U.S. Securities and Exchange Commission

Washington, D.C. 20549

Form 40-F

[Check one]

☐ **Registration statement pursuant to Section 12 of the Securities Exchange Act of 1934**

or

☒ **Annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934**

For the fiscal year ended October 31, 2023 Commission File Number 001-13354

BANK OF MONTREAL

(Exact name of Registrant as specified in its charter)

Not Applicable
(Translation of Registrant's name into English (if applicable))

Canada
(Province or other jurisdiction of incorporation or organization)

6029
(Primary Standard Industrial Classification Code Number (if applicable))

13-4941092
(I.R.S. Employer Identification Number (if applicable))

100 King Street West, 1 First Canadian Place, Toronto, Ontario, Canada M5X 1A1 (416-867-6785)
(Address and telephone number of Registrant's principal executive offices)

Colleen Hennessy, Bank of Montreal, 115 S. LaSalle Street, Floor 18W, Chicago, Illinois 60603 (312-497-6153)
(Name, address (including zip code) and telephone number (including area code) of agent for service in the United States)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Title Of Each Class	Trading Symbol	Name Of Each Exchange On Which Registered
Common Shares	**BMO**	**New York Stock Exchange**

Securities registered or to be registered pursuant to Section 12(g) of the Act:

Not Applicable

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:

Not Applicable

For annual reports, indicate by check mark the information filed with this Form:

☒ Annual information form ☒ Audited annual financial statements

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

Common Shares	720,982,672
Class B Preferred Shares Series 27 (Non-Viability Contingent Capital (NVCC))	20,000,000
Class B Preferred Shares Series 29 (Non-Viability Contingent Capital (NVCC))	16,000,000
Class B Preferred Shares Series 31 (Non-Viability Contingent Capital (NVCC))	12,000,000
Class B Preferred Shares Series 33 (Non-Viability Contingent Capital (NVCC))	8,000,000
Class B Preferred Shares Series 44 (Non-Viability Contingent Capital (NVCC))	16,000,000
Class B Preferred Shares Series 46 (Non-Viability Contingent Capital (NVCC))	14,000,000
Class B Preferred Shares Series 48 (Non-Viability Contingent Capital (NVCC))	1,250,000
Class B Preferred Shares Series 49 (Non-Viability Contingent Capital (NVCC))	750,000
Class B Preferred Shares Series 50 (Non-Viability Contingent Capital (NVCC))	500,000
Class B Preferred Shares Series 51 (Non-Viability Contingent Capital (NVCC))	1,000,000
Class B Preferred Shares Series 52 (Non-Viability Contingent Capital (NVCC)) [1]	650,000

[1] On January 31, 2023, the Bank issued Cdn$650 million of Non-Cumulative 5-Year Fixed Rate Reset Class B Preferred Shares Series 52 (Non-Viability Contingent Capital (NVCC)).

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit such files).

Yes ☒ No ☐

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 12b-2 of the Exchange Act.

Emerging growth company ☐

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 13(a) of the Exchange Act. ☐

† The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Yes ☒ No ☐

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Auditor Name: KPMG LLP
Auditor Location: Toronto, Ontario, Canada
Auditor PCAOB ID Number: 85

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DISCLOSURE CONTROLS AND PROCEDURES

The information provided under the heading “Management’s Annual Report on Disclosure Controls and Procedures and Internal Control over Financial Reporting — Disclosure Controls and Procedures” (page 125) contained in the Bank’s Management’s Discussion and Analysis for the fiscal year ended October 31, 2023 (“2023 MD&A”), filed as Exhibit 99.2 to this annual report on Form 40-F, is incorporated by reference herein.

INTERNAL CONTROL OVER FINANCIAL REPORTING

a. Management’s annual report on internal control over financial reporting

The information provided under the heading “Management’s Annual Report on Disclosure Controls and Procedures and Internal Control over Financial Reporting — Internal Control over Financial Reporting” (page 125) contained in the 2023 MD&A, filed as Exhibit 99.2 to this annual report on Form 40-F, is incorporated by reference herein.

b. Auditor’s attestation report on internal control over financial reporting

The Bank’s shareholders’ auditors, KPMG LLP, have issued an audit report on our internal control over financial reporting. This audit report appears on page 144 of the Bank’s Consolidated Financial Statements for the fiscal year ended October 31, 2023, filed as Exhibit 99.3 to this annual report on Form 40-F and is incorporated by reference herein.

c. Changes in internal control over financial reporting

The information provided under the heading “Management’s Annual Report on Disclosure Controls and Procedures and Internal Control over Financial Reporting — Changes in Internal Control over Financial Reporting” (page 125) contained in the 2023 MD&A, filed as Exhibit 99.2 to this annual report on Form 40-F, is incorporated by reference herein.

AUDIT AND CONDUCT REVIEW COMMITTEE FINANCIAL EXPERT

The information provided under the heading “Audit and Conduct Review Committee Information — Composition of the Audit and Conduct Review Committee” (page 17) identifying the Bank’s Audit and Conduct Review Committee Financial Experts, and confirming the independence of the Audit and Conduct Review Committee Financial Experts, as set forth in the Bank’s Annual Information Form (dated December 1, 2023), filed as Exhibit 99.1 to this annual report on Form 40-F, is incorporated by reference herein.

CODE OF ETHICS

The Bank’s Code of Conduct (“Code”) is its code of business conduct and ethics, which is applicable to every director and employee of the Bank. The Code is available on the Bank’s website www.bmo.com/main/about-bmo under “Learn more about us” and is available in print without charge to any shareholder upon request. Unless and to the extent specifically referred to herein, the information on the Bank’s website shall not be deemed to be incorporated by reference in this annual report on Form 40-F.

PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information provided under the heading “Shareholders’ Auditors’ Services and Fees — Shareholders’ Auditors’ Fees” and “— Pre-Approval Policies and Procedures” (page 124) contained in the 2023 MD&A, filed as Exhibit 99.2 to this annual report on Form 40-F, is incorporated by reference herein.

OFF-BALANCE SHEET ARRANGEMENTS

The information provided under the heading “Financial Condition Review – Off-Balance Sheet Arrangements” (pages 76 and 77) contained in the 2023 MD&A, filed as Exhibit 99.2 to this annual report on Form 40-F, is incorporated by reference herein.

CONTRACTUAL AND OTHER OBLIGATIONS

The information provided under the heading “Enterprise-Wide Risk Management – Liquidity and Funding Risk – Contractual Maturities of Assets and Liabilities and Off-Balance Sheet Commitments” (pages 107 and 108) contained in the 2023 MD&A, filed as Exhibit 99.2 to this annual report on Form 40-F, is incorporated by reference herein.

IDENTIFICATION OF THE AUDIT AND CONDUCT REVIEW COMMITTEE

The information provided under the heading “Audit and Conduct Review Committee Information — Composition of the Audit and Conduct Review Committee” (page 17) identifying the Bank’s Audit and Conduct Review Committee and confirming the independence of the Audit and Conduct Review Committee as set forth in the Bank’s Annual Information Form (dated December 1, 2023), filed as Exhibit 99.1 to this annual report on Form 40-F, is incorporated by reference herein.

