair value of the Bank's common shares or changes in the specific performance conditions and credited dividends is recognized in income during the vesting period, partly offset by the effect of total return swaps used to manage the variability in the value of the related rights and units.

The Bank's contributions related to the employee share purchase program are recognized as compensation expense.

3.13 ASSETS UNDER ADMINISTRATION

The Bank administers assets held by customers that are not recognized in the Consolidated Balance Sheet. Revenues derived from the administration of these assets are recorded in other income, as services are provided.

3.14 TRANSLATION OF FOREIGN CURRENCIES

The Consolidated Financial Statements are presented in Canadian dollars which is the Bank's presentation currency. Items included in the financial statements of each of the Bank's entities are measured using their functional currency, which is the currency of the primary economic environment in which they operate.

Monetary assets and liabilities denominated in a currency that differs from an entity's functional currency are translated into the functional currency of the entity at the exchange rate prevailing at the balance sheet date. Non-monetary assets and liabilities that are measured at historical cost are translated at historical exchange rates. Non-monetary assets that are measured at fair value are translated at the exchange rate prevailing at the balance sheet date. Income and expenses are translated at the average monthly exchange rates prevailing throughout the year. Gains and losses resulting from the translation of foreign currencies are included in other income except for available-for-sale equity securities not designated in fair value hedges, where unrealized translation gains and losses are included in other comprehensive income until the asset is sold or becomes impaired.

Assets and liabilities of the foreign operations with a functional currency in U.S. dollars are translated into Canadian dollars at the exchange rates prevailing at the Consolidated Balance Sheet date, and income and expenses of the foreign operations are translated at the average monthly exchange rates prevailing throughout the year. Any goodwill and fair value adjustments to the carrying amounts of assets and liabilities arising on the acquisition are treated as assets and liabilities of the foreign operations and are translated at the exchange rate prevailing at the Consolidated Balance Sheet date. Unrealized gains and losses resulting from the translation of foreign operations, along with related hedges and tax effects are included in other comprehensive income. Upon disposal or partial disposal of a foreign operation, an appropriate proportion of the translation differences previously recognized in other comprehensive income is recognized in other income.

3.15 CASH AND CASH EQUIVALENTS

Cash and cash equivalents consist of cash and non-interest-bearing deposits with banks and are measured at amortized cost. Cash comprises bank notes and coins.

3.16 SHARE CAPITAL

Share issuance costs

Incremental costs directly attributable to the issuance of new shares or options are recorded in equity as a deduction from the proceeds, net of applicable income taxes.

Dividend on common shares

Dividends on common shares are recorded in equity in the period in which they are approved by the Bank's Board of Directors.

4. FUTURE ACCOUNTING CHANGES

This section summarizes new standards and amendments to existing standards which have been issued but are not yet effective.

Insurance Contracts (IFRS 17)

In May 2017, the IASB issued IFRS 17, *Insurance Contracts*, which sets out the principles for the recognition, measurement, presentation and disclosure of insurance contracts. IFRS 17 replaces the previous insurance contract standard, IFRS 4, *Insurance Contracts*.

In March 2020, the IASB has completed its discussions on the amendments to IFRS 17 that were proposed for public consultation in June 2019 and decided that the effective date of the Standard will be deferred to annual reporting periods beginning on or after January 1, 2023. The IASB also decided to extend the exemption currently in place for some insurers regarding the application of IFRS 9, *Financial Instruments* to enable them to implement both IFRS 9 and IFRS 17 at the same time.

IFRS 17 provides a general measurement model for the recognition of insurance contracts, which requires measuring insurance contracts using updated estimates and assumptions that reflect the timing of cash flows and any uncertainty relating to insurance contracts. In addition, entities have the option to use a simplified measurement model (premium allocation approach) for short-duration contracts. IFRS 17 will be effective November 1, 2023 for the Bank, which is currently assessing the impact of the adoption of this new standard on its Consolidated Financial Statements.

5. SECURITIES

Credit quality

As at October 31, 2022, debt securities at amortized cost and at FVOCI are classified in Stage 1, with their credit rating falling mainly in the "Low risk" category according to the Bank's internal risk-rating categories. As at October 31, 2022, allowances for credit losses amounted to $0.2 million ($0.2 million as at October 31, 2021) for debt securities at amortized cost and $0.2 million reported in Accumulated other comprehensive income for debt securities at FVOCI ($0.2 million as at October 31, 2021) .

Securities at amortized cost

	2022	2021
Securities issued or guaranteed		
by Canada[1]	**$ 1,338,249**	$ 1,245,547
by provinces	**1,483,855**	1,729,373
by municipalities	**110,510**	133,873
Other debt securities	**71,791**	80,662
	$ 3,004,405	$ 3,189,455

(1) Including mortgage-backed securities that are fully guaranteed by the Canada Mortgage and Housing Corporation pursuant to the National Housing Act.

Gains (losses) on disposals of securities at amortized cost

During the years ended 2022 and 2021, the Bank sold certain debt securities measured at amortized cost for liquidity management purposes. The carrying value of these securities, mainly consisting of treasury bills which were at or almost at term, was $368.0 million upon disposal in 2022 ($996.5 million in 2021). The Bank recognized negligible gains in Income from financial instruments in the Consolidated Statement of Income in 2022 (nil in 2021).

Securities at FVOCI

Accumulated unrealized gains and losses recognized in other comprehensive income are detailed as follows:

				2022
	Amortized cost	**Unrealized gains**	**Unrealized losses**	**Fair value**
Securities issued or guaranteed				
by Canada[1]	$ 8,111	$ 1	$ 92	$ 8,020
by provinces	6,994	—	156	6,838
by municipalities	2,617	—	79	2,538
Other debt securities	13,748	17	539	13,226
Preferred shares	145,646	1,281	17,020	129,907
Common shares and other securities	17,812	10,389	2,108	26,093
	$ 194,928	$ 11,688	$ 19,994	$ 186,622

(1) Including mortgage-backed securities that are fully guaranteed by the Canada Mortgage and Housing Corporation pursuant to the National Housing Act.

				2021
	Amortized cost	Unrealized gains	Unrealized losses	Fair value
Securities issued or guaranteed				
by Canada[1]	$ 8,028	$ —	$ 84	$ 7,944
by provinces	5,845	—	5	5,840
by municipalities	31,535	207	2	31,740
Other debt securities	14,347	365	4	14,708
Asset-backed securities	407	5	—	412
Preferred shares	161,623	18,441	797	179,267
Common shares and other securities	13,405	5,835	71	19,169
	$ 235,190	$ 24,853	$ 963	$ 259,080

(1) Including mortgage-backed securities that are fully guaranteed by the Canada Mortgage and Housing Corporation pursuant to the National Housing Act.

Equity securities designated at FVOCI

The Bank designated certain equity securities, the business objective of which is mainly to generate dividend income, at FVOCI without subsequent reclassification of gains and losses to net income.

Dividend income recognized in earnings on these investments was $9.0 million for the year ended October 31, 2022 ($8.9 million for the year ended October 31, 2021), including a negligible amount for investments that were sold during all such periods.

	2022	**2021**
Fair value at beginning of year	**$ 198,436**	$ 170,157
Change in fair value	**(30,867)**	49,966
Designated at FVOCI	**11,018**	49,838
Sales or redemptions	**(22,587)**	(71,525)
Fair value at end of year	**$ 156,000**	$ 198,436

Sales of equity securities designated at FVOCI in 2022 and 2021 were driven by asset allocation decisions and outlook assessments. The cumulative net gain realized as a result of the sale of these securities amounted to $0.8 million in 2022 (cumulative net loss of $3.3 million in 2021).

Refer to Note 22 for additional information on the determination of fair value of securities.

6. LOANS AND ALLOWANCES FOR CREDIT LOSSES

As at October 31, 2022 and October 31, 2021, loans are recognized on the Consolidated Balance Sheet at amortized cost as outlined in Note 3.

Determining and measuring expected credit losses (ECL)

Expected Credit Losses

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

- Stage 1: Financial instruments that are not impaired and for which the credit risk has not increased significantly since initial recognition are classified in Stage 1.
- Stage 2: Financial instruments that have experienced a significant increase in credit risk between initial recognition and the reporting date but are not impaired are migrated to Stage 2.
- Stage 3: Financial instruments for which there is objective evidence of impairment, for which one or more events have had a detrimental impact on estimated future cash flows at the reporting date and are considered credit impaired, are classified in Stage 3.
- POCI: Financial instruments that are credit-impaired when purchased or originated (POCI) are classified in the POCI category.

Governance and controls
The Bank's risk management 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 function. Each month, the Bank's Retail Credit Committee reviews analyses on various credit metrics to identify risks and trends that might affect the retail portfolios. The Bank's Commercial Credit Committee also reviews material impaired loans as well as analyses on other impaired loans where payment is past due by 90 days or more. Collection processes are centralized and are based on specialized expertise. Complex questions on measurement methodologies and assumptions are reviewed by a group of experts from various functions. Furthermore, the inputs and assumptions used to determine expected credit losses are reviewed on a regular basis by the risk management function.

Measurement of expected credit losses
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) discounted at the reporting date. For accounting purposes, 12-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.

Expected credit losses are measured either on a collective or an individual basis. Financial instruments that have credit losses measured on a collective basis are allocated to groups that share similar credit risk characteristics.

Inputs, assumptions and estimation techniques used
To calculate ECL under IFRS 9, the Bank primarily leverages its credit risk models based on the internal risk rating of credit facilities while adjusting certain parameters.

<u>PD estimates</u>
PD is an estimate of the likelihood that a loan will not be repaid over a given time horizon. The resulting PD estimates are built based on historical data, current market conditions and are estimated by incorporating reasonable and supportable forward-looking economic conditions at the balance sheet date. Some adjustments are made to Basel parameters to transform them into parameters compliant with IFRS 9 requirements, including the conversion of through-the-cycle parameters to point-in-time inputs that consider supportable and relevant information about future economic conditions.

<u>LGD estimates</u>
LGD represents the amount that may not be recovered in the case where a default occurs. LGD estimates are determined based on historical data, facility-specific characteristics such as collateral, direct costs and relevant information about future economic conditions, where appropriate.

<u>EAD estimates</u>
EAD represents an estimate of the exposure at the time a default may occur. Depending on the type of exposure, EAD includes forward-looking expectations about amounts to be drawn on a committed facility, if applicable, or expectations about repayments of drawn balances.

<u>Expected life</u>
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 behavioral life of the product.

<u>Incorporation of forward-looking information</u>
The Bank's Economy and Strategy group is responsible for developing three macroeconomic scenarios (base scenario, upside scenario and downside scenario) 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. ECL inputs and models rely on forward-looking macroeconomic factors such as interest rates, unemployment rates, GDP forecasts and housing price indices.

Assessment of significant changes in credit risk
To assess whether the credit risk of a financial instrument has increased significantly, the 12-month PD at the reporting date is compared with the 12-month PD at the date of initial recognition, and reasonable and supportable information indicative of significant increases in credit risk since initial recognition is considered. The Bank has included 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 Bank also considers other relevant factors that may not be adequately reflected in the information used for this assessment (including late payments and whether the financial asset is subject to additional monitoring such as the watch list for commercial loan portfolios).

Similarly, the Bank determines whether credit risk has decreased significantly for loans that have been migrated to stage 2 or stage 3, using those same factors.

Use of management overlays
Management overlays to ECL allowance estimates are used where it is assessed that existing inputs, assumptions and model techniques do not capture all relevant risk factors. The emergence of new macroeconomic or political events, along with expected changes to parameters, models or data that are not incorporated in current parameters, internal risk rating migrations, or forward-looking information are examples of such circumstances. The use of management overlays requires the application of significant judgment.

Determination of credit impairment
The Bank considers a financial asset to be impaired when one or more events that have a detrimental impact on the estimated future cash flows of a financial asset have occurred or when contractual payments are 90 days past due.

Credit risk rating grades

Personal credit exposures
The Bank uses behavior scoring models to manage and monitor personal credit exposures. The table below shows the PD categories along with the associated credit qualities of the personal credit portfolios.

PD (%)	Description
0.00-0.33	Very low risk
0.34-0.83	Low risk
0.84-14.98	Medium risk
14.99-99.99	High risk
100	Default

Commercial credit exposures
For internal credit risk management, the Bank uses a 19-level risk rating system to evaluate commercial credit exposures. This risk rating system used by the Bank is akin to the systems used by major external rating agencies. The following table presents a grouping of the grades by major risk category and compares them with the ratings of two major rating agencies.

Ratings	PD (%)	Standard & Poor's	DBRS	Description
1-7	0.00-0.53	AAA to BBB-	AAA to BBB (low)	Very low risk
8-10	0.54-2.28	BB+ to B+	BB (high) to B (high)	Low risk
11-13	2.29-9.91	B to B-	B to B (low)	Medium risk
14-16	9.92-99.99	CCC+ to CCC-	CCC (high) to CCC (low)	High risk
17-19	100	CC/C/D	CC/C/D	Default

Credit risk exposure

The following table shows the gross and net carrying amounts of loans and acceptances and off-balance sheet exposures, according to credit quality and ECL impairment stage of each loan category at amortized cost.

	2022				2021			
	Performing		Impaired		Performing		Impaired	
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Personal loans								
Very low risk	$ 2,313,984	$ 307	$ —	$ 2,314,291	$ 2,788,385	$ 596	$ —	$ 2,788,981
Low risk	352,966	61,515	—	414,481	337,546	98,748	—	436,294
Medium risk	243,561	271,247	—	514,808	191,675	235,612	—	427,287
High risk	—	10,229	—	10,229	—	12,578	—	12,578
Default	—	—	12,826	12,826	—	—	16,201	16,201
Gross carrying amount	2,910,511	343,298	12,826	3,266,635	3,317,606	347,534	16,201	3,681,341
Allowances for loan losses	12,078	35,710	3,476	51,264	8,432	35,183	9,471	53,086
Net carrying amount	$ 2,898,433	$ 307,588	$ 9,350	$ 3,215,371	$ 3,309,174	$ 312,351	$ 6,730	$ 3,628,255
Residential mortgage loans								
Very low risk	$ 11,436,281	$ —	$ —	$11,436,281	$10,867,771	$ 51	$ —	$10,867,822
Low risk	2,634,189	15,690	—	2,649,879	2,837,423	38,733	—	2,876,156
Medium risk	1,641,105	310,396	—	1,951,501	1,650,657	332,921	—	1,983,578
High risk	—	72,259	—	72,259	—	71,251	—	71,251
Default	—	—	47,560	47,560	—	—	58,192	58,192
Gross carrying amount	15,711,575	398,345	47,560	16,157,480	15,355,851	442,956	58,192	15,856,999
Allowances for loan losses	6,811	6,592	2,591	15,994	6,506	4,689	4,209	15,404
Net carrying amount	$ 15,704,764	$ 391,753	$ 44,969	$16,141,486	$15,349,345	$ 438,267	$ 53,983	$15,841,595
Commercial loans[1]								
Very low risk	$ 3,842,829	$ 11,333	$ —	$ 3,854,162	$ 3,106,102	$ 28,029	$ —	$ 3,134,131
Low risk	10,798,691	132,248	—	10,930,939	7,961,225	59,468	—	8,020,693
Medium risk	2,516,822	334,460	—	2,851,282	2,336,298	304,990	—	2,641,288
High risk	—	423,260	—	423,260	—	133,794	—	133,794
Default	—	—	97,303	97,303	—	—	176,517	176,517
Gross carrying amount	17,158,342	901,301	97,303	18,156,946	13,403,625	526,281	176,517	14,106,423
Allowances for loan losses	51,094	28,887	46,237	126,218	40,358	12,896	73,312	126,566
Net carrying amount	$ 17,107,248	$ 872,414	$ 51,066	$18,030,728	$13,363,267	$ 513,385	$ 103,205	$13,979,857
Total loans								
Gross carrying amount	$ 35,780,428	$ 1,642,944	$ 157,689	$37,581,061	$32,077,082	$ 1,316,771	$ 250,910	$33,644,763
Allowances for loan losses	69,983	71,189	52,304	193,476	55,296	52,768	86,992	195,056
Net carrying amount	$ 35,710,445	$ 1,571,755	$ 105,385	$37,387,585	$32,021,786	$ 1,264,003	$ 163,918	$33,449,707
Off-balance sheet exposures[2]								
Very low risk	$ 1,124,620	$ 335	$ —	$ 1,124,955	$ 1,002,461	$ 414	$ —	$ 1,002,875
Low risk	1,292,992	23,680	—	1,316,672	1,333,287	23,440	—	1,356,727
Medium risk	457,896	39,900	—	497,796	429,430	56,673	—	486,103
High risk	—	38,660	—	38,660	—	6,771	—	6,771
Default	—	—	—	—	—	—	—	—
Total exposure	2,875,508	102,575	—	2,978,083	2,765,178	87,298	—	2,852,476
Allowances for off-balance sheet exposures losses	5,864	1,811	—	7,675	5,775	1,747	—	7,522
Total exposure, net	$ 2,869,644	$ 100,764	$ —	$ 2,970,408	$ 2,759,403	$ 85,551	$ —	$ 2,844,954

(1) Including customers' liabilities under acceptances.
(2) Including letters of guarantee and certain undrawn amounts under approved credit facilities.

Reconciliation of allowances for credit losses

The following table presents the reconciliation of allowances for credit losses for each exposure category at amortized cost according to ECL impairment stage.