SUMMARY OF SIGNIFICANT CORPORATE GOVERNANCE DIFFERENCES

A summary of significant ways corporate governance practices followed by the Bank differ from corporate governance practices required to be followed by U.S. domestic companies under The New York Stock Exchange’s listing standards (disclosure required by Section 303A.11 of the NYSE Listed Company Manual) is available on the Bank’s website at www.bmo.com.

UNDERTAKING

Registrant undertakes to make available, in person or by telephone, representatives to respond to inquiries made by the Commission staff, and to furnish promptly, when requested to do so by the Commission staff, information relating to the securities in relation to which the obligation to file an annual report on Form 40-F arises or transactions in said securities.

SIGNATURES

Pursuant to the requirements of the Exchange Act, the Registrant certifies that it meets all of the requirements for filing on Form 40-F and has duly caused this annual report to be signed on its behalf by the undersigned, thereto duly authorized.

Registrant: BANK OF MONTREAL

By: /s/ Tayfun Tuzun
Tayfun Tuzun
Chief Financial Officer

Date: December 1, 2023

EXHIBIT INDEX

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99.1	Annual Information Form
99.2	Management's Discussion and Analysis for the Fiscal Year Ended October 31, 2023
99.3	Consolidated Financial Statements for the Fiscal Year Ended October 31, 2023
99.4	Consent of Independent Registered Public Accounting Firm dated December 1, 2023
99.5	Certifications of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
99.6	Certifications of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
99.7	Certifications pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
99.8	Code of Conduct (incorporated by reference to the Bank's Current Report on Form 6-K furnished to the Commission on June 13, 2022)
101	Inline Interactive Data File
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

Exhibit 97.1

BANK OF MONTREAL
BOARD OF DIRECTORS' POLICIES

December 1, 2009
Amended April 1, 2019
Amended October 24, 2023

Clawback and Recoupment Policy

The Bank or a Bank affiliate may recoup or otherwise recover of some or all of the incentive compensation paid to, or benefit thereof received, by an individual who is an (a) Executive, (b) a Capital Markets employee at the Managing Director level or above, or (c) who occupies an individual Material Risk Employee role, in each case in the following circumstance(s) ("Trigger Event"):

1) The Bank's annual financial statements are restated or the Bank's quarterly financial statements are restated ("Financial Restatement" as defined in Schedule A), with the exception that for Executive Officers, discretion will not be exercised in deciding whether to recoup incentive compensation based on a Financial Measure (as defined in Schedule A) received by an Executive Officer, or the amount to be recouped, pursuant to the requirements of U.S. Securities Exchange Act and the NYSE listing standards;

2) The individual engages in, is wilfully blind to, or fails to report or prevent, conduct that falls short of legal, professional, internal conduct, and/ or ethical standards which, in turn, caused or could have caused significant financial or reputational harm to the Bank;

3) The individual was negligent, including in a supervisory capacity, in managing risk, which resulted in or could have resulted in significant financial or reputational harm to the Bank; and/or

4) Recoupment is required by an applicable law, rule or regulation, stock exchange rule or regulatory body having jurisdiction.

Incentive compensation includes compensation based on a Financial Measure and may include any short-term,mid-term, or long-term incentive compensation already paid to the affected individual, including compensation that was determined, based or calculated upon such incentive compensation (including, without limitation, any amounts under any long-term disability, life insurance or supplemental retirement or severance plan or agreement or any notional account that is based thereon, as well as any earnings or dividend equivalents accrued thereon). Incentive compensation based on a Financial Measure is considered received in the Bank's fiscal period during which the Financial Reporting Measure applicable to such Compensation is attained, even if the payment or grant of the FRM-Based Compensation occurs after the end of that period.

The Bank shall not indemnify any Executive Officers, directly or indirectly, for any incentive compensation based on a Financial Measure recouped under this Policy, and no Executive Officer will be entitled to any compensation, tax-gross up or damages in respect of any amounts that are recouped pursuant to this Policy. Recoupment under this Policy shall not be considered to be or give rise to an event or action of the Company constituting "good reason" for resignation (or any similar concept) under any agreement, incentive plan or award of the Bank.

The lookback period, within which the recoupment of incentive compensation may be sought is either: (a) three full fiscal years preceding the date upon which the Human Resources Committee ("HRC") makes its determination (or reasonably should have made a determination) that a Trigger Event has occurred, or (b) the period required by applicable law, rule or regulation, stock exchange rule or regulatory body having jurisdiction, whichever period is longer.

Except in cases of Financial Restatement with respect to an Executive Officer, the HRC shall determine in its discretion the amounts, if any, to be recouped from an affected individual, provided that any such determinations affecting a current CEO of the Bank shall be made by the Board.

Discretion shall not be exercised in respect of the recoupment of any incentive compensation based on a Financial Measure received by an Executive Officer in connection with a Financial Restatement. In such cases, the HRC shall determine the recoupment amount (the "Restatement Recoupment Amount") to be the amount by which the incentive compensation based on a Financial Measure received by the Executive Officer during the lookback period, exceeds the amount the Executive Officer would have received during that period had it been determined based on the restated amounts in the Financial Restatement, measured on a before-tax basis. Where the Restatement Recoupment Amount is not subject to mathematical recalculation directly from the information in the Financial Restatement, then the Restatement Recoupment Amount will be based on a reasonable estimate of the effect of the Financial Restatement on the applicable Financial Reporting Measure and the Bank make the documentation related to that determination available to the applicable stock exchange or regulatory body having jurisdiction.

This Policy is designed to comply with, and shall be interpreted to be consistent with, Section 10D of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), Rule 10D 1 promulgated under the Exchange Act ("Rule 10D 1") and Section 303A.14 of the New York Stock Exchange Listed Company Manual.

Any determinations made by the HRC shall be final and binding on all affected individuals and need not be uniform with respect to each individual covered by the Policy.

The methods that may be used by the Bank to recoup incentive compensation pursuant to this Policy are set out in Schedule B.

Schedule A – Definitions

Bank: Bank of Montreal.

Board: Board of Directors for the Bank.

CEO: BMO Financial Group Chief Executive Officer.

Executive Officer: Any person who holds or held the following positions during the lookback period (i) the Bank's Chief Executive Officer, (ii) the Bank's Chief Financial Officer, (iii) the Bank's principal accounting officer (or if there is no such accounting officer, its controller), (iv) any vice-president in charge of a principal business unit, division or function (such as sales, administration or finance) of the Bank, (v) any other officer who performs a policy-making function for the Bank (including any officer of the Bank's subsidiaries if they perform policy-making functions for the Bank) and (vi) any other person who performs similar policy-making functions for the Bank. For greater certainty, all Executive Officers are Material Risk Employees for the purposes of this Policy.