	2022				**2021**			
	Performing		**Impaired**		Performing		Impaired	
	Stage 1	**Stage 2**	**Stage 3**	**Total**	Stage 1	Stage 2	Stage 3	Total
Personal loans								
Balance at beginning of period	$ 9,561	$ 36,551	$ 9,471	$ 55,583	$ 8,758	$ 19,532	$ 17,212	$ 45,502
Transfers:								
to Stage 1	4,941	(4,282)	(659)	—	6,358	(5,272)	(1,086)	—
to Stage 2	(2,019)	3,589	(1,570)	—	(887)	3,001	(2,114)	—
to Stage 3	(211)	(1,156)	1,367	—	(134)	(890)	1,024	—
Originations	1,336	—	—	1,336	928	—	—	928
Derecognitions	(1,647)	(7,605)	(9,373)	(18,625)	(862)	(2,733)	(9,103)	(12,698)
Net remeasurement of allowances	1,212	9,765	22,446	33,423	(4,600)	22,913	20,563	38,876
Provision for (reversal of) credit losses	3,612	311	12,211	16,134	803	17,019	9,284	27,106
Write-offs	—	—	(24,170)	(24,170)	—	—	(25,924)	(25,924)
Recoveries	—	—	6,849	6,849	—	—	9,784	9,784
Foreign exchange and other	—	—	(885)	(885)	—	—	(885)	(885)
Balance at end of period	$ 13,173	$ 36,862	$ 3,476	$ 53,511	$ 9,561	$ 36,551	$ 9,471	$ 55,583
Total allowances for loan losses	$ 12,078	$ 35,710	$ 3,476	$ 51,264	$ 8,432	$ 35,183	$ 9,471	$ 53,086
Total allowances for off-balance sheet exposures	1,095	1,152	—	2,247	1,129	1,368	—	2,497
Total allowances for credit losses	$ 13,173	$ 36,862	$ 3,476	$ 53,511	$ 9,561	$ 36,551	$ 9,471	$ 55,583
Residential mortgage loans								
Balance at beginning of period	$ 6,577	$ 4,707	$ 4,209	$ 15,493	$ 5,401	$ 5,048	$ 3,605	$ 14,054
Transfers:								
to Stage 1	2,681	(2,287)	(394)	—	3,165	(2,256)	(909)	—
to Stage 2	(1,423)	1,823	(400)	—	(917)	1,507	(590)	—
to Stage 3	(98)	(153)	251	—	(133)	(536)	669	—
Originations	2,880	—	—	2,880	2,576	—	—	2,576
Derecognitions	(1,619)	(1,047)	(2,217)	(4,883)	(1,539)	(1,210)	(1,526)	(4,275)
Net remeasurement of allowances	(2,159)	3,556	3,189	4,586	(1,976)	2,154	5,733	5,911
Provision for (reversal of) credit losses	262	1,892	429	2,583	1,176	(341)	3,377	4,212
Write-offs	—	—	(1,824)	(1,824)	—	—	(2,733)	(2,733)
Recoveries	—	—	1,305	1,305	—	—	1,271	1,271
Foreign exchange and other	—	—	(1,528)	(1,528)	—	—	(1,311)	(1,311)
Balance at end of period	$ 6,839	$ 6,599	$ 2,591	$ 16,029	$ 6,577	$ 4,707	$ 4,209	$ 15,493
Total allowances for loan losses	$ 6,811	$ 6,592	$ 2,591	$ 15,994	$ 6,506	$ 4,689	$ 4,209	$ 15,404
Total allowances for off-balance sheet exposures	28	7	—	35	71	18	—	89
Total allowances for credit losses	$ 6,839	$ 6,599	$ 2,591	$ 16,029	$ 6,577	$ 4,707	$ 4,209	$ 15,493
Commercial loans								
Balance at beginning of period	$ 44,933	$ 13,257	$ 73,312	$ 131,502	$ 51,031	$ 18,765	$ 55,618	$ 125,414
Transfers:								
to Stage 1	4,273	(3,262)	(1,011)	—	4,179	(3,889)	(290)	—
to Stage 2	(7,088)	7,715	(627)	—	(2,111)	2,877	(766)	—
to Stage 3	(44)	(421)	465	—	(306)	(1,789)	2,095	—
Originations	12,668	—	—	12,668	12,179	—	—	12,179
Derecognitions	(11,863)	(6,224)	(9,063)	(27,150)	(16,503)	(6,775)	(5,379)	(28,657)
Net remeasurement of allowances	11,548	18,162	22,933	52,643	(3,181)	4,233	33,608	34,660
Provision for (reversal of) credit losses	9,494	15,970	12,697	38,161	(5,743)	(5,343)	29,268	18,182
Write-offs	—	—	(38,737)	(38,737)	—	—	(11,329)	(11,329)
Recoveries	—	—	997	997	—	—	2,231	2,231
Foreign exchange and other	1,408	312	(2,032)	(312)	(355)	(165)	(2,476)	(2,996)
Balance at end of period	$ 55,835	$ 29,539	$ 46,237	$ 131,611	$ 44,933	$ 13,257	$ 73,312	$ 131,502
Total allowances for loan losses	$ 51,094	$ 28,887	$ 46,237	$ 126,218	$ 40,358	$ 12,896	$ 73,312	$ 126,566
Total allowances for off-balance sheet exposures	4,741	652	—	5,393	4,575	361	—	4,936
Total allowances for credit losses	$ 55,835	$ 29,539	$ 46,237	$ 131,611	$ 44,933	$ 13,257	$ 73,312	$ 131,502
Total exposure								
Total allowances for loan losses	$ 69,983	$ 71,189	$ 52,304	$ 193,476	$ 55,296	$ 52,768	$ 86,992	$ 195,056
Total allowances for off-balance sheet exposures	5,864	1,811	—	7,675	5,775	1,747	—	7,522
Total allowances for credit losses	$ 75,847	$ 73,000	$ 52,304	$ 201,151	$ 61,071	$ 54,515	$ 86,992	$ 202,578

Main macroeconomic factors

The following tables show the main macroeconomic factors used to estimate the collective allowances for credit losses .

2022						
	Base scenario		Upside scenario		Downside scenario	
	Next 12 months[1]	Remaining forecast period[2]	Next 12 months[1]	Remaining forecast period[2]	Next 12 months[1]	Remaining forecast period[2]
Main macroeconomic factors						
GDP growth (decrease)	**(0.1)%**	**3.3%**	**1.2%**	**3.4%**	**(3.5)%**	**2.9%**
Average unemployment rate (percentage points)	**5.9**	**6.3**	**5.5**	**5.5**	**8.0**	**8.3**
Housing price index growth (decrease)	**(13.3)%**	**5.8%**	**(5.4)%**	**8.5%**	**(21.3)%**	**3.6%**
S&P/TSX index growth (decrease)[3]	**0.3%**	**13.5%**	**9.8%**	**14.9%**	**(10.7)%**	**19.9%**

2021						
	Base scenario		Upside scenario		Downside scenario	
	Next 12 months[1]	Remaining forecast period[2]	Next 12 months[1]	Remaining forecast period[2]	Next 12 months[1]	Remaining forecast period[2]
Main macroeconomic factors						
GDP growth	3.8%	4.8%	5.8%	4.9%	1.3%	5.4%
Average unemployment rate (percentage points)	6.5	5.6	5.8	4.9	8.6	7.3
Housing price index growth (decrease)	2.6%	4.6%	4.6%	5.4%	(3.0)%	4.6%
S&P/TSX index growth (decrease)[3]	8.4%	8.7%	10.2%	8.4%	(1.9)%	16.3%

(1) Expected variation or average over the next 12 months. These factors are used for Stage 1 ECL calculations.
(2) Expected variation or average over the remaining forecast period of 24 months. These factors are used for Stage 2 and Stage 3 ECL calculations.
(3) Main stock index in Canada.

The main macroeconomic factors used for the personal and residential mortgage loan portfolios are the average unemployment rate, the housing price index and the S&P/TSX index. The main macroeconomic factors used for the commercial loan portfolio is the GDP. An increase in the average unemployment rate will generally correlate with higher allowances for credit losses, whereas an increase in the other macroeconomic factors mentioned above will generally correlate with lower allowances for credit losses.

Description of scenarios used for ECL measurement as at October 31, 2022

In the base scenario, adjustments to central banks tightening financial conditions leads to a shallow recession in North America in early 2023. High interest rates dampen consumer spending and restrain business investment. Unemployment rises modestly and the moderate decline in home prices continues. Equity returns are subdued. Central banks successfully restore price stability during 2023. The recovery is characterized by modest economic momentum.

In the downside scenario, central banks tighten financial conditions to a greater extent than expected by financial markets as they must lean heavily against persistently high inflation. Very high interest rates lead to a deeper and longer recession in North America during 2023. Unemployment increases substantially and contributes to a significant decline in home prices. Equity returns are deeply negative. Central banks cut back policy rates modestly once the recession occurs, but the interest rates environment remains restrictive. The recovery is tepid for the remaining forecast period.

In the upside scenario, a soft-landing is achieved. Inflation cools down and economic momentum does not fall in negative territory in early 2023. Compelling evidence of price stability allows central banks to bring policy rates close to neutral territory during 2023. Resiliency in labour market conditions is preserved and housing market activity rebounds. Improving sentiment and acceleration in economic momentum contribute to solid equity returns.

Sensitivity analysis of allowances for credit losses on performing loans

If the Bank was to only use the base scenario for the measurement of allowances for credit losses on performing loans, it would be $33.5 million lower than the recognized allowances for credit losses as at October 31, 2022 ($35.3 million lower as at October 31, 2021). If the Bank was to only use the downside scenario for the measurement of allowances for credit losses on performing loans, it would be $46.0 million higher than the recognized allowances for credit losses as at October 31, 2022 ($48.0 million higher as at October 31, 2021).

This sensitivity is isolated to the measurement of allowances for credit losses and therefore did not consider changes in the migration of exposures between stage 1 and stage 2 from the determination of the significant increase in credit risk that would have resulted in a 100% base scenario or a 100% downside scenario. As a result, the allowances for credit losses on performing loans could exceed the amount implied by the 100% downside case scenario from the migration of additional exposures from stage 1 to stage 2. Actual credit losses could differ materially from those reflected in these estimates.

Under the current probability-weighted scenarios, if all performing loans were in stage 1, reflecting a 12-month expected loss period, the allowances for credit losses on performing loans would be $136.0 million ($90.4 million as at October 31, 2021)

Loans past due but not impaired

The following table shows personal and residential mortgage loans that are past due but not classified as impaired. The Commercial loans past due but not impaired are not significant.

	2022			2021		
	1 day-31 days	32 days-90 days	Total	1 day-31 days	32 days-90 days	Total
Personal loans	$ 70,173	$ 23,726	$ 93,899	$ 48,897	$ 19,823	$ 68,720
Residential mortgage loans	115,028	27,496	142,524	131,931	29,925	161,856
	$ 185,201	$ 51,222	$ 236,423	$ 180,828	$ 49,748	$ 230,576

Write-offs

The contractual amount outstanding on financial assets that were written off during the year ended October 31, 2022 and that are still subject to enforcement activity was $5.7 million ($8.1 million for the year ended October 31, 2021).

Foreclosed assets

Foreclosed assets are repossessed non-financial assets where the Bank gains title, ownership, or possession of individual properties, such as real estate properties, which are managed for sale in an orderly manner with the proceeds used to reduce or repay any outstanding debt. The Bank does not generally occupy foreclosed properties for its business use. Foreclosed assets are recorded in other assets on the Consolidated Balance Sheet and are classified as held-for-sale. The Bank repossessed assets for $1.8 million in 2022 ($1.8 million in 2021) and foreclosed assets amounted to $4.7 million as at October 31, 2022 ($5.6 million as at October 31, 2021).

Finance lease receivables

The Commercial loans line item includes net investment in leases of $1.1 billion as at October 31, 2022 ($957.7 million as at October 31, 2021).

	2022	2021
Minimum lease payments	$ 1,214,634	$ 1,033,036
Unguaranteed residual values	27,883	24,305
Gross investment in leases	1,242,517	1,057,341
Unearned interest income	(129,707)	(99,636)
Net investment in leases	1,112,810	957,705
Unamortized deferred costs, security deposits, and other	13,503	12,330
	$ 1,126,313	$ 970,035

Contractual maturities of finance lease receivables

The following table shows information about contractual maturity dates for finance lease receivables.

	2022			2021		
	Gross investment in leases	Unearned interest income	Net investment in leases	Gross investment in leases	Unearned interest income	Net investment in leases
Receivable within one year	$ 435,753	$ 57,843	$ 377,910	$ 379,701	$ 45,108	$ 334,593
Receivable within 1 to 5 years	791,980	71,383	720,597	661,669	53,955	607,714
Receivable after 5 years	14,784	481	14,303	15,971	573	15,398
	$ 1,242,517	$ 129,707	$ 1,112,810	$ 1,057,341	$ 99,636	$ 957,705

7. SECURITIZATION AND STRUCTURED ENTITIES

7.1 TRANSFER OF FINANCIAL ASSETS

The Bank primarily sells residential mortgage loans through the Canada Mortgage Bond (CMB) program and to third-party investors under the National Housing Act (NHA) Mortgage-Backed Securities (MBS) program set-up by the Canada Mortgage and Housing Corporation (CMHC), as well as through other multi-seller conduits set up by other Canadian banks.

CMHC programs

Under the NHA MBS program, the Bank issues marketable securities backed by insured eligible residential mortgage loans (the NHA MBS). These NHA MBS may be sold directly to investors or through the CMB program. CMBs are CMHC guaranteed bonds issued through the Canada Housing Trust No. 1 (CHT), a special purpose trust. The NHA MBS and CMB holders and the CHT have no recourse to other assets of the Bank in the event of failure of debtors to pay when due.

As the Bank continues to be exposed to the prepayment, interest rate and/or credit risk associated with the securitized mortgage loans, the Bank retains substantially all risks and rewards related to those financial assets. Therefore, securitized residential mortgage loans remain on balance sheet and are considered pledged assets. The proceeds received are recorded as secured financing on the Debt related to securitization activities line item on the Consolidated Balance Sheet. Other assets required to be maintained for the Bank to participate in the CMB program (Replacement Assets) are also recorded on balance sheet and considered pledged assets.

Multi-seller conduit

The Bank sells residential mortgage loans to an intermediate multi-seller structured entity established for the limited purpose of securitization activities. The intermediate multi-seller structured entity funds such purchases through the issuance of interest-bearing notes to other structured entities. The structured entity has no recourse to other assets of the Bank in the event of failure of debtors to pay when due.

As the Bank provides credit enhancements for these transactions, the Bank retains substantially all risks and rewards related to those financial assets. The securitized loans remain on balance sheet. However, as the Bank's rights, title and interest in the transferred loans are legally transferred to the structured entity, these are considered pledged assets. The proceeds received are recorded as secured financing on the Debt related to securitization activities line item on the Consolidated Balance Sheet.

Financial assets not qualifying for derecognition and associated financial liabilities

The following table summarizes the carrying amounts of financial assets that do not qualify for derecognition and their associated financial liabilities included on the Consolidated Balance Sheet.

	2022	2021
Residential mortgage loans	**$ 10,298,524**	$ 9,248,259
Replacement Assets[1]	**799,619**	735,625
Debt related to securitization activities	**(10,860,606)**	(10,068,782)

(1) Includes cash and deposits with banks, securities purchased under reverse repurchase agreements and securities acquired as part of the principal reinvestment account that is required to be maintained for the Bank to participate in the program.

In addition, as at October 31, 2022, the Bank has also securitized other residential mortgage loans for a total amount of $88.5 million ($605.4 million as at October 31, 2021) as part of the NHA MBS program, which were not subsequently sold. The resulting NHA MBS are presented as part of residential mortgage loans. Of these NHA MBS, nil was pledged as collateral with the Bank of Canada ($111.3 million as at October 31, 2021), refer to Note 29 for further details.

The following table summarizes the securitization activities carried out by the Bank.

	2022	2021
Carrying amounts of residential mortgage loans transferred during the year related to new financing	**$ 3,094,513**	$ 3,165,540
Carrying amounts of residential mortgage loans transferred during the year as Replacement Assets	**334,632**	708,077

Financial assets qualifying for derecognition

In 2022, the Bank securitized pools of $315.8 million mortgage loans with closed prepayment features under the NHA MBS program ($19.8 million in 2021). As the Bank did not retain substantially all the risks and rewards related to this transferred pool of residential mortgages, the related loans were derecognized from the Consolidated Balance Sheet and a gain of $0.1 million was recognized in 2022 in the Consolidated Statement of Income under Other income (nil in 2021). The securitization retained interest recorded was $19.2 million as at October 31, 2022 (not significant as at October 31, 2021) and the servicing liability recorded was not significant as at October 31, 2022 and 2021.

7.2 STRUCTURED ENTITIES SECURITIZATON VEHICLES

In the ordinary course of business, the Bank enters into transactions with other structured entities as part of securitization programs to obtain alternative sources of funding. The Bank sells personal loans and finance lease receivables to two intermediate partnerships, B2B Securitization Limited Partnership and LBC Leasing Limited Partnership (the Partnerships), respectively. To fund these purchases, the Partnerships issue interest-bearing liabilities to securitization conduits of other Canadian banks. These Partnerships are consolidated as the Bank holds 100% of the rights, has the ability to direct the relevant activities and can exercise power to affect returns. The interest-bearing liabilities issued by the Partnerships are recorded as debt related to securitization activities on the Consolidated Balance Sheet.

Financial assets not qualifying for derecognition and associated financial liabilities

The following table summarizes the carrying amounts of financial assets securitized through other structured entities that do not qualify for derecognition and their associated financial liabilities included in the Consolidated Balance Sheet.