Financial Reporting Measure: any (i) measure that is determined and presented in accordance with the accounting principles used in preparing the Bank's financial statements, (ii) stock price, (iii) total shareholder return, and (iv) any measures that are derived wholly or in part from any measure referenced in (i), (ii) or (iii). Such measures need not be presented within the Bank's financial statements or included in a filing with the U.S. Securities and Exchange Commission to constitute a Financial Reporting Measure.

Financial Restatement: an accounting restatement of any of the interim quarterly or annual consolidated financial statements of the Bank due to the material non-compliance of the Bank with any financial reporting requirement under securities laws, including any required accounting restatement to correct:

a) an error in previously issued financial statements that is material to the previously issued financial statements, or

b) that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period,

but does not include:

- an out-of-period adjustment (i.e., the correction of an immaterial error in previously-issued financial statements, provided that such correction is immaterial to the current period);
- an accounting restatement pursuant to an order issued by an applicable securities regulatory authority (provided such order is unrelated to any material non-compliance of the Bank with any financial reporting requirement under securities laws);
- the retrospective application of a change in accounting principles;
- the retrospective revision to reportable segment information due to a change in the structure of the Bank's internal organization;
- a retrospective reclassification due to a discontinued operation;
- the retrospective application of a change in reporting entity, such as from a reorganization of entities under common control;
- retrospective adjustments to provisional amounts in connection with a prior business combination; and/or
- retrospective revision for stock splits, stock dividends, or other changes in the Bank's capital structure.

Incentive compensation based a Financial Reporting Measure: Any compensation that: (a) is granted, earned, or vested based wholly or in part upon the attainment of a Financial Reporting Measure, or (b) was determined based on, or otherwise calculated by reference to, compensation described in (a) (including, without limitation, any amounts under any long-term disability, life insurance or supplemental retirement or severance plan or agreement or any notional account that is based thereon, as well as any earnings or dividend equivalents accrued thereon).

Human Resources Committee (HRC): The Human Resources Committee of the BMO Board oversees the human resources strategies, including compensation and talent management.

Material Risk Employees: Employees whose actions could have a material impact on the risk of the Bank.

Schedule B – Procedural elements for clawback and recoupment

The HRC shall determine, in its sole discretion and subject to applicable law and regulation, the prompt recovery and method for the recoupment of any incentive compensation (including any Restatement Recoupment Amount), which to the fullest extent permitted by applicable law and regulation may include any one or more of the following:

(a) withholding, forfeiting and/or cancelling any incentive compensation of the individual;
(b) cancelling or setting-off against planned future grants of incentive compensation;
(c) requiring repayment of amounts previously received by the individual; and/or
(d) setting off against other amounts payable to the individual.

The HRC maintains the right to elect not to recover some or all of the Restatement Recoupment Amount to the extent the HRC determines that recovery would be impracticable under one or more of the following conditions, and any other requirements of applicable laws, are met:

(a) the direct expense paid to a third party to assist in enforcing this Policy would exceed the Restatement Recoupment Amount, and the Bank has made a reasonable attempt to recover the Restatement Recoupment Amount, documented such attempt, and provided such documentation to the applicable stock exchange or regulatory body having jurisdiction;

(b) recovery of the Restatement Recoupment Amount by the Bank would violate applicable laws in Canada that were adopted prior to November 28, 2022 and the HRC has obtained an opinion of Canadian counsel acceptable to the applicable stock exchange or regulatory body having jurisdiction that recovery would result in such a violation, and has provided such opinion to such stock exchange or regulatory body; or

(c) recovery of the Restatement Recoupment Amount would likely cause an otherwise tax-qualified retirement plan, under which benefits are broadly available to employees of the Bank, to fail to meet the requirements of tax legislation.

Exhibit 99.1

BANK OF MONTREAL



ANNUAL INFORMATION FORM

FOR THE YEAR ENDED OCTOBER 31, 2023

Dated December 1, 2023

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[1] As indicated, parts of the Bank's Consolidated Financial Statements (2023 Financial Statements) and Management's Discussion and Analysis (2023 MD&A) for the fiscal year ended October 31, 2023 are incorporated by reference into this Annual Information Form. The 2023 Financial Statements and the 2023 MD&A are available on SEDAR+ (www.sedarplus.ca).

EXPLANATORY NOTES AND CAUTIONS

Unless specifically stated otherwise in this Annual Information Form:

- all amounts are in Canadian dollars
- BMO Financial Group, the Bank, BMO, we, or our means Bank of Montreal and, as applicable, its subsidiaries
- information is as at October 31, 2023

Caution Regarding Forward-Looking Statements

Bank of Montreal's public communications often include written or oral forward-looking statements. Statements of this type are included in this document, and may be included in other filings with Canadian securities regulators or the U.S. Securities and Exchange Commission, or in other communications. All such statements are made pursuant to the "safe harbor" provisions of, and are intended to be forward-looking statements under, the United States Private Securities Litigation Reform Act of 1995 and any applicable Canadian securities legislation. Forward-looking statements in this document may include, but are not limited to, statements with respect to our objectives and priorities for fiscal 2024 and beyond, our strategies or future actions, our targets and commitments (including with respect to net zero emissions), expectations for our financial condition, capital position, the regulatory environment in which we operate, the results of, or outlook for, our operations or the Canadian, U.S. and international economies, plans for the combined operations of BMO and Bank of the West, and include statements made by our management. Forward-looking statements are typically identified by words such as "will", "would", "should", "believe", "expect", "anticipate", "project", "intend", "estimate", "plan", "goal", "commit", "target", "may", "might", "schedule", "forecast", "outlook", "suggest", "seek" and "could" or negative or grammatical variations thereof.

By their nature, forward-looking statements require us to make assumptions and are subject to inherent risks and uncertainties, both general and specific in nature. There is significant risk that predictions, forecasts, conclusions or projections will not prove to be accurate, that our assumptions may not be correct, and that actual results may differ materially from such predictions, forecasts, conclusions or projections. We caution readers of this document not to place undue reliance on our forward-looking statements, as a number of factors – many of which are beyond our control and the effects of which can be difficult to predict – could cause actual future results, conditions, actions or events to differ materially from the targets, expectations, estimates or intentions expressed in the forward-looking statements.

The future outcomes that relate to forward-looking statements may be influenced by many factors, including, but not limited to: general economic and market conditions in the countries in which we operate, including labour challenges; the anticipated benefits from acquisitions, including Bank of the West, are not realized; changes to our credit ratings; the emergence or continuation of widespread health emergencies or pandemics, and their impact on local, national or international economies, as well as their heightening of certain risks that may affect our future results; cyber and cloud security, including the threat of data breaches, hacking, identity theft and corporate espionage, as well as the possibility of denial of service resulting from efforts targeted at causing system failure and service disruption; technology resiliency; failure of third parties to comply with their obligations to us; political conditions, including changes relating to, or affecting, economic or trade matters; climate change and other environmental and social risks; the Canadian housing market and consumer leverage; inflationary pressures; technological innovation and competition; changes in monetary, fiscal, or economic policy; changes in laws, including tax legislation and interpretation, or in supervisory expectations or requirements, including capital, interest rate and liquidity requirements and guidance, and the effect of such changes on funding costs and capital requirements; weak, volatile or illiquid capital or credit markets; the level of competition in the geographic and business areas in which we operate; exposure to, and the resolution of, significant litigation or regulatory matters, our ability to successfully appeal adverse outcomes of such matters and the timing, determination and recovery of amounts related to such matters; the accuracy and completeness of the information we obtain with respect to our customers and counterparties; our ability to execute our strategic plans, complete proposed acquisitions or dispositions and integrate acquisitions, including obtaining regulatory approvals; critical accounting estimates and judgments, and the effects of changes to accounting standards, rules and interpretations on these estimates; operational and infrastructure risks, including with respect to reliance on third parties; global capital markets activities; the possible effects on our business of war or terrorist activities; natural disasters and disruptions to public infrastructure, such as transportation, communications, power or water supply; and our ability to anticipate and effectively manage risks arising from all of the foregoing factors.