	2022	2021
Personal loans	**$ 1,475,526**	$ 1,230,712
Commercial loans[1]	**783,781**	650,289
Debt related to securitization activities	**(1,331,816)**	(1,186,748)

(1) The Bank securitizes finance lease receivables which are included in the Commercial loans line item.

The following table summarizes the activities carried out by the Bank's consolidated structured entities.

	2022	2021
Carrying amounts of personal loans transferred during the year	**$ 436,189**	$ 250,001
Carrying amounts of finance lease receivables transferred during the year	**314,745**	361,356

7.3 COVERED BONDS

In April 2021, the Bank received approval from Canada Mortgage and Housing Corporation ("CMHC") to establish a $2.0 billion legislative covered bond programme (the "Programme") pursuant to the Canadian Registered Covered Bond Programs Guide, published by CMHC. In May 2021, the Bank issued its inaugural $250.0 million covered bonds which bear interest at a rate of 1.603% annually, payable semi-annually. In April 2022, the Bank issued its second tranche of covered bonds for $300.0 million which bear interest at a rate of 3.545% annually, payable semi-annually. The covered bonds are presented as Deposits on the Bank's Consolidated Balance Sheet.

The Bank will periodically transfer mortgages to LBC Covered Bond (Legislative) Guarantor Limited Partnership (the Guarantor LP) to support funding activities and asset coverage requirements under the Programme. The Guarantor LP was created to guarantee payment of the principal and interest owed to the bondholders. The covered bonds guaranteed by the Guarantor LP are direct, unsecured and unconditional obligations of the Bank; therefore, investors have a claim against the Bank which will continue if the covered bonds are not paid by the Bank and the mortgage assets in the Guarantor LP are insufficient to satisfy the obligations owing on the covered bonds. As at October 31, 2022 the total amount of mortgages outstanding was $732.9 million ($359.1 million as at October 31, 2021).

8. PREMISES AND EQUIPMENT

		Right-of-use assets		Premises and leasehold improvements		Equipment and furniture		Computer hardware		Total
Cost										
As at October 31, 2020	$	139,930	$	100,457	$	23,558	$	33,533	$	297,478
Additions		12,699		1,610		231		523		15,063
Change in estimates[1]		(48,245)		—		—		—		(48,245)
Impairment		(18,609)		(42,834)		(7,622)		(1,368)		(70,433)
Disposals		(3,096)		—		—		—		(3,096)
Impact of foreign currency translation		(847)		(101)		(47)		(13)		(1,008)
As at October 31, 2021		81,832		59,132		16,120		32,675		189,759
Additions		**28,376**		**1,425**		**328**		**9,124**		**39,253**
Change in estimates[1]		**(1,785)**		**—**		**—**		**—**		**(1,785)**
Impairment		**373**		**(2,740)**		**(263)**		**(268)**		**(2,898)**
Disposals		**(4,749)**		**—**		**—**		**—**		**(4,749)**
Impact of foreign currency translation		**1,143**		**133**		**62**		**23**		**1,361**
As at October 31, 2022	**$**	**105,190**	**$**	**57,950**	**$**	**16,247**	**$**	**41,554**	**$**	**220,941**
Accumulated depreciation										
As at October 31, 2020	$	16,105	$	33,690	$	21,156	$	26,658	$	97,609
Depreciation		14,415		5,425		573		1,600		22,013
Impairment		—		(18,335)		(7,550)		(1,368)		(27,253)
Disposals		(3,096)		—		—		—		(3,096)
Impact of foreign currency translation		(64)		(8)		(10)		(8)		(90)
As at October 31, 2021		27,360		20,772		14,169		26,882		89,183
Depreciation		**10,734**		**4,062**		**503**		**1,805**		**17,104**
Impairment		**48**		**(1,639)**		**(188)**		**(268)**		**(2,047)**
Disposals		**(4,749)**		**—**		**—**		**—**		**(4,749)**
Impact of foreign currency translation		**163**		**24**		**21**		**15**		**223**
As at October 31, 2022	**$**	**33,556**	**$**	**23,219**	**$**	**14,505**	**$**	**28,434**	**$**	**99,714**
Carrying amount										
As at October 31, 2021	$	54,472	$	38,360	$	1,951	$	5,793	$	100,576
As at October 31, 2022	**$**	**71,634**	**$**	**34,731**	**$**	**1,742**	**$**	**13,120**	**$**	**121,227**

(1) The change in estimates in right-of-use assets resulted from the reassessment of whether the Bank was reasonably certain to exercise extension options for its corporate office premises.

Impairment

In 2021, indicators of impairment were identified for the Bank's leased corporate office premises given the shift to work-from-home resulting from the pandemic and the Bank's future of work plans. Consequently, the Bank compared the carrying value of its right-of-use assets to its recoverable amount, which was determined using a value in use approach based on the expected sublease terms over the remainder of the head-leases. These terms notably included base rent recovery and variable rent recovery, as well as an expected absorption period. As a result, an impairment charge amounting to $36.7 million was recorded on the Impairment and restructuring charges line item related to management's plan to reduce the Bank's leased corporate office premises.

In addition, an impairment of premises and equipment amounting to $5.8 million in 2021 was recorded on the Impairment and restructuring charges line item related to the Personal Banking segment's impairment. Refer to Notes 10 and 30 for further details. No such impairment occurred in 2022.

In 2022, the Bank completed the decommissioning of its corporate premises which led to additional impairment charges of $0.7 million. Other impairment charges amounting to $0.2 million were also recorded in 2022 ($0.7 million in 2021).

9. SOFTWARE AND OTHER INTANGIBLE ASSETS

		Software		Acquisition related intangible assets		Other intangible assets		Total
Cost								
As at October 31, 2020	$	306,995	$	113,538	$	273,245	$	693,778
Additions		13,062		43		12,636		25,741
Impairment		(48,581)		(17,945)		(74,053)		(140,579)
Other		(4)		(6,022)		—		(6,026)
As at October 31, 2021		271,472		89,614		211,828		572,914
Additions		**45,648**		**21**		**6,503**		**52,172**
Impairment		**(6,344)**		**—**		**—**		**(6,344)**
Other		**12**		**7,940**		**—**		**7,952**
As at October 31, 2022	**$**	**310,788**	**$**	**97,575**	**$**	**218,331**	**$**	**626,694**
Accumulated amortization								
As at October 31, 2020	$	227,341	$	59,971	$	26,207	$	313,519
Amortization		16,539		12,547		10,418		39,504
Impairment		(35,171)		(14,961)		(5,201)		(55,333)
Other		(3)		(3,068)		—		(3,071)
As at October 31, 2021		208,706		54,489		31,424		294,619
Amortization		**14,017**		**12,356**		**9,007**		**35,380**
Impairment		**(3,309)**		**—**		**—**		**(3,309)**
Other		**6**		**5,560**		**—**		**5,566**
As at October 31, 2022	**$**	**219,420**	**$**	**72,405**	**$**	**40,431**	**$**	**332,256**
Carrying amount								
As at October 31, 2021	$	62,766	$	35,125	$	180,404	$	278,295
As at October 31, 2022	**$**	**91,368**	**$**	**25,170**	**$**	**177,900**	**$**	**294,438**

Acquisition related intangible assets mainly include contractual relationships with advisors and brokers associated to the Personal Banking segment, as well as with vendor-dealers associated to the Commercial Banking segment.

Other intangible assets include assets under development amounting to $48.1 million as at October 31, 2022 ($47.0 million as at October 31, 2021) which are not being amortized. These include developments costs related to the program to implement the Basel Advanced Internal Ratings Based (AIRB) approach to credit risk.

Software includes $29.4 million pertaining to projects under development yet to be amortized as at October 31, 2022 ($9.2 million as at October 31, 2021).

Impairment

In 2021, an impairment of software and other assets of $31.5 million was recorded on the Impairment and restructuring charges line item related to management's decision to cease Phase 2 of the core banking system program; refer to Note 30 for further details. No such impairment occurred in 2022.

Software and other intangible assets are also tested for impairment when there are indicators of impairment, except for assets under development which are tested for impairment annually. Since software and other intangible assets do not generate cash flows that are largely independent from other assets or group of assets, they are tested for impairment at the CGU level

In 2021, indicators of impairment were identified for the Personal Banking CGU's assets, which led management to perform an impairment test. As a result, it was determined that the estimated recoverable amount of the Personal Banking CGU was below its carrying amount and an impairment of software and other intangible assets amounting to $52.7 million in 2021 was recorded on on the Impairment and restructuring charges line item. Refer to Notes 10 and 30 for further details.

In 2022, indicators of potential impairment were identified for the Bank's assets, which led management to perform an impairment test for all CGUs. As the estimated recoverable amount of the CGUs was in excess of their carrying amount, there was no impairment charge recorded on software and other intangible assets. Changes in estimates and assumptions could significantly impact the impairment test results. Refer to Note 10 for details. Refer to Note 10 for details.

Other impairment charges amounting to $3.0 million were also recorded in 2022 ($1.0 million in 2021), mainly relating to certain software being decommissioned.

10. GOODWILL

	Commercial Banking[1]	Personal Banking[1]	Total
As at October 31, 2020	$ 82,433	$ 34,853	$ 117,286
Impairment	—	(34,853)	(34,853)
Impact of foreign currency translation	(4,004)	—	(4,004)
As at October 31, 2021	$ 78,429	$ —	$ 78,429
Impact of foreign currency translation	**5,281**	**—**	**5,281**
As at October 31, 2022	**$ 83,710**	**$ —**	**$ 83,710**

(1) This CGU is also an operating segment; refer to Note 31 for further details.

Impairment

The Bank tests goodwill for impairment on an annual basis and whenever there are events or changes in circumstances which indicate that the carrying amount of a CGU may not be recoverable.

Goodwill as at October 31, 2022 and October 31, 2021 has been entirely allocated to the Commercial Banking CGU. For both years, management determined that the estimated recoverable amount of the Commercial Banking CGU was in excess of its carrying amount.

Prior to being written-off as of August 1, 2021, goodwill was also allocated to the Personal Banking CGU. In 2021, as part of the annual impairment test, it was determined that the estimated recoverable amount of the Personal Banking CGU was below its carrying amount. A a result, a goodwill impairment loss of $34.9 million was recognized on the Impairment and restructuring charges line-item, refer to Note 30 for further details.

The recoverable amount of the CGUs was determined based on the value in use approach using a discounted cash flow method. The significant key assumptions included: 1) the forecasts of cash flows based on financial plans approved by the Board of Directors covering a four-year period, adjusted by management to exclude any estimated future cash inflows or outflows expected to arise from future restructurings or from improving or enhancing the asset's performance and to align projections with past actual outcomes; 2) a terminal growth rate of 2.0% in 2022 (2.0% in 2021) based on projected economic growth, and; 3) an after-tax discount rate of 9.8% in 2022 (9.5% in 2021) based on the bank-wide cost of capital and further adjusted to reflect the risks specific to the CGUs. If alternative reasonably possible changes in key estimates and assumptions had been applied, the result of the impairment test could have significantly differed.

11. OTHER ASSETS

	2022	2021
Accrued interest receivable	**$ 148,119**	$ 77,248
Cheques and other items in transit	**109,100**	143,371
Cash reserve deposits	**60,025**	38,587
Accounts receivable[1]	**55,957**	391,590
Defined benefit plan assets (Note 18)	**38,610**	24,633
Assets under operating leases (Note 28)	**13,159**	5,700
Prepaid expenses and other items	**217,621**	236,785
	$ 642,591	$ 917,914

(1) As at October 31, 2022, allowances for credit losses for accounts receivable is nil ($1.4 million as at October 31, 2021).

12. DEPOSITS

				2022
	Demand[1]	Notice[2]	Term[3]	Total
Personal	**$ 136,160**	**$ 7,936,834**	**$ 14,161,042**	**$ 22,234,036**
Business, banks and other[4]	**1,331,138**	**448,406**	**3,118,226**	**4,897,770**
	$ 1,467,298	**$ 8,385,240**	**$ 17,279,268**	**$ 27,131,806**

				2021
	Demand[1]	Notice[2]	Term[3]	Total
Personal	$ 138,469	$ 5,927,684	$ 12,084,891	$ 18,151,044
Business, banks and other[4]	1,274,335	461,959	3,100,891	4,837,185
	$ 1,412,804	$ 6,389,643	$ 15,185,782	$ 22,988,229

(1) Demand deposits, primarily chequing accounts, consist of deposits in respect of which the Bank is not authorized to require notice prior to withdrawal by customers.
(2) Notice deposits primarily savings accounts, consist of deposits in respect of which the Bank may legally require a withdrawal notice.
(3) Term deposits include deposits maturing at a specific date, particularly term deposits and guaranteed investment certificates, as well as senior unsecured notes and covered bonds.
(4) The Bank has access to a credit facility agreement for an amount of up to $250 million secured by insured residential mortgage loans and maturing in August 2023, of which nil was drawn as at October 31, 2022 (nil as at October 31, 2021).

13. OTHER LIABILITIES

	2022	2021
Accrued interest payable	**$ 385,838**	$ 363,532
Lease liabilities (Note 29)	**130,388**	120,141
Cheques and other items in transit	**44,508**	130,911
Credit card loyalty points programs liability	**27,205**	27,244
Defined benefit plan liabilities (Note 18)	**17,458**	20,629
Accounts payable, accrued expenses and other items	**560,811**	955,687
	$ 1,166,208	$ 1,618,144

14. DEBT RELATED TO SECURITIZATION ACTIVITIES

	2022	2021
Debt related to CMB and NHA MBS transactions	**$ 10,846,313**	$ 10,004,770
Debt related to other securitization activities	**1,346,109**	1,250,760
	$ 12,192,422	$ 11,255,530

Refer to Note 7 for further details about securitization and structured entities.

15. SUBORDINATED DEBT

			2022	2021
Maturity	Interest rate	Earliest par value redemption date	Carrying amount	Carrying amount
June 2032[1]	5.10%[2]	June 15, 2027[3]	**$ 338,221**	$ —
June 2027[4]	4.25%	June 22, 2022	**—**	350,000
Unamortized issuance costs			**(1,668)**	(218)
			$ 336,553	$ 349,782

(1) On March 25, 2022, the Bank issued $350.0 million of notes (Non-Viability Contingent Capital (NVCC)) (subordinated indebtedness) (the "Notes"). The Notes qualify as Tier 2 Capital and as such, the Bank may be required to convert the Notes into a variable number of common shares upon the occurrence of a non-viability trigger event. The amount presented above is net of the Bank's own holdings in these notes.
(2) The Notes bear interest at a fixed rate of 5.095% per annum (paid semi-annually) until June 15, 2027, and, thereafter, at the three-month CDOR plus 2.42% per annum (paid quarterly) until maturity on June 15, 2032.
(3) The Bank may, at its option, with the prior approval of OSFI, redeem the Notes on not less than 30 days' and not more than 60 days' prior notice to the registered holders of the Notes (i) in whole or in part, at any time on or after June 15, 2027, and (ii) in whole but not in part, prior to June 15, 2027, on or following a regulatory event date or a tax event date, in each case, at a redemption price equal to par, together with accrued and unpaid interest to, but excluding, the date fixed for redemption.
(4) On June 22, 2022, the Bank redeemed all outstanding $350.0 million 4.25% Notes due June 22, 2027 (Non-Viability Contingent Capital (NVCC)) (subordinated indebtedness) at 100% of their principal amount plus accrued and unpaid interest to, but excluding, the redemption date.

16. SHARE CAPITAL

Authorized share capital

Preferred shares – Unlimited number of Class A Preferred Shares, without par value, issuable in series.

Common shares – Unlimited number of common shares, without par value.

Preferred shares

	Redemption and conversion date in effect as of[1][2]	Redemption price per share ($)[1]	Convertible into preferred shares[2]	Dividend per share ($)[3]	Reset premium
					2022
Non-Cumulative Class A Preferred Shares (NVCC) issued and outstanding					
Series 13[4]	**June 15, 2024[5][6]**	**25.00**	**Series 14**	**0.2577[7]**	**2.55 %**
Non-Cumulative Class A Preferred Shares (NVCC) authorized but not issued					
Series 14[4]	**June 15, 2024[5]**	**25.00[8]**	**Series 13**	**Floating rate[9]**	**2.55 %**

(1) Redeemable in cash at the Bank's option, subject to the provisions of the *Bank Act* and to the prior consent of OSFI. Redemption prices are increased by all the declared and unpaid dividends on the preferred shares to the date fixed for redemption.
(2) Convertible at the option of the holders of preferred shares, subject to the automatic conversion provisions and the right of the Bank to redeem those shares.
(3) Fixed non-cumulative preferential cash dividends payable quarterly, as and when declared by the Board of Directors.
(4) The Bank may be required to convert any or all of the preferred shares into a variable number of common shares upon the occurrence of a non-viability trigger event.
(5) Redeemable as of the date fixed for redemption and on the same date every five years thereafter.
(6) Convertible as of 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 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 5-year Government of Canada bond yield on the applicable fixed-rate calculation date by $25.00, plus the reset premium.
(8) As of the date fixed for redemption, the redemption price will be $25.00 per share. Thereafter, on the same date every five years, the redemption price will be $25.00 per share.
(9) The dividend period begins as of the date fixed for redemption. The amount of the floating quarterly non-cumulative dividend is determined by multiplying the rate of interest equal to the sum of the 90-day Government of Canada treasury bill yield on the floating rate calculation date by $25.00, plus the reset premium.