We caution that the foregoing list is not exhaustive of all possible factors. Other factors and risks could adversely affect our results. For more information, please refer to the discussion in the Risks That May Affect Future Results section, and the sections related to credit and counterparty, market, insurance, liquidity and funding, operational non-financial, legal and regulatory, strategic, environmental and social, and reputation risk, in the Enterprise-Wide Risk Management section of the 2023 MD&A, as may be updated by quarterly reports, all of which outline certain key factors and risks that may affect our future results. Investors and others should carefully consider these factors and risks, as well as other uncertainties and potential events, and the inherent uncertainty of forward-looking statements. We do not undertake to update any forward-looking statements, whether written or oral, that may be made from time to time by the organization or on its behalf, except as required by law. The forward-looking information contained or incorporated by reference in this document is presented for the purpose of assisting shareholders and analysts in understanding our financial position as at and for the periods ended on the dates presented, as well as our strategic priorities and objectives, and may not be appropriate for other purposes.

Material economic assumptions underlying the forward-looking statements contained or incorporated by reference in this document include those set out in the Economic Developments and Outlook section of the 2023 MD&A as well as in the Allowance for Credit Losses section of the 2023 MD&A, each as may be updated by quarterly reports. Assumptions about the performance of the Canadian and U.S. economies, as well as overall market conditions and their combined effect on our business, are material factors we consider when determining our strategic priorities, objectives and expectations for our business. In determining our expectations for economic growth, we primarily consider historical economic data, past relationships between economic and financial variables, changes in government policies, and the risks to the domestic and global economy.

CORPORATE STRUCTURE

Bank of Montreal started business in Montreal in 1817 and was incorporated in 1821 by an Act of Lower Canada as the first Canadian chartered bank. Since 1871, the Bank has been a chartered bank under the *Bank Act* (Canada) (the Bank Act), and is named in Schedule I of the Bank Act. The Bank Act is the charter of the Bank and governs its operations.

The Bank's head office is 129 rue Saint Jacques, Montreal, Quebec, H2Y 1L6. Its executive offices are 100 King Street West, 1 First Canadian Place, Toronto, Ontario, M5X 1A1.

Bank of Montreal brands the organization's member companies as BMO Financial Group. Note 26 to the 2023 Financial Statements lists the intercorporate relationships among Bank of Montreal and its significant subsidiaries. The Bank incorporates this Note herein by reference. These subsidiaries are incorporated or organized under the laws of the state or country of their principal office, except for: BMO Financial Corp. and BMO Capital Markets Corp., which are incorporated under the laws of the state of Delaware, United States.

GENERAL DEVELOPMENT OF THE BUSINESS

Three-Year History

Effective January 1, 2021, Tayfun Tuzun was appointed Chief Financial Officer. Also effective January 1, 2021, Sharon Haward-Laird was appointed General Counsel.

On April 30, 2021, BMO completed the sale of its Private Banking business in Hong Kong and Singapore to J. Safra Sarasin Group.

On October 28, 2021, BMO announced the appointment of Deland Kamanga as Group Head, BMO Wealth Management, effective November 1, 2021.

During the first fiscal quarter of 2022, BMO completed the sale of its EMEA Asset Management business, as well as the transfer of certain U.S. asset management clients, to Ameriprise Financial, Inc.

On December 20, 2021, BMO announced a definitive agreement with BNP Paribas (BNP) to acquire Bank of the West and its subsidiaries. On February 1, 2023, we completed the acquisition of Bank of the West and its subsidiaries from BNP for a cash purchase price of US$13.8 billion. Bank of the West provides a broad range of banking products and services primarily in the Western and Midwestern parts of the U.S. The conversion of the Bank of the West customer accounts and systems to our respective BMO platforms was completed in September 2023.

On June 8, 2022, BMO announced the appointment of Piyush Agrawal as Deputy Chief Risk Officer effective July 1, 2022 and, after a transition period with Patrick Cronin, became Chief Risk Officer effective November 1, 2022.

On February 15, 2023, BMO announced the appointment of Nadim Hirji as Group Head, BMO Commercial Banking and Co-Head, Personal and Commercial Banking, effective March 1, 2023.

On April 20, 2023, BMO announced the appointment of Darrel Hackett as U.S. Chief Executive Officer of BMO Financial Group, President & CEO of BMO Bank N.A., and CEO of BMO's U.S. holding company, BMO Financial Corp., effective June 1, 2023.

On June 1, 2023, BMO completed the acquisition of the AIR MILES Reward Program (AIR MILES) business of LoyaltyOne Co. for a cash purchase price of US$160 million. The AIR MILES business operates as a wholly-owned subsidiary of BMO.

On August 30, 2023, BMO announced the appointment of Hazel Claxton, former Executive Vice-President and Chief Human Resources Officer of Morneau Shepell Inc. (now part of TELUS Health), to its Board of Directors, effective August 30, 2023.

On October 10, 2023, BMO announced the appointment of Alan Tannenbaum as Chief Executive Officer & Group Head, Capital Markets, effective November 1, 2023.

During the years ended October 31, 2021, 2022 and 2023, the Bank did not have share buyback programs in place and did not repurchase any of its common shares for cancellation.

For additional information on the general development of BMO's business and its strategies for the upcoming year, see pages 22 and 42 to 60 of the 2023 MD&A, which pages the Bank incorporates herein by reference.

This Three-Year History section contains forward-looking statements. Please see the Caution Regarding Forward-Looking Statements on page 2.

DESCRIPTION OF THE BUSINESS

Business

BMO Financial Group is a highly diversified financial services provider based in North America, providing a broad range of personal and commercial banking, wealth management, global markets and investment banking products and services directly and through Canadian and non-Canadian subsidiaries, offices, and branches. As at October 31, 2023, BMO had approximately 13 million customers and approximately 56,000 full-time equivalent employees. The Bank has more than 1,800 bank branches and approximately 5,800 BMO automated banking machines, as well as online and mobile digital banking platforms. It operates in Canada, the United States and select markets globally through its offices in a number of jurisdictions around the world. BMO Financial Corp. (BFC) is based in Chicago and wholly-owned by Bank of Montreal. BFC operates primarily through its subsidiary BMO Bank N.A. (BBNA), which provides banking, financing, investing, and cash management services in the United States. BMO provides a full range of investment dealer services through entities, including BMO Nesbitt Burns Inc., a major fully integrated Canadian investment dealer, and BMO Capital Markets Corp., Bank of Montreal's wholly-owned registered broker dealer in the United States.