Issued and outstanding

The variation and outstanding number and amount of preferred shares were as follows.

	2022			2021		
	Number of shares		**Amount[1]**	Number of shares		Amount[1]
Non-Cumulative Class A Preferred Shares (NVCC)[2]						
Series 13						
Outstanding at beginning of period	**5,000,000**	**$**	**122,071**	5,000,000	$	122,071
Series 15						
Outstanding at beginning of period	**—**		**—**	5,000,000		121,967
Redemption of preferred shares[3]	**—**		**—**	(5,000,000)		(121,967)
Outstanding at end of period	**—**		**—**	—		—
	5,000,000	**$**	**122,071**	5,000,000	$	122,071

(1) Incremental costs directly attributable to the issuance of preferred shares are recorded in equity as a deduction from the proceeds, net of applicable income taxes.
(2) Non-Viability Contingent Capital (NVCC).
(3) On June 15, 2021, the Bank redeemed the outstanding 5,000,000 Non-cumulative Class A Preferred Shares, Series 15 (Non-Viability Contingent Capital (NVCC)), for an aggregate redemption price of $125 million.

Limited Recourse Capital Notes (LRCN)

	Maturity	Interest rate	Earliest par value redemption date[2][3]		Redemption price per note ($)[2]	Reset premium
						2022
Limited Recourse Capital Notes (NVCC)						
Series 1[1]	**June 15, 2081**	**5.30 %**	**May 15, 2026**	**$**	**1,000**	**4.33 %**

(1) Recourse is limited to assets held by a third-party trustee in a bare trust. The trust assets in respect of LRCN Series 1 consist of $125.0 million of the Bank's Preferred Shares Series 17 issued concurrently with LRCN Series 1.
(2) Redeemable in cash at the Bank's option, only upon the redemption by the Bank of the Preferred Shares Series 17 held in the Limited Recourse Trust in accordance with the terms of such Preferred Shares Series 17, and subject to the provisions of the *Bank Act* and to the prior consent of OSFI.
(3) Redeemable as of the date fixed for redemption during the period from May 15 to and including June 15 and on the same dates every five years thereafter.

Issued and outstanding

The variation and outstanding number and amount of Limited Recourse Capital Notes were as follows.

	2022	2021
	Amount	Amount
Limited Recourse Capital Notes (NVCC)		
Series 1		
Outstanding at beginning of period	$ 123,612	$ —
Issuance under an offering to accredited investors[1]	—	125,000
Net issuance costs	—	(1,388)
Treasury limited recourse capital notes[2]	(1,280)	n/a
Outstanding at the end of period	$ 122,332	$ 123,612

(1) In May 2021, the Bank issued $125.0 million of Limited Recourse Capital Notes, Series 1 (Non-Viability Contingent Capital (NVCC))(Subordinated Indebtedness) (the "LRCN Series 1"), with recourse limited to assets held by a third-party trustee in a bare trust.

(2) When the Bank purchases its own equity instruments as part of its trading business, they are classified as treasury instruments and the cost of these instruments is recorded as a reduction in equity.

For accounting purposes, the LRCN Series 1 are compound instruments with both equity and liability features. The liability component of the LRCN Series 1 has a nominal value and, as a result, the total proceeds received are presented as equity on the Bank's Consolidated Balance Sheet.

Common shares

Issued and outstanding

The variation and outstanding number and amount of common shares were as follows.

	2022		2021	
	Number of shares	**Amount**	Number of shares	Amount
Common shares				
Outstanding at beginning of year	43,586,656	$ 1,172,722	43,237,931	$ 1,159,488
Issuance under the employee share purchase option plan	42,266	1,912	—	—
Issuance under the Shareholder Dividend Reinvestment and Share Purchase Plan	106,666	3,732	348,725	13,280
Repurchase of shares for cancellation	(401,200)	(10,795)	—	—
Net issuance costs	n/a	(22)	n/a	(46)
	43,334,388	$ 1,167,549	43,586,656	$ 1,172,722

Normal course issuer bid

On December 10, 2021, the Bank announced that it had received the approval of the Toronto Stock Exchange and OSFI to launch a normal course issuer bid ("NCIB") to repurchase for cancellation up to 875,000 of its common shares, being approximately 2% of the total number of its shares outstanding as at December 1, 2021.

In 2022, the Bank repurchased 401,200 common shares under its NCIB at an average price of $42.91 per share for a total amount of $17.2 million, of which $10.8 million reduced common shares and $6.4 million reduced retained earnings. The NCIB will terminate on December 14, 2022.

Shareholder dividend reinvestment and share purchase plan

The Bank offers a Shareholder Dividend Reinvestment and Share Purchase Plan (the "Plan") to eligible Canadian shareholders. Participation in the Plan is optional. Under the terms of the Plan, dividends on common and preferred shares are reinvested to purchase additional common shares of the Bank. Shareholders can also make optional cash payments to acquire additional common shares. At the option of the Bank, the common shares may be issued from the Bank's treasury at an average market price with a discount of up to 5%, or from the open market at market price. In 2022, 106,666 common shares were legally issued from Corporate Treasury at a discount ranging from 0% to 2% (348,725 common shares issued at a 2% discount in 2021).

Dividends and other

	2022		2021	
	Dividends declared per share	Total amount	Dividends declared per share	Total amount
Preferred share dividends and limited recourse capital note interest				
Preferred shares				
Series 13	**$ 1.03**	**$ 5,154**	$ 1.03	$ 5,154
Series 15	**$ —**	**—**	$ 1.10	5,484
		5,154		10,638
Limited recourse capital notes	**n/a**	**6,625**	n/a	1,627
		$ 11,779		$ 12,265
Common shares dividends	**$ 1.78**	**$ 77,115**	$ 1.60	$ 69,407

On November 15, 2022, the Board of Directors declared regular dividends on the Preferred Shares Series 13 to shareholders of record on December 7, 2022. On December 8, 2022, the Board of Directors declared a dividend of $0.46 per common share, payable on February 1, 2023, to shareholders of record on January 4, 2023.

Restrictions on the payment of dividends

The Bank is prohibited by the *Bank Act* from declaring or paying any dividends on its preferred shares or common shares if there are reasonable grounds for believing that, in so doing, the Bank would not comply with capital adequacy and liquidity regulations, or related guidance provided by OSFI. The Bank's ability to pay common share dividends is also restricted by the terms of the outstanding preferred shares. These terms provide that the Bank may not pay dividends on its common shares at any time without the approval of holders of the outstanding preferred shares, unless all dividends that are then payable have been declared and paid or set apart for payment.

Capital management

Management seeks to maintain an adequate level of capital that considers the Bank's targeted capital ratios and internal assessment of required capital that is aligned with the Bank's risk appetite, strategic plan and shareholders' expectations. The framework is also consistent with the Bank's target credit ratings and underscores the Bank's capacity to cover risks and ensure depositor confidence. Management oversees capital adequacy on an ongoing basis.

The Board of Directors, on the recommendation of the Risk Management Committee, approves annually several capital-related documents, including the Capital Management and Adequacy Policy, the Internal Capital Adequacy Assessment Process, the Stress Testing Program, as well as the Capital Plan. It further reviews capital adequacy on a quarterly basis.

Regulatory capital

OSFI requires banks to meet minimum risk-based capital ratios drawn on the Basel Committee on Banking Supervision (BCBS) capital framework, commonly referred to as the Basel III Accord. Under OSFI's "Capital Adequacy Requirements" guideline, the Bank must maintain minimum levels of capital depending on various criteria. Tier 1 capital, the most permanent and subordinated forms of capital, consists of two components: Common Equity Tier 1 capital and Additional Tier 1 capital. Tier 1 capital is predominantly composed of common equity to ensure that risk exposures are backed by a high-quality capital base. Tier 2 capital consists of supplementary capital instruments and contributes to the overall strength of a financial institution as a going concern. Under OSFI's guideline, minimum Common Equity Tier 1, Tier 1 and Total capital ratios are set at 7.0%, 8.5% and 10.5% respectively including a 2.5% capital conservation buffer. Under OSFI's Leverage Requirements Guideline, Federally regulated deposit-taking institutions are expected to maintain a Basel III leverage ratio that always meets or exceeds 3%. The leverage ratio is defined as the Tier 1 capital divided by unweighted on-balance sheet assets and off-balance sheet commitments, derivatives and securities financing transactions, as defined within the requirements.

The Bank has complied with regulatory capital and leverage requirements throughout the year ended October 31, 2022. Regulatory capital is detailed below.

	2022	2021
Regulatory capital		
Common Equity Tier 1 capital	**$ 2,167,313**	$ 2,038,761
Tier 1 capital	**$ 2,411,716**	$ 2,283,297
Total capital	**$ 2,881,927**	$ 2,730,005
Total risk-weighted assets(1)	**$ 23,909,169**	$ 20,007,010
Regulatory capital ratios		
Common Equity Tier 1 capital ratio	**9.1 %**	10.2 %
Tier 1 capital ratio	**10.1 %**	11.4 %
Total capital ratio	**12.1 %**	13.6 %

(1) Using the Standardized approach in determining credit risk and operational risk.

17. SHARE-BASED COMPENSATION

Share purchase option plans

Old Stock Option Purchase Plan
The Old Stock Option Purchase Plan was offered to members of the Bank's senior management. Under this plan, the exercise price of options for the purchase of common shares must not be less than the market prices of such shares immediately prior to the grant date. The right to exercise the options vests gradually on each anniversary of the grant date (25% each year) and the options may be exercised at any time up to ten years after they have been granted. The Bank reserved 1,600,000 common shares for the potential exercise of options under this plan, of which nil were still available as at October 31, 2022 (nil as at October 31, 2021).

Information relating to outstanding number of options under the Old Stock Option Purchase Plan is as follows.

		2022			2021
	Number of options		**Exercise price**	Number of options		Exercise price
Outstanding at beginning of year	**71,683**	**$**	**38.97**	71,683	$	38.97
Exercised	**(20,924)**		**38.97**	—		—
Outstanding at end of year	**50,759**	**$**	**38.97**	71,683	$	38.97
Exercisable at end of year	**—**		**n/a**	53,763	$	38.97

New Stock Option Plan
In fiscal 2019, the Bank established the New Stock Option Plan. The terms and conditions of the New Stock Option Plan govern the stock options granted by the Board of Directors described thereafter.

Officers, senior executives and other employees of the Bank or its subsidiaries are eligible participants in the New Stock Option Plan. Under this plan, the exercise price of options for the purchase of common shares cannot be below the market value of the Bank's share at the date of grant. Stock options granted will vest 50% after three years and 50% after four years and the options may be exercised after vesting at any time up to ten years after they have been granted. The Bank reserved 3,401,000 common shares under this plan, of which 2,223,713 were still available as at October 31, 2022 (1,666,000 options reserved and 753,001 options still available as at October 31, 2021).

Information relating to outstanding number of options under the New Stock Option Plan is as follows.

			2022			2021
	Number of options		**Weighted-average exercise price**	Number of options		Weighted-average exercise price
Outstanding at beginning of year	**911,329**	**$**	**37.47**	715,646	$	37.28
Granted	**338,647**		**40.26**	269,861		33.13
Forfeited	**(74,359)**		**38.73**	(74,178)		38.34
Exercised	**(21,342)**		**38.97**	—		—
Outstanding at end of year	**1,154,275**	**$**	**38.18**	911,329	$	37.47
Exercisable at end of year	**—**		**n/a**	—		n/a

Information relating to exercise prices under the New Stock Option Plan is as follows.

		2022
Exercise price	**Number of options outstanding**	**Weighted-average remaining contractual life (years)**
33.13	**414,564**	**8.1**
38.97	**184,326**	**6.0**
40.26	**323,405**	**9.1**
43.68	**231,980**	**7.1**
	1,154,275	**7.9**

Fair value and assumptions related to the stock options valuations

The weighted-average fair value of the fiscal 2022 and 2021 stock option grants was estimated using the following assumptions.

		2022 grant		2021 grant
Weighted-average fair value of options granted	$	6.00	$	4.87
Share price at grant date	$	40.26	$	33.13
Risk-free interest rate		1.24 %		0.62 %
Expected life of options		8 years		8 years
Expected volatility[1]		23 %		24 %
Expected dividend yield		5.00 %		5.40 %

(1) Expected volatility is extrapolated from the implied volatility of the Bank's share price and observable market inputs, which are not necessarily representation of actual results.

Employee share purchase plan

The Bank offers an employee share purchase plan. Under this plan, employees who meet the eligibility criteria can contribute up to 20% of their annual gross salary. The Bank matches 30% of the employee contribution amount, up to a maximum of $1,500 per year. The Bank's contributions, totaling $0.7 million in 2022 ($0.6 million in 2021), are recognized in salaries and employee benefits.

Share unit plans

The Bank offers a performance-based share unit (PSU) plan. All rights to the new PSUs vest over three years with no guaranteed minimum vesting. The number of units vesting will be based on the three-year Bank's total shareholder return (TSR) relative to the average TSR of the TSX Capped Financials Index, which includes peers from Canadian companies in the financial services sectors, and on a three-year return on equity measure relative to targets set as part of strategic planning. During the vesting period, dividend equivalents accrue to the participants in the form of additional share units. All PSUs are cash settled at fair value at the maturity date. A deferred version of the plan exists under which the participant is paid on termination of employment rather than at the end of the three-year period.

The Bank offers a restricted share unit (RSU) plan to certain executives and other employees. Rights to the RSUs generally vest ratably over a three-year period or at the end of the three-year period following their award. In addition, executives can voluntarily defer part or all of their annual bonus into fully vested RSUs payable at a rate of one third per year. Certain employees of the Capital Markets segment are also required to defer a portion of their annual bonus into fully vested RSUs payable at a rate of one third per year if the annual bonus exceeds a certain amount. All RSUs are cash settled at fair value at the maturity dates. A deferred version of the plan exists under which the participant is paid on termination of employment rather than at the maturity dates. During the vesting period, under all RSU plans, dividend equivalents accrue to the participants in the form of additional share units.

The Bank offers a deferred share unit plan to non-employee directors of the Bank. Under this plan, each non-employee director may choose to receive all or a percentage of his or her remuneration in the form of deferred share units which can be settled in cash or common shares. The deferred share units are converted when the holder steps down from the Board of Directors.

Units granted under share unit plans

			2022			2021
	Units granted during the year		Weighted average fair value per unit	Units granted during the year		Weighted average fair value per unit
Performance-based share unit plan	124,766	$	38.00	107,848	$	33.12
Restricted share unit plan	324,283		38.77	402,824		33.97
Deferred share unit plan	39,006		41.89	32,173		30.77
	488,055	$	38.82	542,845	$	33.61

Number of units outstanding under performance-based share and other plans

	2022	2021
Performance-based share unit plan	370,983	368,138
Restricted share unit plan	830,897	786,790
Deferred share unit plan	145,805	126,222
	1,347,685	1,281,150

The carrying amount of the liability relating to the cash-settled plans was $33.4 million as at October 31, 2022 ($43.5 million as at October 31, 2021). The intrinsic value of the total liability related to fully vested rights and units was $12.9 million as at October 31, 2022 ($15.6 million as at October 31, 2021).

Share-based compensation plans' expense

The following table shows the expense related to share-based compensation plans, net of the effect of related hedging transactions.

		2022		2021
Expense arising from cash-settled share-based compensation transactions	**$**	**2,200**	$	32,389
Effect of hedges		**10,661**		(17,546)
	$	**12,861**	$	14,843

To reduce volatility in the share-based compensation plans' expense, the Bank enters into total return swap contracts with third parties, the value of which is linked to the Bank's share price. Changes in fair value of these derivative instruments partially offset the share-based compensation plans' expense related to the share price variations over the period in which the swaps are in effect. Refer to Note 25 for further details regarding the hedge of the share-based compensation plan using total return swap contracts.

18. POST-EMPLOYMENT BENEFITS

Description of benefit plans

Pension plans
The Bank has a number of defined benefit pension plans, which in certain cases include a defined contribution portion, as well as defined contribution pension plans. The plans provide pension benefits to most of the Bank's employees. The defined benefit pension plans are based on years of service and final average salary at retirement time.

Pension plans are registered with OSFI and are subject to the federal *Pension Benefits Standards Act, 1985*. The Bank's Human Resources and Corporate Governance Committee of the Board has the responsibility to ensure that management implements appropriate internal oversight systems with a view to adequately manage pension plans in accordance with the laws and regulations in effect.

Other group plans
The Bank offers other post-employment benefits to its employees such as a salary continuance plan during maternity leave and the payment of group insurance plan premiums during a disability period or maternity leave. In addition, certain retired employees have other retirement benefits, including health and life insurance.

Risks associated with pension plans

Pension plans expose the Bank to a broad range of risks. These risks are managed with the objective of meeting pension benefit obligations, while maintaining a reasonable risk profile for the Bank. The pension obligation is mainly subject to demographic and economic risks such as longevity improvements and salary inflation. In addition, the obligation is impacted by the discount rate. Pension plan assets are subject to market risks and more precisely to equity value, long-term interest rates and credit spreads. To reduce risks associated with the pension obligation, the Bank monitors and adjusts its plan benefits with the objective of optimizing the overall employee benefits. Defined benefit pension plan assets are invested in order to meet pension obligations. To manage the predominant interest rate risk, the Bank has adopted a liability-driven investment policy for the assets invested in debt securities. This approach provides some control over the plans' financial position by investing in assets that are correlated with liabilities and that allow a reduction in volatility. Other plans' assets are invested in various asset classes, such as common shares, emerging market equities, high-yield fixed income securities, private equity or debt investments, as well as other alternative investments to improve potential returns.