BMO conducts business through three operating groups: Personal and Commercial Banking (P&C), comprising the Canadian P&C and U.S. P&C operating segments; BMO Wealth Management; and BMO Capital Markets. In P&C, Personal and Business Banking (P&BB) provides customers with a wide range of products and services, including deposits, home lending, consumer credit, small business lending, credit cards, cash management, everyday financial and investment advice, and other banking services, with an overall focus on providing customers with an exceptional experience in every interaction and helping them make real financial progress through a network of branches, dedicated contact centres, digital banking platforms and automated teller machines. Commercial Banking serves clients across Canada and the United States with a comprehensive range of commercial banking products and services, including a variety of financing options and treasury and payment solutions, as well as risk management products. Commercial Banking serves clients across Canada and the United States, offering valuable industry expertise, a local presence and a comprehensive range of commercial products and services. Canadian P&C operates branches across Canada, while U.S. P&C operates under the BMO brand through branches, commercial banking offices and a national digital banking platform. BMO Wealth Management serves a full range of clients from individuals and families to business owners and institutions. It offers a wide spectrum of wealth, asset management and insurance products and services aimed at helping clients plan, grow, protect and transition their wealth. The asset management business is focused on making a positive impact and delivering innovative solutions and strategies for its clients. BMO Capital Markets offers a comprehensive range of products and services to corporate, institutional and government clients. These include equity and debt investment and corporate banking services, as well as global market sales and trading solutions. Corporate Services consists of Corporate Units and Technology and Operations (T&O). Corporate Units provide enterprise-wide expertise, governance and support in a variety of areas, including strategic planning, risk management, treasury, finance, legal and regulatory compliance, sustainability, human resources, communications, marketing, real estate and procurement. T&O develops, monitors, manages and maintains governance of information technology, including data and analytics, and provides cyber security and operations services.

For additional information regarding BMO's businesses, see pages 22 and 42 to 60 of the 2023 MD&A and Note 25 to the 2023 Financial Statements. The Bank incorporates these pages and Note herein by reference.

This Business section contains forward-looking statements. Please see the Caution Regarding Forward-Looking Statements on page 2.

Supervision and Regulation in Canada

Bank of Montreal's activities in Canada are governed by the Bank Act.

Under the Bank Act, a bank can operate its regular banking business as well as some additional activities, such as dealing with real property and various financial technology and information services. A bank is restricted when it undertakes certain activities, including fiduciary activities, dealing in securities, insurance activities, and personal property leasing. For example, other than for authorized types of insurance, a bank may not offer insurance products through its branch system or bank website.

The Bank Act grants a bank broad power to invest in the securities of other corporations and entities, but limits substantial investments. Under the Bank Act, a bank generally has a substantial investment in a body corporate when (1) the bank and entities controlled by the bank beneficially own more than 10% of the voting shares of the body corporate or (2) the bank and entities controlled by the bank beneficially own shares representing more than 25% of the total shareholders' equity of the body corporate. A bank can have a substantial investment in entities that meet the substantial investment requirements as set out in Part IX of the Bank Act. In certain cases, the Minister of Finance or the Superintendent of Financial Institutions (Canada) (the Superintendent) must approve before a bank can make an investment.

The Superintendent is responsible to the Minister of Finance for administering the Bank Act. The Superintendent provides guidelines for disclosing a bank's financial information. The Superintendent must also examine each bank annually to ensure compliance with the Bank Act and that each bank is in sound financial condition. The Superintendent's examination report is submitted to the Minister of Finance.

The Bank's Canadian trust, loan and insurance subsidiaries are federally regulated financial institutions governed by the *Trust and Loan Companies Act* (Canada) and the *Insurance Companies Act* (Canada), respectively, and under provincial laws in respect of their activities in the provinces. The Bank and its Canadian trust, loan and insurance subsidiaries are also subject to regulation by the Financial Consumer Agency of Canada (the FCAC). The FCAC enforces consumer-related provisions of the federal statutes which govern these financial institutions. Certain activities of the Bank and its subsidiaries acting as securities brokers, dealers, underwriters, advisors and investment fund managers are regulated in Canada under provincial securities legislation and, in some cases, by a self-regulatory organization (Canadian Investment Regulatory Organization).

Under Canadian bank resolution powers, the Canada Deposit Insurance Corporation (CDIC) may, in circumstances where the Bank has ceased, or is about to cease, to be viable, assume temporary control or ownership of the Bank and may be granted broad powers by one or more orders of the Governor in Council (Canada), including the power to sell or dispose of all or a part of the assets of the Bank, and the power to carry out or cause the Bank to carry out a transaction or a series of transactions the purpose of which is to restructure the business of the Bank. As part of the Canadian bank resolution powers, certain provisions of, and regulations under the Bank Act, the *Canada Deposit Insurance Corporation Act* (CDIC Act) and certain other Canadian federal statutes pertaining to banks (collectively, the "Bail-in Regime") provide for a bank recapitalization regime for banks designated by the Superintendent as domestic systemically important banks. Effective September 23, 2018, under the Bail-in Regime, subject to an order of the Governor in Council (Canada) having been issued, CDIC may, having assumed temporary control or ownership of the Bank, amongst other actions, carry out a conversion, by converting or causing the Bank to convert, in whole or in part – by means of a transaction or series of transactions and in one or more steps – the shares and liabilities of the Bank that are subject to the Bail-in Regime into common shares of the Bank or any of its affiliates. For a more detailed description of Canadian bank resolution powers and the consequent risk factors attaching to certain liabilities of the Bank, reference is made to https://www.bmo.com/ir/files/F18%20Files/Bail_In_TLAC_Disclosure.pdf. The information on the Bank's website does not form a part of this Annual Information Form.

Additional information about supervision and regulation in Canada is found under the headings “Regulatory Capital Requirements”, “Regulatory Capital and Total Loss Absorbing Capacity Ratios”, “Regulatory Capital and Total Loss Absorbing Capacity Elements” and “Regulatory Capital Developments” in the Enterprise-Wide Capital Management section on pages 70 to 72, “Regulatory Requirements” in the Risks That May Affect Future Results section on pages 80 to 81, and “Legal and Regulatory Risk” on pages 113 to 115 of the 2023 MD&A, which pages the Bank incorporates herein by reference.

Supervision and Regulation in the United States

In the United States, the operations of Bank of Montreal and its subsidiaries are supervised, regulated, and examined by regulatory and government agencies at the federal and state level. As a foreign bank, Bank of Montreal is subject to various U.S. laws and regulations, including the United States *International Banking Act of 1978*, the United States *Bank Holding Company Act of 1956*, and related regulations. The Board of Governors of the Federal Reserve System, including the Federal Reserve Banks (the Federal Reserve), and state banking regulators oversee the Bank of Montreal’s branch and office operations in the United States. The U.S. Securities and Exchange Commission (the SEC), the Financial Industry Regulatory Authority, and state securities regulators regulate broker-dealer subsidiaries. The SEC and state securities regulators regulate registered investment advisor subsidiaries.

Bank of Montreal and its subsidiaries own two Federal Deposit Insurance Corporation (FDIC) insured depository institutions in the United States, BBNA and BMO Harris Central N.A. (BHC). BBNA provides banking, financing, investing, and cash management services across the United States. BHC provides limited cash management services. They are subject to examination by the Office of the Comptroller of the Currency (OCC). The Federal Reserve generally needs to approve acquiring (a) more than 5% of voting shares, (b) control, or (c) all (or substantially all) of the assets of a bank holding company, bank, or savings association.

The Bank is also subject to the *Dodd-Frank Wall Street Reform and Consumer Protection Act* (Dodd-Frank). Dodd-Frank reforms include heightened consumer protection, revised regulation of over-the-counter derivatives markets, restrictions on proprietary trading and the ownership and sponsorship of private investment funds by banks and their affiliates (referred to as the Volcker Rule), imposition of heightened prudential standards, and broader application of leverage and risk-based capital requirements.

The Federal Reserve Board’s rule for strengthening supervision and regulation of foreign banking organizations (FBO Rule) implemented Dodd Frank’s enhanced prudential standards for the U.S. operations of non-U.S. banks, such as BMO. The rule established new requirements relating to an intermediate holding company structure, risk-based capital and leverage requirements, capital stress testing requirements, U.S. risk management and risk governance, liquidity risk management and liquidity stress testing frameworks. The Bank has certified its compliance with this rule. In May 2018, the U.S. Congress passed the Economic Growth, Regulatory Relief, and *Consumer Protection Act* (EGRRCP), which made reforms to Dodd-Frank, including raising the threshold for heightened prudential standards from US$50 billion to US$250 billion in total consolidated assets. The Federal Reserve in October 2019 issued final rules that modify capital and liquidity requirements, single counterparty credit limits, and enhanced prudential standards for bank holding companies and foreign banking organizations.

The OCC has issued guidelines that establish heightened standards for large national banks with average total consolidated assets of US$50 billion or more, including BBNA. The guidelines set out minimum standards for the design and implementation of a bank’s risk governance framework and minimum standards for oversight of that framework by a bank’s board of directors. The framework must ensure the bank’s risk profile is easily distinguished and separate from that of its parent for risk management purposes. A bank’s board of directors is responsible for informed oversight of, and providing credible challenge to, management’s risk management recommendations and decisions. We comply with these guidelines.

Additional information about supervision and regulation in the United States is found under the headings “Regulatory Capital Requirements”, “Regulatory Capital Developments” and “Regulatory Capital and Total Loss Absorbing Capacity Review” in the Enterprise-Wide Capital Management section on pages 70 to 72, “Regulatory Requirements” in the Risks That May Affect Future Results section on pages 80 to 81, “Legal and Regulatory Risk” on pages 113 to 115, and “Other Regulatory Developments” on page 123 of the 2023 MD&A, which pages the Bank incorporates herein by reference.

This Supervision and Regulation in the United States section contains forward-looking statements. Please see the Caution Regarding Forward-Looking Statements on page 2.

International Supervision and Regulation

Outside Canada and the U.S., each of Bank of Montreal’s branches, agencies and subsidiaries must comply with the regulatory requirements of the country or jurisdiction where it conducts business. These include the Basel Committee on Banking Supervision capital, liquidity and prudential rules (Basel III), or local variations on Basel III, which are intended to strengthen the banking sector’s capital and liquidity frameworks. Since the first quarter of 2013, regulatory capital requirements for Bank of Montreal have been determined on a Basel III basis. Additional information about international supervision and regulation is found under the headings “Regulatory Capital Requirements”, “Regulatory Capital and Total Loss Absorbing Capacity Ratios”, “Regulatory Capital and Total Loss Absorbing Capacity Elements” and “Regulatory Capital Developments” in the Enterprise-Wide Capital Management section on pages 70 to 72, “Regulatory Requirements” in the Risks That May Affect Future Results section on pages 80 to 81, and “Legal and Regulatory Risk” on pages 113 to 115 of the 2023 MD&A, which pages the Bank incorporates herein by reference.

Competition

Canada’s financial services industry is highly competitive. It includes 35 domestic banks and 46 foreign bank subsidiaries, branches, and lending branches, as well as a multitude of trust companies, credit unions, online and full-service brokerages, investment dealers, life and property and casualty insurance companies, mutual fund dealers, and large monoline financial institutions, among others. Bank of Montreal competes with most of these companies in some form across its businesses. However, the Bank’s range of services compares most directly to those of the other five major Canadian banks, and they are direct competitors in almost all the Bank’s businesses and markets in Canada. Bank of Montreal is the fourth largest chartered bank in Canada as measured by assets and equity, and the third largest as measured by market capitalization, as at October 31, 2023. In North America, the Bank is the eighth largest bank by assets, seventh largest by market capitalization, and ninth largest by equity as at October 31, 2023. BMO is the second largest Canadian bank, as measured by global retail branches, and a top-5 commercial lender in North America**.**

The six major banks play a prominent role in the Canadian banking system, each maintaining an extensive branch network, augmented by automated banking machines, dedicated contact centres and digital and mobile banking platforms. The industry is considered mature with moderate growth. Although the major banks offer similar products and services, they compete on product offerings, pricing, service models, digital capabilities and customer experience, as well as entering alliances, with a goal of attracting and retaining customers, gaining a strategic advantage and growing market share and scale.

In addition, non-traditional competitors continue to gain momentum in certain segments of banking, in some cases with reduced regulatory requirements and oversight, and are deepening their connections with banks in order to enhance their products and build customer relationships. The financial services industry continues to operate in a rapidly changing environment as the advancement of technological capabilities is shaping the future of everyday banking for individuals and businesses. Customer behaviour and preferences for on-demand banking has led to an increase in digital adoption, a growing number of non-bank financial services providers and progress towards developing an open banking framework for Canada. In response to these changes, Bank of Montreal has set out a Digital First strategy to simplify our businesses and deliver leading customer experiences. We continue to invest in new and innovative technological capabilities, including artificial intelligence (AI) to meet and exceed our customers' evolving expectations, as well as enhancing our robust risk management practices and capabilities to support operational resilience and comply with relevant regulatory requirements. The Bank has developed talent strategies and aims to foster a culture of innovation to attract and retain employees with the skills we need. The Bank continues to invest in our Financial Crimes Unit and technological infrastructure to detect and address cybersecurity threats across North America, Europe and Asia in order to keep our customers' and employees' data secure.

The Bank continues to focus on delivering word-class client loyalty and growth powered by One Client strategy bringing a full suite of products, services and advice to our clients; a winning culture driven by alignment, empowerment and recognition; digital capabilities for speed, scale and the elimination of complexity; being our clients' lead partner in the transition to a net zero world including sustainable financing and responsible investing; and superior management of risk, capital and funding performance.