Factors taken into consideration in developing the asset allocation include but are not limited to the following:

i. the nature of the underlying benefit obligations, including the duration and term profile of the liabilities;

ii. the member demographics, including normal retirement age, terminations, and mortality;

iii. the financial position of the pension plans; and

iv. the diversification benefits obtained by the inclusion of multiple asset classes.

Funding requirements

The Bank's defined benefit pension plans are mainly funded by contributions from the Bank and are determined based on the financial position and the funding policy of the plan. Certain officers may also elect to participate in a component of their plan through optional contributions to enhance benefits. The Bank's contributions must be sufficient to cover the value of the obligations that currently accrue in the plan, including fees paid by the plan, as well as special contributions required to amortize any deficit. The Bank assumes all the risks and costs related to the defined benefit pension plans, including any deficit.

Funding for defined contribution pension plans and other post-employment benefits are provided by both the Bank and the participating employees of the plans.

Defined benefit plan measurement dates

The Bank measures its defined benefit obligations and the fair value of plan assets for accounting purposes as at October 31 of each year. The most recent actuarial valuations were performed as at December 31, 2021 for all pension plans. The next required actuarial valuation for funding purposes will be as at December 31, 2022 for all funded plans.

Defined benefit plan obligations

Changes in the present value of the defined benefit obligation are as follows.

			2022		2021
	Pension plans	Other plans	Pension plans	Other plans
Change in defined benefit obligation				
Defined benefit obligation at beginning of year	$ 213,109	$ 20,303	$ 632,775	$ 24,706
Current service cost	6,937	—	9,894	—
Past service cost	74	—	143	—
Interest expense	7,212	606	13,163	563
Benefits paid	(7,315)	(934)	(42,707)	(1,016)
Employee contributions	444	—	432	—
Settlement related to annuity purchases[1]	—	—	(353,411)	—
Actuarial losses (gains) arising from changes in economic assumptions	(52,778)	(2,792)	(40,342)	(2,689)
Actuarial gains arising from changes in demographic assumptions	(971)	(81)	—	—
Actuarial losses (gains) arising from plan experience	(958)	—	(6,838)	(1,261)
Defined benefit obligation at end of year	$ 165,754	$ 17,102	$ 213,109	$ 20,303

(1) Refer to the Settlement related to annuity purchases section below for further details.

Defined benefit pension plan assets

Changes in fair value of pension plan assets are as follows.

	2022	2021
Change in fair value of pension plan assets		
Fair value of plan assets at beginning of year	$ 237,416	$ 615,732
Interest income (at prescribed rate)	7,927	12,964
Actuarial losses arising from the difference between the actual return on plan assets and interest income	(34,462)	(7,688)
Administration costs (other than costs of managing plan assets)	(1,818)	(1,799)
Bank contributions	1,816	6,767
Employee contributions	444	432
Benefits paid	(7,315)	(42,707)
Settlement related to annuity purchases[1]	—	(346,285)
Fair value of plan assets at end of year	$ 204,008	$ 237,416

(1) Refer to the Settlement related to annuity purchases section below for further details.

Reconciliation of the funded status of the benefit plans to the amounts recorded in the Consolidated Financial Statements

		2022		2021
	Pension plans	Other plans	Pension plans	Other plans
Fair value of plan assets	$ 204,008	$ —	$ 237,416	$ —
Defined benefit obligation	165,754	17,102	213,109	20,303
Funded status – plan surplus (deficit)	$ 38,254	$ (17,102)	$ 24,307	$ (20,303)
Recorded in the balance sheet as				
Defined benefit plan assets, included in other assets	$ 38,610	$ —	$ 24,633	$ —
Defined benefit plan liabilities, included in other liabilities	$ 356	$ 17,102	$ 326	$ 20,303

Defined benefit plan costs recognized during the year

	2022		2021	
	Pension plans	Other plans	Pension plans	Other plans
Amounts recognized in net income				
Current service cost	$ 6,937	$ —	$ 9,894	$ —
Past service cost	74	—	143	—
Administration costs (other than costs of managing plan assets)	1,818	—	1,799	—
Interest expense	7,212	606	13,163	563
Interest income (at prescribed rate)	(7,927)	—	(12,964)	—
Gain on short-term employee benefits	—	(198)	—	(1,446)
Settlement gain, net[1]	—	—	(7,126)	—
	8,114	408	4,909	(883)
Amounts recognized in other comprehensive income				
Actuarial gains on defined benefit obligation	(54,707)	(2,675)	(47,180)	(2,504)
Actuarial losses on plan assets	34,462	—	7,688	—
	(20,245)	(2,675)	(39,492)	(2,504)
Total defined benefit gain	$ (12,131)	$ (2,267)	$ (34,583)	$ (3,387)

(1) Refer to the Settlement related to annuity purchases section below for further details.

The Bank expects to contribute $1.5 million to its defined benefit pension plans for the year ending October 31, 2023.

Asset allocation of defined benefit pension plans

	2022	2021
Asset category		
Cash and cash equivalents[1]	$ 2,779	$ 955
Equity funds		
Canada	20,090	25,043
United States	5,094	6,621
Other	24,548	31,451
Debt securities		
Canadian governments and other public administrations	17,425	22,723
Corporate and other	63,003	75,001
Other[2]	71,069	75,622
	$ 204,008	$ 237,416

(1) Cash and cash equivalents mainly consist of Canada and U.S. treasury bills.
(2) Other assets are mainly composed of investments in real estate, agricultural businesses and infrastructure.

Equity funds included no equity securities of the Bank as at October 31, 2022 ($0.1 million as at October 31, 2021). As at October 31, 2022 and 2021, none of the plan assets were quoted in active markets.

Significant assumptions for pension plans and other plans

	2022	2021
Weighted average of assumptions to determine benefit obligation		
Discount rate at end of year	5.24 %	3.37 %
Rate of compensation increase	2.75 %	2.75 %
Weighted average of assumptions to determine benefit expense		
Discount rate - Current service	3.46 %	2.95 %
Discount rate - Interest expenses (income), net	3.37 %	2.71 %
Rate of compensation increase	2.75 %	2.75 %

For 2022, the weighted-average financial duration of the pension plans was approximately 14.2 years (17.6 years for 2021). The weighted-average financial durations of the other group plans were approximately 5.8 years for the post-employment benefits (6.4 years for 2021) and 7.9 years for the other retirement benefits (9.3 years for 2021).

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, this method results in the use of a higher discount rate for calculating current service cost than that used to measure obligations where the yield curve is positively sloped.

Assumed health care cost trend rates

	2022	2021
Assumed annual rate of increase in the cost of health care benefits	**4.62 %**	4.62 %
Level to which it should decline and at which it is assumed to subsequently stabilize	**3.57 %**	3.57 %
Year that the rate is assumed to stabilize	**2040**	2040

Sensitivity analysis

Due to the long-term nature of post-employment benefits, there are significant uncertainties related to the recognition of balances surrounding the assumptions used.

Discount rates could have a significant impact on the defined benefit plan assets (liabilities), as well as, depending on the funding status of the plan, on pension plan and other post-employment benefit expenses. The following table presents the impact that a 0.25% change in this key assumption would have had on the defined benefit obligation and cost for the year ended October 31, 2022.

	Impact of a 0.25% change to the discount rate on[1]	
	Obligation	**Expense**
Pension plans	**$ 5,735**	**$ 839**
Other plans	**$ 330**	**$ 8**

(1) The sensitivity analysis presented in this table should be used with caution, as it is hypothetical and the impact of changes in assumptions may not be linear.

Assumed health care cost trend rates have a significant effect on the amounts reported for the health care plans. The following table presents the impact that a 1% change in this key assumption would have had on the defined benefit obligation and expense for the year ended October 31, 2022, with all other assumptions remaining constant.

	Obligation	**Expense**
Impact of a :		
1% increase in assumed health care cost trend rates	**$ 645**	**$ 80**
1% decrease in assumed health care cost trend rates	**$ (574)**	**$ (69)**

Expense for post-employment benefits

The total expense recognized for post-employment benefit plans was as follows:

	2022	2021
Defined benefit pension plans	**$ 8,114**	$ 12,035
Defined contribution pension plans	**9,125**	8,306
Other plans	**408**	(883)
Settlement gain, net[1]	**—**	(7,126)
	$ 17,647	$ 12,332

(1) Refer to the Settlement related to annuity purchases section below for further details.

Settlement related to annuity purchases

In June 2021, to reduce its defined benefit pension plan obligation and decrease future pension volatility and risks, the Bank purchased $346.2 million of group annuity contracts from a Canadian insurer and transferred $353.4 million in obligations, resulting in a $7.3 million settlement gain ($7.1 million net of related costs). Under the agreement, the Canadian insurer issued annuities covering the responsibility for pension benefits owed to approximately 1,900 Laurentian Bank of Canada pensioners. The insurer began administering all benefits for these members in October 2021. Following the transaction, benefits for plan participants are protected under Assuris, the life insurance compensation association designated under the Insurance Companies Act of Canada.

The Bank considers, for accounting purposes, that this buy-out transaction essentially eliminates any further legal or constructive obligation for benefits, provided that, the combined risk: i) that the Canadian insurer goes bankrupt; and ii) that the Bank would be responsible for paying the portion of pensions not covered by Assuris should the Canadian insurer go bankrupt, is remote. Accordingly, the Bank considers that a settlement occurred.

19. INCOME TAXES

Deferred income taxes

Significant components of the Bank's deferred income tax assets and liabilities are as follows.

	2022	2021
Deferred income tax assets		
Allowances for loan losses	$ 49,508	$ 34,439
Lease liabilities	35,393	32,452
Non-capital losses	35,208	33,661
Deferred revenues	13,758	11,992
Amount related to share-based payments	8,445	10,710
Provisions	7,660	9,371
Premises and equipment	6,146	7,886
Derivatives	4,926	—
Other temporary differences	6,357	6,024
	167,401	146,535
Deferred income tax liabilities		
Leases	73,590	65,715
Other intangible assets	28,578	26,775
Right-of-use assets	19,211	14,487
Deferred charges	15,938	15,568
Derivatives	—	6,223
Defined benefit plan liabilities	5,599	1,058
Software	3,906	4,312
Other temporary differences	3,301	2,149
	150,123	136,287
Deferred income taxes, net	$ 17,278	$ 10,248

As at October 31, 2022, unused capital tax losses of $32.3 million ($1.0 million as at October 31, 2021) available to offset future capital gains were not recognized as deferred tax assets. The unused capital tax losses can be carried forward indefinitely.

As at October 31, 2022, the total amount of temporary differences associated with investments in foreign subsidiaries for which deferred tax liabilities have not been recognized was $369.4 million ($311.8 million as at October 31, 2021).

Net deferred income taxes reported in the Consolidated Balance Sheet are as follows.

	2022	2021
Deferred income tax assets	$ 71,533	$ 58,492
Deferred income tax liabilities	54,255	48,244
Deferred income taxes, net	$ 17,278	$ 10,248

The components of deferred income tax expense (recovery) recorded in the Consolidated Statement of Income are as follows.

		2022		2021
Deferred income tax expense (recovery)				
Leases	$	7,875	$	15,139
Right-of-use assets		4,307		(18,348)
Premises and equipment		1,725		(5,303)
Amount related to share-based payments		2,265		(3,424)
Other intangible assets		2,074		(8,680)
Deferred charges		370		(819)
Allowances for loan losses		(14,785)		6,807
Derivatives		(4,128)		(7,953)
Lease liabilities		(2,487)		11,039
Non-capital losses		(1,548)		(8,813)
Software		(406)		(2,294)
Other temporary differences		(1,752)		592
	$	(6,490)	$	(22,057)

Income tax expense

Significant components of the income tax expense (recovery) recorded in the Consolidated Statement of Income for the years ended October 31, 2022 and 2021 are as follows.

		2022		2021
Current income taxes				
Income tax expense for the year	$	55,552	$	37,129
Previous years income tax expense adjustment		51		454
		55,603		37,583
Deferred income taxes				
Origination and reversal of temporary differences		(5,879)		(21,264)
Previous years income tax recovery adjustment		(611)		(793)
		(6,490)		(22,057)
	$	49,113	$	15,526

Significant components of the income tax expense (recovery) recorded in the Consolidated Statement of Comprehensive Income for the years ended October 31, 2022 and 2021 are as follows.

		2022		2021
Items that may subsequently be reclassified to the Statement of Income				
Income tax recovery related to unrealized net losses on debt securities at FVOCI	$	(516)	$	(558)
Income tax expense (recovery) related to reclassification of net (gains) losses on debt securities at FVOCI to net income		192		(85)
Income tax expense (recovery) related to net gains (losses) on hedges of investments in foreign operations		262		(159)
Income tax recovery related to net change in value of derivatives designated as cash flow hedges		(7,022)		(543)
		(7,084)		(1,345)
Items that may not subsequently be reclassified to the Statement of Income				
Income tax expense related to remeasurement gains on employee benefit plans		6,068		11,119
Income tax expense (recovery) related to net gains (losses) on equity securities designated at FVOCI		(7,976)		14,108
	$	(8,992)	$	23,882
Composition of income taxes				
Current income tax expense (recovery)	$	(9,245)	$	11,762
Deferred income tax expense		253		12,120
	$	(8,992)	$	23,882

Significant components of the income tax expense (recovery) recorded in the Consolidated Statement of Changes in Shareholders' Equity for the years ended October 31, 2022 and 2021 are as follows.

		2022		2021
Income taxes on issuance of equity instruments				
Current income tax recovery	$	(2)	$	(131)
Deferred income tax recovery		(6)		(385)
		(8)		(516)
Income taxes on other items				
Current income tax expense (recovery) on other items		—		(6,281)
Deferred income tax expense (recovery) on other items		(787)		6,957
	$	(795)	$	160

Reconciliation with the statutory rate

The reconciliation of the income tax expense reported in the Consolidated Statement of Income to the dollar amount of income taxes using the statutory rates is as follows.

		2022			2021	
		Amount	Rate		Amount	Rate
Income taxes at statutory rates	$	72,539	26.3 %	$	18,982	26.1 %
Change resulting from:						
Lower taxation related to income from foreign operations		(18,209)	(6.6)		(9,394)	(12.9)
Non-taxable dividends and non-taxable portion of capital gains		(3,520)	(1.3)		(3,471)	(4.8)
Impairment of goodwill		—	—		9,227	12.7
Other, net		(1,697)	(0.6)		182	0.3
Income taxes as reported in the Consolidated Statement of Income	$	49,113	17.8 %	$	15,526	21.4 %

20. EARNINGS PER SHARE

Basic and diluted earnings per share is detailed as follows[1].

		2022		2021
Earnings per share – basic				
Net income	$	226,583	$	57,069
Preferred share dividends and limited recourse capital note interest		11,779		12,265
Net income attributable to common shareholders	$	214,804	$	44,804
Weighted-average number of outstanding common shares (in thousands)		43,329		43,407
Earnings per share – basic	$	4.96	$	1.03
Earnings per share – diluted				
Net income attributable to common shareholders	$	214,804	$	44,804
Weighted-average number of outstanding common shares (in thousands)		43,329		43,407
Dilutive share purchase options (in thousands)		83		76
Diluted weighted-average number of outstanding common shares (in thousands)		43,412		43,483
Earnings per share – diluted	$	4.95	$	1.03

(1) There have been no transactions involving ordinary shares or potential ordinary shares between the reporting date and the date of the completion of these Consolidated Financial Statements which would require the restatement of earnings per share.

21. RELATED PARTY TRANSACTIONS

Related parties of the Bank include:

- key management personnel and their close family members;
- entities which are controlled, jointly controlled or significantly influenced, or for which significant voting power is held, by key management personnel or their close family members;
- post-employment benefit plans for Bank employees.

Key management personnel are defined as those persons having authority and responsibility for planning, directing and controlling the activities of the Bank, being members of the Executive Committee or Board of Directors.

Loans and deposits with related parties

The following table shows the outstanding carrying amount of loans and deposits with related parties.

		2022		2021
Loans				
Key management personnel	$	1,850	$	907
Deposits				
Key management personnel	$	1,356	$	542
Entities controlled by key management personnel		—		92
	$	1,356	$	634

The Bank provides loans to key management personnel. Loans to key management personnel are granted under market conditions for similar risks and are initially measured at fair value. Loans to key management personnel consist mostly of term residential mortgage loans, as well as personal loans, at market rates less a discount based on the type and amount of the loan.

In the normal course of business, the Bank also provides usual banking services to key management personnel and their related entities, including bank accounts (deposits) under terms similar to those offered to arm's length parties.

Compensation of key management personnel

The following table shows the total compensation of key management personnel.

		2022		2021
Short-term employee benefits, including salaries	$	8,539	$	3,847
Post-employment benefits		767		810
Share-based compensation		6,195		5,853
	$	15,501	$	10,510

22. FINANCIAL INSTRUMENTS – 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 between market participants at the measurement date under current market conditions. Note 3 details the accounting treatment for each measurement category of financial instruments, as well as the estimates and judgment used in measuring the fair value of financial instruments.

Classification of fair value measurement in the fair value hierarchy

Fair value measurements are categorized into levels within a fair value hierarchy based on the valuation inputs used. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect the Bank's market assumptions. These two types of inputs create the following fair value hierarchy:

- Level 1 — Quoted prices in active markets for identical financial instruments.
- Level 2 — Quoted prices for similar instruments in active markets; quoted prices for identical or similar financial instruments in markets that are not active; and model-derived valuations in which all significant inputs and significant value drivers are observable in active markets.
- Level 3 — Valuations derived from valuation techniques in which one or more significant inputs or significant value drivers are unobservable.