BMO's Canadian P&C banking business provides a full range of lending, deposit and treasury management products and services to nearly eight million customers. Canadian P&C continues to focus on strengthening customer loyalty to generate growth in a competitive environment, as well as increasing digital capabilities to augment the customer experience. Canadian P&C's award-winning[1] Personal and Business Banking provides customers with a wide range of products and services, including deposits, home lending, consumer credit, small business lending, credit cards, cash management, everyday financial and investment advice, and other banking services, with an overall focus on providing customers with an exceptional experience in every interaction and helping them make real financial progress.

Canadian P&C's award winning[2] commercial bank possesses a strong competitive position in commercial lending, with a number two market share for business loans from $1 million to $100 million. Commercial Banking provides clients with a comprehensive range of commercial products and services, including a variety of financing options and treasury and payment solutions, as well as risk management products. Our commercial bankers partner with clients to anticipate their financial needs, and share expertise and knowledge to help them manage and grow their businesses.

In Canada, BMO Wealth Management competes with domestic banks, insurance companies, trust companies, global private banks, investment counselling and advisory firms, and investment fund and asset management companies, among others. BMO Wealth Management's Canadian businesses have strong brand recognition and market position. BMO Private Wealth provides full-service investing, award-winning private banking[3] and wealth advisory services to high net worth and ultra-high net worth clients, leveraging individualized financial planning and advice-based solutions. BMO InvestorLine provides a range of digital investment services that compete effectively with online brokerages and digital advice providers. BMO Insurance competes with Canadian insurance companies in providing individual life and annuity products as well as pension de-risking solutions. In the United States, BMO Wealth Management competes primarily in U.S. personal wealth and advisory services, with a strategic presence in the States of Illinois, Wisconsin and California and in select high-growth wealth markets across the country. BMO Global Asset Management provides investment management products and services to institutional, retail and high net worth investors, offering a range of innovative, client-focused solutions and strategies to help clients meet their investment objectives.

BMO Capital Markets operates in a highly competitive environment and its businesses face a diverse range of competitors. With approximately 2,700 professionals in 33 locations around the world, BMO Capital Markets works proactively with clients, aiming to be their valued financial partner – leveraging people, innovative solutions, and capital to help them achieve their goals. BMO Capital Markets' success is based on a highly integrated, client-focused North American capital markets business with a well-diversified platform and business mix – by sector, geography, product and currency. This includes a strong, scalable and relevant U.S. business, and strong risk management and regulatory compliance practices.

U.S. P&C provides a broad range of financial products and services to over four million customers and competes with a diverse range of competitors including large U.S. banks, regional banks and non-bank financial service providers. Personal and Business Banking's core branch footprint spans twenty-two states with a top three deposit market share position across our Midwest footprint, serving customers through a network of over 1,000 branches as well as nationwide access to a digital banking platform and access to over 40,000 BMO and Allpoint® automated banking machines. Personal and Business Banking offers a variety of products and services, including deposits, home lending, consumer credit, small business lending, credit cards, cash management, everyday financial and investment advice, and other banking services, with an overall focus on providing customers with an exceptional experience in every interaction and helping them make real financial progress. Commercial Banking offers nationwide coverage across key specialty sectors and continues to extend its footprint and strengthen its position in key states, including through the acquisition of Bank of the West. Commercial Banking provides clients with a comprehensive range of commercial products and services, including a variety of financing options, advisory services and treasury and payment solutions, to meet clients' financial needs and help them manage and grow their business.

Consolidation has been underway in the financial services industry in Canada and the United States in recent years. This affects trust companies, mutual fund managers, life insurers, and credit unions. Any large bank merger would be subject to Canadian federal government policy on bank mergers and a thorough public review process. It is uncertain whether this will change in the near future but further consolidation and increased competition in the financial services industry overall is likely. This Competition section contains forward-looking statements. Please see the Caution Regarding Forward-Looking Statements on page 2.

[1] In 2023, the Bank received Best Retail Bank in Canada for second consecutive year by World Finance magazine. In addition, the Bank received the highest score among the Big 5 Banks in the J.D. Power 2023 Canada Retail Banking Satisfaction Study, which measures customers' satisfaction with their primary bank. Visit jdpower.com/awards for more details

[2] In 2023, the Bank was named Best Commercial Bank in Canada by World Finance Magazine for the ninth consecutive year.

[3] In 2023, BMO Private Banking was named Best Private Bank in Canada by World Finance Magazine for the thirteenth consecutive year.

Environmental, Social and Governance Issues

The Bank publishes a *Sustainability Report and Public Accountability Statement*, outlining how the Bank is addressing environmental, social, and governance issues. This report is part of a broader suite of sustainability reporting including the BMO Climate Report, and other related information that is available on the Bank's website, www.bmo.com. The information on the Bank's website does not form a part of this Annual Information Form. Additional information about the Bank's environmental and social risks is under the heading "Risks that May Affect Future Results – Top and Emerging Risks That May Affect Future Results – Climate Change" and "Environmental and Social Risk" in the Enterprise-Wide Risk Management section on page 79 and pages 116 to 118 of the 2023 MD&A, which pages the Bank incorporates herein by reference.

Risk Factors

A description of certain key factors and risks faced by the Bank and its businesses can be found in the "Enterprise-Wide Risk Management" section on pages 78 to 118 of the 2023 MD&A, which pages the Bank incorporates herein by reference.

DIVIDENDS

You can find information about the Bank's dividends paid or payable per share on the common shares and each outstanding series of preferred shares in each of the three most recently completed years under the heading "Outstanding Shares and NVCC Instruments" on page 75 of the 2023 MD&A, which page the Bank incorporates herein by reference. Information about restrictions on the payment of dividends appears under the heading "Share Redemption and Dividend Restrictions" in Note 16 of the 2023 Financial Statements, which Note is incorporated herein by reference.

The Bank cannot (a) declare dividends on its preferred or common shares if paying those dividends would contravene the capital adequacy, liquidity, or other regulations under the Bank Act; (b) pay common share dividends unless the Bank has paid all dividends declared and payable on its preferred shares or set aside sufficient funds to do so; and (c) in certain circumstances, pay Class B Preferred Share dividends unless the Bank pays dividends on the Class B Preferred Shares Series 48 (NVCC), Class B Preferred Shares Series 49 (NVCC) and Class B Preferred Shares Series 51 (NVCC), (each as defined below). In the event that interest due and payable on the Bank's Subordinated Capital Notes (as defined below) is not paid in full, the Bank will not declare dividends on its common shares or preferred shares or, subject to certain exceptions, redeem, purchase or otherwise retire such shares until the month commencing after such interest payments have been made in full. The Board of Directors determines the amount and payment of future dividends. The determination by the Board of Directors depends on the Bank's operations, financial condition, cash requirements, future regulatory restrictions on the payment of dividends, and other factors the Board of Directors finds relevant. You can find information about the Bank's dividends and dividend payout range on page 76 of the 2023 MD&A, which page the Bank incorporates herein by reference.