Determining fair value

Certain assets and liabilities, primarily financial instruments, are carried on the Consolidated Balance Sheet at their fair value. All other financial instruments are carried at amortized cost and the fair value is disclosed below. The following section discusses how the Bank measures fair value.

Fair value is best evidenced by an independent quoted market price for the same instrument in an active market. When available, the Bank generally uses quoted market prices to determine fair value and classifies such items in Level 1.

If quoted market prices are not available, fair value is based on internally developed valuation techniques that use, where possible, current market-based or independently sourced market inputs, such as interest rates, exchange rates and option volatilities. Instruments valued using internal valuation techniques are classified according to the lowest level input or value driver that is significant to the fair value measurement. Thus, an instrument may be classified in Level 3 even though some significant inputs may be observable.

Where available, the Bank may also make use of quoted prices for recent trading activity in positions with the same or similar characteristics to that being valued. The frequency and size of transactions and the amount of the bid-ask spread are among the factors considered in determining the liquidity of markets and the relevance of observed prices from those markets. If relevant and observable prices are available, those valuations would be classified in Level 2. If prices are not available, other valuation techniques are used and items are classified in Level 3. For these assets and liabilities, the inputs used in determining fair value may require significant management judgment. Due to the inherent uncertainty in these estimates, the values may differ significantly from those that would have been used if an active market had existed for the financial instruments. Moreover, the estimates of fair value for the same or similar financial instruments may differ among financial institutions. The calculation of fair value is based on market conditions as at each balance sheet date.

Valuation methodologies

The following section describes the valuation methodologies used by the Bank to measure and disclose certain significant financial instruments at fair value, including an indication of the level in the fair value hierarchy in which each instrument is generally classified. Where appropriate, the description includes details of the valuation models, the key inputs to those models as well as any significant assumptions.

Securities purchased under reverse repurchase agreements and obligations related to securities sold under repurchase agreements
Given that quoted prices are not available for such financial instruments, fair value is determined using a discounted cash flow technique. Cash flows are estimated based on the terms of the contract and discounted using appropriate market rates.

Securities
When available, the Bank uses quoted market prices to determine the fair value of securities; such instruments are classified in Level 1 of the fair value hierarchy; for example, exchange-traded equity securities. For bonds traded over the counter, the Bank generally determines fair value using internal valuation techniques or prices obtained from independent vendors. Where available, the Bank may also use quoted prices for recent trading activity of assets with similar characteristics to the bond being valued. Securities priced using such methods are generally classified in Level 2. However, less liquid securities may be classified in Level 3 given that the Bank must then determine the parameters related to certain significant value drivers, including liquidity premiums and credit spreads.

Loans
Quoted market prices in an active market are not available for these financial instruments. As a result, the fair value of loans is estimated using internal valuation techniques by discounting cash flows adjusted to reflect prepayments, if any, at the prevailing market interest rates for new loans with substantially similar terms. For certain variable rate loans subject to frequent rate revisions and loans with indeterminate maturities, the fair value is deemed to represent the carrying amount.

Other assets
Other assets consist primarily of cheques and other items in transit, accrued interest receivable and accounts receivable. As quoted market prices in an active market are not available for these financial instruments the Bank determined that the carrying value approximates the fair value due to their short-term nature.

Derivatives
The fair value of over-the-counter derivatives is calculated using prevailing market prices for instruments with similar characteristics and maturities, based on a discounted net value analysis or an appropriate pricing model that factors in the current and contractual prices of the underlying instruments, the time value of money, the yield curve, counterparty credit risk and volatility factors. These derivatives are classified in Level 2 or Level 3 depending on whether the significant inputs to those pricing models include observable or unobservable inputs. Also, certain exchange-traded derivatives, whose fair value is based on quoted market prices, are classified in Level 1 of the fair value hierarchy.

Deposits
Quoted market prices in an active market are not available for these financial instruments. As a result, the fair value of fixed rate deposits is estimated using discounted cash flows based on prevailing market interest rates for deposits with substantially similar terms. The fair value of deposits without stated maturities or variable rate deposits is deemed to represent their carrying amount.

Obligations related to securities sold short
When available, the Bank uses quoted market prices to determine the fair value of obligations related to securities sold short; such instruments are classified in Level 1. For bonds traded over the counter, the Bank generally determines fair value using internal valuation techniques or prices obtained from independent vendors. Where available, the Bank may also use quoted prices for recent trading activity of assets with similar characteristics to the bond being valued. Securities priced using such methods are generally classified in Level 2.

Other liabilities
Other liabilities consist primarily of cheques and other items in transit, accrued interest payable and accounts payable. Quoted market prices in an active market are not available for these financial instruments and their fair value is deemed to represent their carrying amount due to their short-term nature.

Debt related to securitization activities
Quoted market prices in an active market are not available for debt related to securitization activities. As a result, the fair value of these financial instruments is estimated using discounted cash flows based on prevailing market interest rates for similar issues or rates currently offered for debt securities with the same term to maturity.

Subordinated debt
Quoted market prices in an active market are not available for these financial instruments. As a result, the fair value of subordinated debt is estimated using discounted cash flows based on prevailing market interest rates for similar issues or rates currently offered for debt securities with the same term to maturity.

Fair value hierarchy

Financial assets and liabilities measured at fair value in the Consolidated Balance Sheet
The following table shows the fair value hierarchy of financial instruments measured at fair value on a recurring basis using the valuation methods and assumptions as set out above.

(in millions of Canadian dollars)				**2022**
	Level 1	**Level 2**	**Level 3**	**Total**
Assets				
Securities				
At FVOCI	**$ 131**	**$ 31**	**$ 25**	**$ 187**
At FVTPL	**110**	**2,882**	**1**	**2,993**
Derivatives	**—**	**313**	**—**	**313**
Liabilities				
Obligations related to securities sold short	**4**	**3,217**	**—**	**3,221**
Derivatives	**10**	**769**	**30**	**809**

(in millions of Canadian dollars)				2021
	Level 1	Level 2	Level 3	Total
Assets				
Securities				
At FVOCI	$ 180	$ 61	$ 18	$ 259
At FVTPL	142	2,906	3	3,051
Derivatives	—	263	—	263
Liabilities				
Obligations related to securities sold short	21	3,231	—	3,252
Derivatives	1	114	38	153

Level transfers and reclassification
There were no significant transfers between Level 1 and Level 2 of the hierarchy, or changes in fair value measurement methods during the year.

Change in level 3 fair value category and sensitivity analysis
The Bank classifies financial instruments in Level 3 of the fair value hierarchy when there is reliance on at least one significant unobservable input to the valuation model. In addition to these unobservable inputs, the valuation models for Level 3 financial instruments typically rely on a number of inputs that are observable either directly or indirectly. Transfers in and out of Level 3 can occur as a result of additional or new information regarding valuation inputs and changes in their observability. Changes in Level 3 financial instruments were not significant for the years ended October 31, 2022 and 2021.

As at October 31, 2022, the Bank considered other reasonably possible alternative assumptions for the valuation models to recalculate the fair value of the instruments and concluded that the resulting potential increase or decrease in total fair value classified in Level 3 was not significant.

Financial assets and liabilities not measured at fair value on the Consolidated Balance Sheet
The following table shows financial instruments which are not recorded at fair value on the Consolidated Balance Sheet and their classification in the fair value hierarchy. For these instruments, fair values are calculated for disclosure purposes only, and the valuation techniques are disclosed above.

(in millions of Canadian dollars)					2022		2021
	Carrying amount	Fair value	Level 1	Level 2	Level 3	Carrying amount	Fair value
Assets							
Securities at amortized cost	$ 3,004	$ 2,900	$ —	$ 2,900	$ —	$ 3,189	$ 3,189
Loans	37,390	36,142	—	—	36,142	33,450	33,185
Liabilities							
Deposits	27,132	26,712	—	26,712	—	22,988	23,060
Debt related to securitization activities	12,192	11,379	—	11,379	—	11,226	11,230
Subordinated debt	337	310	—	310	—	350	358

The Bank also determined that the carrying value approximates the fair value as at October 31, 2022 and 2021 for the following assets and liabilities as they are generally liquid floating rate financial instruments or are generally short term in nature: cash and non-interest-bearing deposits with banks, interest-bearing deposits with banks, securities purchased under reverse repurchase agreements, other assets, obligations related to securities sold under repurchase agreements, acceptances and other liabilities.

23. FINANCIAL INSTRUMENTS – OFFSETTING

The following table shows information about financial assets and financial liabilities that are subject to an enforceable master netting arrangement or similar agreement and the effect or potential effect of set-off rights.

2022

	Gross recognized amounts	Gross amounts offset in the Consolidated Balance Sheet	Amounts presented in the Consolidated Balance Sheet	Amounts not offset in the Consolidated Balance Sheet: Impact of master netting agreements[1]	Amounts not offset in the Consolidated Balance Sheet: Financial collateral received or pledged	Net amounts
Financial assets						
Securities purchased under reverse repurchase agreements	**$ 5,999,810**	**$ 2,272,058**	**$ 3,727,752**	**$ 798,183**	**$ 2,922,027**	**$ 7,542**
Derivatives	**312,538**	**—**	**312,538**	**271,908**	**14,754**	**25,876**
	$ 6,312,348	**$ 2,272,058**	**$ 4,040,290**	**$ 1,070,091**	**$ 2,936,781**	**$ 33,418**
Financial liabilities						
Obligations related to securities sold under repurchase agreements	**$ 5,196,353**	**$ 2,272,058**	**$ 2,924,295**	**$ 798,183**	**$ 2,121,012**	**$ 5,100**
Derivatives	**808,958**	**—**	**808,958**	**271,908**	**471,927**	**65,123**
	$ 6,005,311	**$ 2,272,058**	**$ 3,733,253**	**$ 1,070,091**	**$ 2,592,939**	**$ 70,223**

2021

	Gross recognized amounts	Gross amounts offset in the Consolidated Balance Sheet	Amounts presented in the Consolidated Balance Sheet	Amounts not offset in the Consolidated Balance Sheet: Impact of master netting agreements[1]	Amounts not offset in the Consolidated Balance Sheet: Financial collateral received or pledged	Net amounts
Financial assets						
Securities purchased under reverse repurchase agreements	$ 5,635,089	$ 2,870,808	$ 2,764,281	$ 218,812	$ 2,525,188	$ 20,281
Derivatives	263,014	—	263,014	108,319	126,640	28,055
	$ 5,898,103	$ 2,870,808	$ 3,027,295	$ 327,131	$ 2,651,828	$ 48,336
Financial liabilities						
Obligations related to securities sold under repurchase agreements	$ 5,642,282	$ 2,870,808	$ 2,771,474	$ 218,812	$ 2,511,457	$ 41,205
Derivatives	153,069	—	153,069	108,319	437	44,313
	$ 5,795,351	$ 2,870,808	$ 2,924,543	$ 327,131	$ 2,511,894	$ 85,518

(1) Carrying amount of financial assets and financial liabilities that are subject to a master netting agreement or similar agreements but that do not meet offsetting criteria, as these agreements give a right of set-off that is enforceable only following a specified event of default or in other circumstances not expected to arise in the normal course of business.

24. FINANCIAL INSTRUMENTS – RISK MANAGEMENT

The Bank is exposed to various types of risks owing to the nature of the business activities it pursues. To ensure that significant risks to which the Bank could be exposed are taken into consideration, a Risk Management Framework has been developed to provide for oversight of risk assessment and control. Risk management is conducted according to tolerance levels established by management committees and approved by the Board of Directors through its committees.

In order to manage the risks associated with financial instruments, including loan and deposit portfolios, securities and derivatives, the Bank has implemented policies prescribing how various risks are to be managed. In practice, management closely monitors various risk limits, as well as a number of other indicators. Oversight of operations is performed by groups independent of the business lines.

The risk management policies and procedures of the Bank are disclosed in the Risk Appetite and Risk Management Framework section of the Management's Discussion and Analysis (MD&A). The relevant MD&A sections are identified in the shaded text and tables and are an integral part of these Consolidated Financial Statements.

25. DERIVATIVES AND HEDGES

25.1 DERIVATIVES

Derivatives are financial contracts that derive their value from underlying changes in interest rates, foreign exchange rates or other equity prices or indices.

In the normal course of business, the Bank enters into various derivatives to manage its interest rate, foreign exchange and equity price risk related to the Bank's lending, funding, investment, and asset and liability management activities, as well as to meet its customer demands and to earn trading income, as described below.

Types of derivatives

The main types of derivatives used are as follows:

Forwards and futures
Forward contracts are non-standardized agreements that are transacted between counterparties in the over-the-counter (OTC) market, whereas futures are standardized contracts with respect to amounts and settlement dates and are traded on organized exchanges. Examples of forwards and futures are described below.

- Interest rate futures are contractual obligations to buy or sell an interest-rate sensitive financial instrument on a predetermined future date at a specified price.
- Foreign exchange forwards are contractual obligations to exchange one currency for another at a specified price for settlement at a predetermined future date.
- Equity futures are contractual obligations to buy or sell at a fixed value (the specified price) of an equity index, a basket of stocks or a single stock at a predetermined future date.

Swaps
Swaps are OTC contracts in which two counterparties exchange a series of cash flows based on agreed upon rates applied to a notional amount. Examples of swap agreements are described below.

- Interest rate swaps are agreements where two counterparties exchange a series of payments based on different interest rates applied to a notional amount in a single currency. Certain interest rate swaps are transacted and settled through a clearing house which acts as a central counterparty.
- Cross-currency swaps are transactions in which counterparties exchange float-rate interest payments and principal payments in different currencies.
- Foreign exchange swaps are agreements to exchange payments in different currencies over predetermined periods of time.

Options
Options are contractual agreements under which the seller (writer) grants the purchaser the right, but not the obligation, either to buy (call option) or sell (put option) a security, exchange rate, interest rate, or other financial instrument or commodity at a specified price, at or by a predetermined future date. The seller (writer) of an option can also settle the contract by paying the cash settlement value of the purchaser's right. The seller (writer) receives a premium from the purchaser for this right. The various option agreements that the Bank enters into include foreign currency options, equity options and index options.

Total return swaps
Total return swaps are contracts where one counterparty agrees to pay or receive from the other cash amounts based on changes in the value of a referenced asset or group of assets, including any returns such as interest earned on these assets, in exchange for amounts that are based on prevailing market funding rates.

Aggregate notional amounts

The following tables present notional amounts of derivatives by term to maturity. The notional amounts of derivatives represents the contract amount used as a reference point to calculate payments. Notional amounts are generally not exchanged by counterparties, and do not reflect the Bank's exposure at default.

(in millions of Canadian dollars)						2022		2021
	Term to maturity							
Notional amount	Within 1 year	1 to 5 years	Over 5 years	Total	Contracts designated as hedges	Other contracts[1][2]	Contracts designated as hedges	Other contracts[1][2]
Interest rate contracts								
Over-the-counter contracts								
Swaps	$ 8,034	$ 10,177	$ 2,278	$ 20,489	$ 18,985	$ 1,504	$ 13,656	$ 2,970
Exchange-traded contracts								
Futures	153	—	—	153	—	153	—	46
Foreign exchange contracts								
Over-the-counter contracts								
Cross-currency swaps	1,771	1,062	—	2,833	2,813	20	1,003	185
Foreign exchange swaps	3,054	98	—	3,152	—	3,152	—	1,315
Forwards	1,146	95	—	1,241	—	1,241	—	435
Options purchased	184	106	—	290	—	290	—	98
Options written	184	106	—	290	—	290	—	99
Equity- and index-linked contracts								
Options purchased	45	54	—	99	—	99	—	98
Options written	109	257	16	382	—	382	—	326
Futures	9	—	—	9	—	9	—	2
Total return swaps	11	31	—	42	7	35	8	41
	$ 14,700	$ 11,986	$ 2,294	$ 28,980	$ 21,805	$ 7,175	$ 14,667	$ 5,615

(1) Include notional amounts of $1.0 billion related to basis swaps as at October 31, 2022 ($1.8 billion as at October 31, 2021).
(2) Include derivatives used in trading operations to meet customer demands and to earn trading income, as well as derivatives used to manage the Bank's risk exposures that are not designated in hedge relationships.

Fair value of derivatives

(in thousands of Canadian dollars)	2022		2021	
	Assets	Liabilities	Assets	Liabilities
CONTRACTS DESIGNATED AS HEDGES				
Fair value hedges				
Interest rate contracts				
Swaps	$ 101,136	$ 372,150	$ 62,497	$ 75,819
Cash flow hedges				
Interest rate contracts				
Swaps	147,914	150,859	84,971	20,725
Equity- and index-linked contracts				
Total return swaps	137	863	494	—
Net investment hedges				
Foreign exchange contracts				
Cross-currency swaps	3,256	152,131	77,015	756
OTHER CONTRACTS[1]				
Interest rate contracts				
Swaps	15,321	12,103	12,202	7,392
Foreign exchange contracts				
Foreign exchange swaps	13,502	72,403	17,324	3,328
Forwards	15,318	4,471	2,768	4,536
Options purchased	10,714	—	1,649	—
Options written	—	2,472	—	1,358
Equity- and index-linked contracts				
Options purchased	4,900	—	3,702	—
Options written	—	40,156	—	39,155
Total return swaps	340	1,350	392	—
Total	$ 312,538	$ 808,958	$ 263,014	$ 153,069

(1) Include derivatives used in trading operations to meet customer demands and to earn trading income as well as derivatives used to manage the Bank's risk exposures that do not qualify for hedge accounting.

Credit risk exposure of derivatives

(in millions of Canadian dollars)	2022			2021		
	Replacement cost[1]	Credit equivalent amount[2]	Risk-weighted amount[3]	Replacement cost[1]	Credit equivalent amount[2]	Risk-weighted amount[3]
Interest rate contracts	$ 324	$ 865	$ 175	$ 171	$ 577	$ 123
Foreign exchange contracts	43	292	115	102	230	59
Equity-and index-linked contracts	8	60	19	7	43	11
	375	1,217	309	280	850	193
Impact of master netting agreements	(315)	(966)	(205)	(242)	(695)	(142)
	$ 60	$ 251	$ 104	$ 38	$ 155	$ 51

(1) Represents what it would cost to replace transactions at prevailing market conditions in the event of a default. This is the favourable fair market value of all outstanding contracts, excluding options written since they do not constitute a credit risk, including securitization swaps not recognized on the balance sheet.
(2) Represents the sum of (i) the total replacement cost of all outstanding contracts and (ii) an amount representing the assessed potential future credit risk, using guidelines issued by OSFI.
(3) Represents the credit risk equivalent amount weighted based on the creditworthiness of the counterparty, as prescribed by OSFI.

25.2 HEDGE ACCOUNTING

The Bank applies hedge accounting as part of managing its interest rate, foreign exchange and equity price risk related to the Bank's lending, funding, investment, and asset and liability management activities.

Interest rate risk

Most derivative contracts used to hedge certain exposures to benchmark interest rate risk are interest rate swaps. For fair value hedges, the Bank converts fixed interest rate exposures from the hedged financial instruments to floating interest rate exposures. For cash flow hedges, the Bank converts certain exposures to cash flow variability from its variable rate instruments to fixed interest rate exposures.

Equity price risk

Cash-settled total return swaps are used in designated cash flow hedge relationships to hedge changes in the Bank's share price in respect of certain cash-settled share-based compensation awards. Refer to Note 17 for further details.

Foreign exchange risk

Cross-currency swaps and foreign exchange swaps are used in designated net investment hedge relationships to hedge changes in the value of the net investment in a foreign subsidiary from foreign exchange currency fluctuations.

Assessing hedge effectiveness

For the hedge relationships above, hedge effectiveness is assessed at the inception of the hedge relationship and on an ongoing basis, primarily using regression analysis.

For fair value and 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.

For net investment hedges, changes in fair value of the derivative attributable to exchange rate fluctuations are compared 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.

Derivative instruments designated in hedging relationships

2022						
	Notional amounts				Carrying amounts	
(in thousands of Canadian dollars)	Within 1 year	1 to 5 years	Over 5 years	Total	Assets	Liabilities
Fair value hedges						
Interest rate risk						
Interest rate contracts						
Hedge of fixed rate assets	$ 300,000	$ 852,500	$ 415,000	$1,567,500	$ 100,103	$ —
Hedge of fixed rate liabilities	$4,896,000	$4,928,000	$ 974,000	$10,798,000	$ 1,033	$ 372,150
Weighted-average fixed interest rate						
Hedge of fixed rate assets	1.9 %	1.2 %	2.8 %	1.8 %		
Hedge of fixed rate liabilities	2.2 %	2.4 %	2.0 %	2.3 %		
Cash flow hedges						
Interest rate risk						
Interest rate contracts						
Hedge of variable rate assets	$2,139,000	$2,426,000	$ 149,000	$4,714,000	$ 3,237	$ 148,733
Hedge of variable rate liabilities	$ 100,000	$1,224,200	$ 581,000	$1,905,200	$ 144,677	$ 2,126
Weighted-average variable interest rate						
Hedge of variable rate assets	4.0 %	4.1 %	4.1 %	4.0 %		
Hedge of variable rate liabilities	4.2 %	3.2 %	4.1 %	3.5 %		
Equity price risk						
Total return swaps	$ 1,181	$ 5,578	$ —	$ 6,759	$ 137	$ 863
Weighted-average price	$ 34.19	$ 34.04	$ —	$ 34.07		
Net investment hedges						
Foreign exchange risk						
Cross-currency swaps	$1,645,421	$1,015,429	$ —	$2,660,850	$ 3,256	$ 152,131
Average CAD-USD exchange rate	$ 1.2805	$ 1.3018	$ —	$ 1.2885		

2021						
(in thousands of Canadian dollars)	Within 1 year	1 to 5 years	Over 5 years	Total	Assets	Liabilities
Fair value hedges						
Interest rate risk						
Interest rate contracts						
Hedge of fixed rate assets	$ 150,000	$ 862,500	$ 388,000	$1,400,500	$ 27,289	$ 7,303
Hedge of fixed rate liabilities	$2,542,400	$2,864,000	$1,013,000	$6,419,400	$ 35,207	$ 68,516
Weighted-average fixed interest rate						
Hedge of fixed rate assets	1.9 %	1.5 %	1.2 %	1.5 %		
Hedge of fixed rate liabilities	0.9 %	1.5 %	1.7 %	1.3 %		
Cash flow hedges						
Interest rate risk						
Interest rate contracts						
Hedge of variable rate assets	$1,850,600	$2,072,000	$ 73,000	$3,995,600	$ 25,485	$ 18,153
Hedge of variable rate liabilities	$ 40,000	$1,178,700	$ 622,000	$1,840,700	$ 59,486	$ 2,573
Weighted-average variable interest rate						
Hedge of variable rate assets	0.4 %	0.4 %	0.4 %	0.4 %		
Hedge of variable rate liabilities	0.5 %	0.4 %	0.5 %	0.4 %		
Equity price risk						
Total return swaps	$ —	$ 8,164	$ —	$ 8,164	$ 494	$ —
Weighted-average price	$ —	$ 40.65	$ —	$ 40.65		
Net investment hedges						
Foreign exchange risk						
Foreign exchange swaps	$ 902,937	$ 175,732	$ —	$1,078,669	$ 77,015	$ 756
Average CAD-USD exchange rate	$ 1.3477	$ 1.2552	$ —	$ 1.3317		

Fair value hedges

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

(in thousands of Canadian dollars)	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	Gains (losses) on the hedging instruments for ineffectiveness measurement	Hedge ineffectiveness[1]
2022						
Interest rate risk						
Securities at amortized cost	**$ 1,473,654**	**$ (93,846)**	**$ —**	**$ (69,240)**	**$ 68,792**	**$ (448)**
Securities at FVOCI	**—**	**—**	**2**	**(185)**	**187**	**2**
Deposits	**7,670,812**	**(137,188)**	**(10,283)**	**139,645**	**(139,492)**	**153**
Debt related to securitization activities	**2,820,525**	**(169,475)**	**(32,616)**	**168,697**	**(167,954)**	**743**
				$ 238,917	**$ (238,467)**	**$ 450**
2021						
Interest rate risk						
Securities	$ 1,373,895	$ (24,605)	$ —	$ (46,671)	$ 46,784	$ 113
Securities at FVOCI	2,000	112	8	(198)	201	3
Loans	—	—	—	—	—	—
Deposits	3,385,772	(21,628)	16,357	39,327	(39,880)	(553)
Debt related to securitization activities	2,959,596	(52,404)	21,936	105,598	(106,139)	(541)
				$ 98,056	$ (99,034)	$ (978)

(1) Included on the Income from financial instruments line-item.

Cash flow hedges

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

(in thousands of Canadian dollars)	Accumulated other comprehensive income from active hedges	Accumulated other comprehensive income from discontinued hedges	Gains (losses) on hedged items for ineffectiveness measurement	Gains (losses) on hedging instruments for ineffectiveness measurement	Hedge ineffectiveness[1]	Unrealized gains (losses) included in Other comprehensive income as the effective portion of the hedging instrument	Losses (gains) reclassified to net interest income
2022							
Interest rate risk							
Loans	**$ (133,921)**	**$ (8,869)**	**$ 146,291**	**$ (146,821)**	**$ (530)**	**$ (129,845)**	**$ (21,710)**
Deposits	**138,348**	**35,915**	**(125,270)**	**125,435**	**165**	**76,643**	**50,580**
Debt related to securitization activities	**—**	**—**	**8**	**(8)**	**—**	**111**	**273**
	4,427	**27,046**	**21,029**	**(21,394)**	**(365)**	**(53,091)**	**29,143**
Equity price risk							
Other liabilities	**(726)**	**—**	**1,883**	**(1,883)**	**—**	**(2,562)**	**—**
	$ 3,701	**$ 27,046**	**$ 22,912**	**$ (23,277)**	**$ (365)**	**$ (55,653)**	**$ 29,143**
2021							
Interest rate risk							
Loans	$ (4,076)	$ 12,842	$ 75,792	$ (75,366)	$ 426	$ (74,132)	$ (12,961)
Deposits	61,705	(14,666)	(75,694)	75,210	(484)	73,678	5,776
Debt related to securitization activities	(111)	(273)	(818)	821	3	1,780	(273)
	57,518	(2,097)	(720)	665	(55)	1,326	(7,458)
Equity price risk							
Other liabilities	1,835	—	(4,602)	4,602	—	4,013	78
	$ 59,353	$ (2,097)	$ (5,322)	$ 5,267	$ (55)	$ 5,339	$ (7,380)

(1) Included on the Income from financial instruments line-item.

Net investment hedges

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

(in thousands of Canadian dollars)	Accumulated other comprehensive income from active hedges	Accumulated other comprehensive income from discontinued hedges	Gains (losses) on hedged items for ineffectiveness measurement	Gains (losses) on hedging instruments for ineffectiveness measurement	Hedge ineffectiveness[1]	Losses (gains) reclassified to income
						2022
Net investments in foreign operations						
USD	**$ (151,784)**	**$ 118,991**	**$ 29,501**	**$ (29,501)**	**$ —**	**$ —**
						2021
Net investments in foreign operations						
USD	$ 76,072	$ (79,364)	$ (10,113)	$ 10,113	$ —	$ —

(1) Included on the Income from financial instruments line-item.

Reconciliation of equity components

The following table presents a reconciliation by risk category of AOCI.

	2022 Cash flow hedge reserve	**2022** Translation of foreign operations reserve	2021 Cash flow hedge reserve	2021 Translation of foreign operations reserve
Balance at beginning of period	**$ 42,095**	**$ (18,839)**	$ 43,593	$ 6,838
Hedges of net investments in foreign operations				
Effective portion of changes in fair value on hedging derivatives	**n/a**	**(29,501)**	n/a	10,113
Foreign currency translation gains on investments in foreign operations	**n/a**	**68,662**	n/a	(35,949)
Cash flow hedges				
Effective portion of changes in fair value on hedging derivatives				
Interest rate risk	**(53,091)**	**n/a**	1,326	n/a
Equity price risk	**(2,562)**	**n/a**	4,013	n/a
Net amount reclassified to profit or loss				
Interest rate risk	**29,143**	**n/a**	(7,458)	n/a
Equity price risk	**—**	**n/a**	78	n/a
Income taxes	**7,022**	**(262)**	543	159
Balance at end of period	**$ 22,607**	**$ 20,060**	$ 42,095	$ (18,839)

26. INCOME RELATED TO FINANCIAL INSTRUMENTS

Income related to financial instruments reported in the Consolidated Statement of Income is detailed as follows.

Net interest income

		2022		2021
Interest and dividend income				
Interest income calculated using the effective interest method				
Financial instruments measured at amortized cost	$	1,395,541	$	1,149,826
Financial instruments measured at FVOCI		696		1,724
Interest and dividend income on financial instruments not measured at amortized cost[1]		78,121		101,765
		1,474,358		1,253,315
Interest expense				
Interest expense calculated using the effective interest method				
Financial instruments measured at amortized cost		699,177		560,001
Interest expense on financial instruments not measured at amortized cost[1]		41,845		973
		741,022		560,974
Net interest income	$	733,336	$	692,341

(1) Including interest income and expense on derivatives, as well as dividend income on securities not held for-trading. Dividend income was $12.7 million for the year ended October 31, 2022 ($13.1 million for the year ended October 31, 2021).

Income from financial instruments (other income)

		2022		2021
Trading revenues	$	19,617	$	23,266
Income from non-trading financial instruments at FVTPL and foreign exchange		12,878		6,004
Net gains (losses) on FVOCI debt securities		(724)		320
	$	31,771	$	29,590

27. INSURANCE INCOME

Insurance income reported in other income in the Consolidated Statement of Income is detailed as follows.

		2022		2021
Insurance revenues	$	13,768	$	16,234
Claims and expenses		(4,790)		(6,015)
Insurance income, net	$	8,978	$	10,219

28. OTHER INCOME

Rental income

The Bank has entered as a lessor into operating leases with clients on an equipment portfolio (see Note 11). These leases have terms of between 1 and 5 years. Rental income for these leases of $7.5 million ($3.6 million in 2021) is reported in other income in the Consolidated Statement of Income. The following table shows minimum lease payments receivable from lessees under these non-cancellable operating leases.

		2022		2021
Receivable within one year	$	5,932	$	958
Receivable within 1 to 5 years		1,850		484
	$	7,782	$	1,442

29. COMMITMENTS, GUARANTEES AND CONTINGENT LIABILITIES

Credit-related commitments

The Bank uses certain off-balance sheet credit instruments as a means of meeting the financial needs of its customers. Undrawn amounts under approved credit facilities represent a commitment to make credit available in the form of loans or other credit instruments for specific amounts and maturities, subject to specific conditions.

Documentary letters of credit are documents issued by the Bank on behalf of customers, authorizing a third party to draw drafts to a stipulated amount under specific conditions. These letters are guaranteed by the underlying shipments of goods.

The amounts of credit-related commitments represent the maximum amount of additional credit that the Bank could be obliged to extend. These amounts are not necessarily indicative of credit risk as many of these commitments are contracted for a limited period of usually less than one year and will expire or terminate without being drawn upon.

Guarantees

Standby letters of credit and performance guarantees
In the normal course of its operations, the Bank offers its customers the possibility of obtaining standby letters of credit and performance guarantees. These represent irrevocable assurances that the Bank will make payments in the event that clients cannot meet their obligations to third parties. The term of these guarantees varies according to the contracts and normally does not exceed one year. The Bank's policy for requiring collateral security with respect to these instruments is similar to its policy for loans. The maximum potential amount of future payments under these guarantees totalled $228.0 million as at October 31, 2022 ($203.4 million as at October 31, 2021).

Other indemnification agreements
In the normal course of its operations, the Bank provides indemnification agreements to counterparties in certain transactions such as purchase contracts, service agreements and sales of assets. These indemnification agreements require the Bank to compensate the counterparties for costs incurred as a result of changes in laws and regulations (including tax legislation) or as a result of litigation claims or statutory sanctions that may be suffered by the counterparty as a consequence of the transaction. The Bank also indemnifies directors and officers, to the extent permitted by law, against certain claims that may be made against them as a result of their being, or having been, directors or officers at the request of the Bank. The terms of these indemnification agreements vary based on the contract. The nature of the indemnification agreements prevents the Bank from making a reasonable estimate of the maximum potential amount it could be required to pay to counterparties. Historically, the Bank has not made any significant payments under such indemnification agreements. No amount has been accrued with respect to these indemnification agreements.

The Bank also enters into other derivative contracts under which it may be required to make payments to counterparties. These derivatives are accounted for in accordance with the policy for derivative instruments (refer to Note 25 for further detail).

Lease liabilities

The Bank has entered into commercial leases mainly related to real estate right-of-use assets. The following table presents lease liabilities by contractual maturity excluding operating costs and variable lease payments. The Bank has extension options for its real estate leases. For the measurement of lease liabilities, such extensions have been included if management has concluded that it is reasonably certain that they will be exercised.

		2022
Lease liabilities – undiscounted value		
Due within one year	$	16,290
Due within 1 to 5 years		59,335
Due after 5 years		73,042
		148,667
Discounting		(18,279)
Lease liabilities (Note 13)	$	130,388

Interest expense related to lease liabilities was $3.3 million for the year ended October 31, 2022 ($4.2 million for the year ended October , 2021). Refer to Note 8 for details on the related right-of-use assets.

Other non-cancellable commitments

Minimum future payments for other non-cancellable commitments (including real estate variable lease payments and short-term lease contracts) by maturity are as follows:

						2022
		Leases		Information technology service contracts		Other
Due within one year	$	18,047	$	55,781	$	5,962
Due within 1 to 5 years		49,992		104,106		8,840
Due after 5 years		55,088		12,840		—
		123,127		172,727		14,802
Less: Future minimum sublease payments to be received		(33,148)		—		—
Total	$	89,979	$	172,727	$	14,802

Payments under these real estate variable lease and short-term lease contracts commitments recognized as an expense amounted to $15.8 million for the year ended October 31, 2022 ($21.6 million for the year ended October 31, 2021).

Payments under these information technology service contracts and other commitments recognized as an expense amounted to $121.5 million for the year ended October 31, 2022 ($117.4 million for the year ended October 31, 2021).

Financial assets pledged as collateral

In the normal course of its operations, the Bank pledges financial assets presented in the Consolidated Balance Sheet. This collateral security is pledged under the usual terms that provide, among other things, that the Bank bear the risks and rewards related to the collateral security and the pledged assets be returned to the Bank when the terms and conditions requiring them to be pledged as security cease to apply.

Financial assets pledged as collateral under securitization operations are detailed in Note 7. The following table details the financial assets pledged as collateral under other arrangements.

		2022		2021
Pledged assets:				
To participate in clearing and payment systems[1]	$	895,493	$	732,070
For obligations related to securities sold under repurchase agreements and for securities borrowed		6,032,192		6,676,974
For obligations related to derivatives in a liability position		528,788		42,091
		7,456,473	$	7,451,135
Pledged assets are detailed as follows:				
Securities and securities purchased under reverse repurchase agreements		7,416,736	$	7,293,576
Residential mortgage loans (NHA MBS)[1]		39,737		157,559
		7,456,473	$	7,451,135

(1) Of which $750.0 million was pledged in excess of minimum requirements as at October 31, 2022, including nil NHA MBS ($575.0 million as at October 31, 2021, including $111.3 million of NHA MBS).

Contingent liabilities and legal provisions

In the ordinary course of business, the Bank and its subsidiaries are involved in various legal and regulatory proceedings. Such proceedings involve a variety of issues, and the timing of their resolution is varied and uncertain.

Legal provisions are recognized when it becomes probable that the Bank will incur an expense related to legal proceedings and the amount can be reliably estimated. Legal provisions are recorded at the best estimate of the amounts required to settle the obligation as at the reporting date, taking into account the risks and uncertainties associated with the obligation. Management and external experts are involved in estimating any legal provision, as necessary. The actual costs of settling some obligations may be substantially higher or lower than the amounts of the provisions. In some cases, it is not possible to either determine whether an obligation is probable or to reliably estimate the amount of loss, in which case no accrual can be made. This is an area of significant judgment and uncertainty, given the varying stages of the proceedings, the fact that the Bank's liability, if any, has yet to be determined and the fact that the underlying matters will change from time to time. As such the extent of our financial and other exposure to such legal proceedings, after taking into account current accruals, could be material to our results of operations in any period.

The following is a description of the Bank's significant legal proceedings, which we intend to vigorously defend:

MEDAC v. Laurentian Bank of Canada and al.

In June 2020, a plaintiff filed an application seeking leave to institute a class action in the Superior Court of Québec against the Bank, as well as former executives. The application alleges that the Bank and executives violated the Quebec Securities Act and Civil Code through alleged misrepresentations and non-disclosures regarding the Bank's and a subsidiary's mortgage loan securitization activities, and related mortgage underwriting procedures. The defendants to the proposed class action also include the Bank's external auditor, lead underwriters and all other securities dealers who underwrote securities offerings of the Bank in May 2017 and January 2018, including Laurentian Bank Securities, a subsidiary of the Bank. The plaintiff instituted this action on behalf of the Bank's shareholders who acquired shares between May 18, 2017 and September 3, 2018 and still held all or part of such shares between December 5, 2017 and September 4, 2018. A date for the court hearing of the application to authorize the proposed class action has not yet been scheduled. Based on the facts currently known, it is not possible at this time for us to predict the ultimate outcome of this proceeding or the timing of its resolution.

Consumer class actions

A number of financial institutions, including the Bank, have been named in various class actions brought by customers or clients alleging that certain of our practices or actions were improper in respect of fees, charges or interest rates relating to credit cards, bank accounts and other products. The cases are in various stages of maturity and the timing of their resolution is varied and uncertain. Based on the facts currently known, it is not possible at this time for us to predict the ultimate outcome of these proceedings or the timing of their resolution.

30. IMPAIRMENT AND RESTRUCTURING CHARGES

The following table details the Impairment and restructuring charges line item.

		2022		2021
Strategic review-related charges[1]				
Impairment charges				
Impairment of premises and equipment	$	651	$	36,668
Impairment of software and intangible assets		2,337		31,549
		2,988		68,217
Charges (reversals) related to lease and other contracts		(1,160)		18,425
Severance charges		—		9,425
		1,828		96,067
Personal Banking segment impairment charges[2]				
Impairment of goodwill (Note 10)		—		34,852
Impairment of software and intangible assets (Note 9)		—		52,741
Impairment of premises and equipment (Note 8)		—		5,800
		—		93,393
Restructuring charges[3]				
Severance charges		—		(929)
Charges related to lease contracts		—		(493)
Other restructuring charges		—		3,806
		—		2,384
Total	$	1,828	$	191,844

(1) The strategic review-related charges relate to the renewed strategic direction and include impairment charges, severance charges and charges related to lease and other contracts. Refer to Notes 8 and 9 for further details..

(2) The Personal Banking segment impairment charges related to the impairment of the Personal Banking segment in 2021 as part of the annual goodwill impairment test. Impairment charges were included in the Impairment and restructuring charges line-item.

(3) Restructuring charges in 2021 mainly consisted of charges associated with the optimization of the branch network and the related streamlining of certain back-office and corporate functions, as well as the resolution of the union grievances and complaints. Restructuring charges included severance charges, salaries, legal fees, communication expenses, professional fees and charges related to lease contracts.

Provision for restructuring charges

The following table shows the change in the provision for restructuring charges, including severance charges and charges related to lease and other contracts, which is included in the Other liabilities line item in the Consolidated Balance Sheet.

		2022		2021
Balance at beginning of the year	**$**	**25,241**	$	5,041
Charges incurred (reversed) during the year		**(1,160)**		30,234
Payments made during the year		**(16,751)**		(10,034)
Balance at end of the year	**$**	**7,330**	$	25,241

As at October 31, 2022 and October 31, 2021, the provision was mainly related to lease contracts and severances.

31. SEGMENTED INFORMATION

Operating segments

The Bank determines its operating segments based on how the chief operating decision maker manages the different services and products provided to clients. The Bank has three operating segments, as detailed below.

- The Personal Banking segment caters to the financial needs of retail clients. Clients can access the Bank's offering of financial advice, products and services through a network of branches in Quebec; an Advisors and Brokers channel targeting independent financial intermediaries across Canada; and a Digital Direct-to-customer platform available to all Canadians.
- The Commercial Banking segment caters to the financial needs of business clients across Canada and in the United States and provides commercial banking; real estate financing; and equipment and inventory financing.
- The Capital Markets segment provides a range of services, including research, market analysis and advisory services; corporate underwriting for debt and equity; and administrative services.

The Bank's other activities, including the Bank's corporate functions and Corporate Treasury, are grouped into the Other sector.

Reportable segments

The Bank has evaluated qualitative aggregation criteria and quantitative thresholds to determine that it has one reportable segment. The Bank aggregates the Personal Banking and Commercial Banking segments which have similar economic characteristics that meet the aggregation criteria. Factors considered in applying aggregation criteria mainly include: the similarity of products and services offered, the nature of operations and processes, as well as the similarity in the regulatory environments in which the segments operate The Capital Markets segment is below the quantitative thresholds to be considered a reportable segment.

Geographic segments

The Bank operates primarily within two geographic areas: Canada and the United States. The following tables summarizes the Bank's revenues and average earning assets by geographic segment.

						2022						2021
		Canada		**United States**		**Total**		Canada		United States		Total
Total revenue	**$**	**877,458**	**$**	**156,777**	**$**	**1,034,235**	$	913,036	$	89,421	$	1,002,457
Average earning assets[1]	**$**	**36,669,957**	**$**	**3,258,896**	**$**	**39,928,853**	$	35,515,548	$	1,858,447	$	37,373,995

(1) Average earning assets include the Bank's loans net of allowances, as well as interest-bearing deposits with other banks, securities, securities purchased under reverse repurchase agreements used in the Bank's treasury operations and derivatives but exclude average earning assets related to trading activities. The averages are based on the daily balances for the period.

32. SIGNIFICANT SUBSIDIARIES

The significant subsidiaries of the Bank as at October 31, 2022 are listed in the table below.

	Principal office address[1]	Book value of voting shares owned by the Bank[2]
Corporate name		
B2B Bank	Toronto, Canada	$ 622,389
Laurentian Bank Securities Inc.	Montreal, Canada	220,976
Laurentian Trust of Canada Inc.	Montreal, Canada	108,421
LBC Capital Inc.	Burlington, Canada	2,863,751
NCF Commercial Finance Holdings Inc.	Alpharetta, United States	
Northpoint Commercial Finance LLC	Alpharetta, United States	
LBC Financial Services Inc.	Montreal, Canada	405,229
LBC Investment Management Inc.	Montreal, Canada	429,115
V.R. Holding Insurance Company Ltd.	St. James, Barbados	
Venture Reinsurance Company Ltd.	St. James, Barbados	
LBC Tech Inc.	Toronto, Canada	1,574
LBC Trust	Montreal, Canada	84,400
NCF International Holding Kft	Budapest, Hungary	66,564

(1) Each subsidiary is incorporated or organized under the laws of the country in which the principal office is located

(2) Unless otherwise noted, the Bank, either directly or indirectly through its subsidiaries, owns 100% of the outstanding voting shares of each subsidiary. The book value of shares with voting rights corresponds to the Bank's interest in the shareholders' equity of the subsidiaries.

FIVE-YEAR STATISTICAL REVIEW

Condensed Consolidated Balance Sheet

As at October 31 (in thousands of Canadian dollars, unaudited)	2022	2021	2020	2019	2018
Assets					
Cash and non-interest-bearing deposits with banks	**$ 79,702**	$ 69,002	$ 69,661	$ 90,658	$ 116,490
Interest-bearing deposits with banks	**1,811,221**	598,121	603,181	322,897	374,237
Securities	**6,184,461**	6,499,193	5,799,216	6,299,936	6,061,144
Securities purchased under reverse repurchase agreements	**3,727,752**	2,764,281	3,140,228	2,538,285	3,652,498
Loans					
Personal	**3,266,635**	3,681,341	4,120,875	4,660,524	5,372,468
Residential mortgage	**16,157,480**	15,856,999	16,341,890	16,039,680	16,986,338
Commercial	**18,057,146**	14,106,423	12,730,360	12,646,332	11,839,106
Customers' liabilities under acceptances	**99,800**	—	—	319,992	196,776
	37,581,061	33,644,763	33,193,125	33,666,528	34,394,688
Allowances for loan losses	**(193,476)**	(195,056)	(173,522)	(100,457)	(93,026)
	37,387,585	33,449,707	33,019,603	33,566,071	34,301,662
Other	**1,526,037**	1,696,720	1,535,771	1,535,280	1,388,652
	$ 50,716,758	$ 45,077,024	$ 44,167,660	$ 44,353,127	$ 45,894,683
Liabilities and shareholders' equity					
Deposits					
Personal	**$ 22,234,036**	$ 18,151,044	$ 18,796,150	$ 19,747,260	$ 20,995,453
Business, banks and other	**4,897,770**	4,837,185	5,124,053	5,905,344	7,011,119
	27,131,806	22,988,229	23,920,203	25,652,604	28,006,572
Other	**8,274,874**	7,842,613	7,102,277	6,870,428	7,255,394
Debt related to securitization activities	**12,192,422**	11,255,530	10,184,497	8,913,333	7,787,753
Subordinated debt	**336,553**	349,782	349,442	349,101	348,762
Shareholders' equity	**2,781,103**	2,640,870	2,611,241	2,567,661	2,496,202
	$ 50,716,758	$ 45,077,024	$ 44,167,660	$ 44,353,127	$ 45,894,683

Condensed Consolidated Statement of Income

For the years ended October 31 (in thousands of Canadian dollars, unaudited)	2022	2021	2020	2019	2018
Net interest income	**$ 733,336**	$ 692,341	$ 682,424	$ 686,411	$ 705,912
Other income	**300,899**	310,116	288,585	282,099	337,498
Total revenue	**1,034,235**	1,002,457	971,009	968,510	1,043,410
Amortization of net premium on purchased financial instruments	**—**	—	638	1,452	2,296
Provision for credit losses	**56,878**	49,500	116,300	44,400	44,000
Non-interest expenses	**701,661**	880,362	733,787	726,493	716,781
Income before income taxes	**275,696**	72,595	120,284	196,165	280,333
Income taxes	**49,113**	15,526	6,199	23,455	55,687
Net income	**$ 226,583**	$ 57,069	$ 114,085	$ 172,710	$ 224,646
Preferred share dividends and limited recourse capital note interest	**11,779**	12,265	12,466	12,966	14,038
Net income available to common shareholders	**$ 214,804**	$ 44,804	$ 101,619	$ 159,744	$ 210,608

Other Statistics

As at and for the years ended October 31 (in thousands of Canadian dollars, except per share and percentage amounts, unaudited)	**2022**	2021	2020	2019	2018
Operating performance					
Diluted earnings per share	**$ 4.95**	$ 1.03	$ 2.37	$ 3.77	$ 5.10
Return on common shareholders' equity[1]	**8.9 %**	1.9 %	4.4 %	7.0 %	9.7 %
Net interest margin[2]	**1.84 %**	1.85 %	1.84 %	1.81 %	1.78 %
Efficiency ratio[2]	**67.8 %**	87.8 %	75.6 %	75.0 %	68.7 %
Operating leverage[2]	**23.5 %**	(16.7)%	(0.7)%	(8.5)%	0.7 %
Common share information					
Closing share price[3]	**$ 30.40**	$ 41.67	$ 26.21	$ 45.30	$ 41.56
Price / earnings ratio[2]	**6.1 x**	40.5 x	11.1 x	12.0 x	8.1 x
Book value per share[1]	**$ 58.02**	$ 53.99	$ 53.74	$ 54.02	$ 53.72
Dividends declared per share	**$ 1.78**	$ 1.60	$ 2.14	$ 2.62	$ 2.54
Dividend yield[2]	**5.9 %**	3.8 %	8.2 %	5.8 %	6.1 %
Dividend payout ratio[2]	**35.9 %**	154.9 %	90.2 %	69.3 %	49.6 %
Average volumes (in millions of dollars)					
Average earning assets	**$ 39,929**	$ 37,374	$ 37,019	$ 37,837	$ 39,663
Average loans and acceptances	**$ 35,423**	$ 32,950	$ 33,252	$ 33,966	$ 35,956
Average common shareholders' equity	**$ 2,420**	$ 2,398	$ 2,295	$ 2,271	$ 2,171
Credit quality					
Gross impaired loans as a % of loans and acceptances[2]	**0.42 %**	0.75 %	0.82 %	0.52 %	0.53 %
Net impaired loans as a % of loans and acceptances[2]	**0.28 %**	0.49 %	0.59 %	0.40 %	0.42 %
Provision for credit losses as a % of average loans and acceptances[2]	**0.16 %**	0.15 %	0.35 %	0.13 %	0.12 %
Basel III regulatory capital ratios					
Common Equity Tier 1 (CET1) capital ratio[4]	**9.1 %**	10.2 %	9.6 %	9.0 %	9.0 %
CET1 risk-weighted assets ($ millions)[4]	**$ 23,909**	$ 20,007	$ 19,669	$ 20,407	$ 20,239
Other information					
Number of common shares outstanding (in thousands)	**43,334**	43,587	43,238	42,625	42,075
Number of full-time equivalent employees	**3,126**	2,871	2,939	3,256	3,642
Number of branches	**58**	58	63	83	96
Number of automated banking machines[5]	**145**	153	169	197	222

(1) This is a non-GAAP ratio. Refer to the Non-GAAP Financial and Other Measures section on page 28 for more information.
(2) This is a supplementary financial measure. Refer to the Non-GAAP Financial and Other Measures section on page 28 for more information.
(3) Toronto Stock Exchange (TSX) closing market price.
(4) In accordance with OSFI's "Capital Adequacy Requirements" guideline. Refer to the Capital Management section on page 43 for more information.
(5) Through the Bank's partnership with THE EXCHANGE® Network, customers have access to thousands of automated banking machines in Canada.

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Corporate Governance

The Bank's website provides information on our corporate governance practices, including our governance policies and our board and committee mandates.
https://www.laurentianbank.ca/en/about_lbc/my_bank/governance.html

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Change of address and inquiries

Shareholders must notify the Bank's transfer agent and registrar of any change of address. Inquiries or requests may be directed to the Bank's Corporate Secretariat's Office at corporate_secretariat@lbcfg.ca

Direct deposit service

Shareholders of the Bank may, by advising the transfer agent in writing, have their dividends deposited directly into an account held at any financial institution member of the Payments Canada.

Investors and analysts

Investors and analysts may contact the Bank's Investor Relations Department at investor.relations@lbcfg.ca

Media

Journalists may contact the Bank's Executive Office at media@lbcfg.ca or by calling 514-451-3201.

Social media

Dividend reinvestment and share purchase plan

The Bank has a dividend reinvestment and share purchase plan for Canadian 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 shares through the reinvestment of cash dividends paid on the shares they hold or through optional cash payments of a minimum amount of $500 per payment, up to an aggregate amount of $20,000 in each 12 month period ending October 31.

For more information, shareholders may contact the Bank's transfer agent, Computershare Trust Company of Canada, at service@computershare.com or by calling 1-800-564-6253.
To participate in the plan, the Bank's non-registered shareholders must contact their financial institution or broker.

STOCK SYMBOL AND DIVIDEND RECORD AND PAYMENT DATES

The common and preferred shares indicated below are listed on the Toronto Stock Exchange.	CUSIP CODE / STOCK SYMBOL	RECORD DATE*	DIVIDEND PAYMENT DATE*
Common shares	51925D 10 6 / LB	First business day of:	
		January	February 1
		April	May 1
		July	August 1
		October	November 1
Preferred shares			
Series 13	51925D 82 5 / LB.PR.H	**	March 15
		**	June 15
		**	September 15
		**	December 15

* Subject to the approval of the Board of Directors.
** On such day (which shall not be more than 30 days preceding the date fixed for payment of such dividend) as may be determined from time to time by the Board of Directors of the Bank.

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LAURENTIAN BANK

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