Currently, these limitations do not restrict the payment of dividends on common or preferred shares.

DESCRIPTION OF CAPITAL STRUCTURE

The following summarizes certain provisions of the Bank's common shares, preferred shares, Subordinated Capital Notes and Limited Recourse Capital Notes. This summary is qualified in its entirety by the Bank's by-laws and the actual terms and conditions of such securities. For more detail on the Bank's capital structure, see pages 72 to 76 of the 2023 MD&A and Notes 16 and 19 of the 2023 Financial Statements. The Bank incorporates those pages and Notes herein by reference.

Description of Common Shares

The authorized capital of the Bank includes an unlimited number of common shares without nominal or par value for unlimited consideration. The holders of common shares are entitled to:

(i) Vote at all Bank shareholders' meetings, except for meetings where only holders of a specified class or series of shares are entitled to vote.

(ii) Receive dividends as and when declared by the Board of Directors, subject to the preference of the Bank's holders of preferred shares.

(iii) Receive the remaining property of the Bank if it is liquidated, dissolved, or wound up, only after paying the Bank's holders of preferred shares and paying all outstanding debt.

Description of Preferred Shares

The authorized capital of the Bank includes an unlimited number of Class A Preferred Shares and Class B Preferred Shares without nominal or par value, in series, for unlimited consideration. Class B Preferred Shares may be issued in a foreign currency. The following describes certain general terms and conditions of the preferred shares.

Certain Conditions of the Class A Preferred Shares as a Class

Issuable in Series

From time to time, the Board of Directors may resolve to issue Class A Preferred Shares in one or more series with rights, privileges, restrictions, and conditions, which the Board of Directors may also decide. As at November 30, 2023, there were no outstanding Class A Preferred Shares.

The Class A Preferred Shares of each series rank equally to all other series of Class A and Class B Preferred Shares and are entitled to preference over the common shares and over any other shares ranking junior to the Class A Preferred Shares and the Class B Preferred Shares with respect to the payment of dividends and in the distribution of property in the event of the liquidation, dissolution or winding up of the Bank.

Creating and Issuing Shares

Under the Bank Act, the Bank needs approval from the holders of Class A Preferred Shares to create any other class of shares with equal or superior rank to Class A Preferred Shares. Shareholders must give this approval as set out below in "Shareholder Approvals." The Bank Act and other laws may also require other forms of approval.

The Bank does not require shareholder approval to create or issue additional Class A Preferred Shares or shares of equal rank if, on the date they are created or issued, the Bank has declared and paid or set apart for payment all dividends payable on cumulative and non-cumulative Class A Preferred Shares, including for the most recently completed fiscal period.

Voting Rights

The holders of the Class A Preferred Shares only have voting rights as a class on certain matters (see below) or as the law requires.

Shareholder Approvals

Holders of the Class A Preferred Shares can give their approval if 66⅔% or more holders casting vote in favour of doing so at a meeting where the majority of Class A Preferred Shares is represented, or if no quorum is present at such a meeting, at an adjourned meeting at which no quorum requirements apply.

Certain Conditions of the Class B Preferred Shares as a Class

Issuable in Series

From time to time, the Board of Directors may resolve to issue Class B Preferred Shares in one or more series with rights, privileges, restrictions, and conditions, which the Board of Directors may also decide.

The Class B Preferred Shares of each series rank equally to all the other series of Class B and Class A Preferred Shares and are entitled to preference over the common shares and any other shares ranking junior to the Class A Preferred Shares and the Class B Preferred Shares with respect to the payment of dividends and in the distribution of property in the event of the liquidation, dissolution or winding up of the Bank.

Creating and Issuing Shares

Under the Bank Act, the Bank needs approval from holders of Class B Preferred Shares to create any other class of shares with equal or superior rank to Class B Preferred Shares. The Bank Act or other laws may also require other forms of approval.

The Bank does not require shareholder approval to create or issue additional Class B Preferred Shares or shares of equal rank if, on the date they are created or issued, the Bank has declared and paid or set apart for payment all dividends payable on cumulative and non-cumulative Class B Preferred Shares, including for the most recently completed fiscal period. As at November 30, 2023, none of the outstanding Class B Preferred Shares have the right to cumulative dividends.

Voting Rights

The holders of the Class B Preferred Shares only have voting rights as a class on certain matters (see below) or as the law requires.

Shareholder Approvals

Holders of the Class B Preferred Shares can give their approval if 66⅔% or more holders casting vote in favour of doing so at a meeting where the majority of Class B Preferred Shares is represented, or if no quorum is present at such meeting, at an adjourned meeting at which no quorum requirements apply.

Contingent Conversion of Certain Series of Class B Preferred Shares

Upon the occurrence of certain specified trigger events relating to the viability of the Bank, the Class B Preferred Shares Series 27(Non-Viability Contingent Capital (NVCC)), Class B Preferred Shares Series 29 (Non-Viability Contingent Capital (NVCC)), Class B Preferred Shares Series 31 (Non-Viability Contingent Capital) (NVCC)), Class B Preferred Shares Series 33 (Non-Viability Contingent Capital (NVCC)), Class B Preferred Shares Series 44 (Non-Viability Contingent Capital (NVCC)), Class B Preferred Shares Series 46 (Non-Viability Contingent Capital (NVCC)), Class B Preferred Shares Series 48 (Non-Viability Contingent Capital (NVCC)), Class B Preferred Shares Series 49 (Non-Viability Contingent Capital (NVCC)), Class B Preferred Shares Series 50 (Non-Viability Contingent Capital (NVCC)), Class B Preferred Shares Series 51 (Non-Viability Contingent Capital (NVCC) and Class B Preferred Shares Series 52 (Non-Viability Contingent Capital (NVCC)) will immediately and automatically be converted into common shares of the Bank. The number of common shares into which such Class B Preferred Shares would be converted upon the occurrence of such a trigger event will be determined in accordance with a pre-determined conversion formula specified at the time of issuance of such Class B Preferred Shares.

Description of Other Equity Instruments – Subordinated Capital Notes

The Bank currently has outstanding US$500 million 4.800% Fixed Rate Resetting Non-Cumulative Subordinated Additional Tier 1 Capital Notes (Non-Viability Contingent Capital (NVCC)) ("Subordinated Capital Notes") which are classified as equity and form part of the Bank's additional tier 1 non-viability contingent capital. The Subordinated Capital Notes are compound financial instruments that have both equity and liability features. For more details, see "Other Equity Instruments" in Note 16 of the 2023 Financial Statements.

The Subordinated Capital Notes are direct unsecured obligations of the Bank and, in the event of the Bank's insolvency or winding-up, will rank subordinate to all of the Bank's subordinated indebtedness and in right of payment equally with and not prior to indebtedness that ranks equally in right of payment with, or is subordinated to, the Subordinated Capital Notes (other than indebtedness which by its terms ranks subordinate to the Subordinated Capital Notes, including but not limited to the Limited Recourse Capital Notes). The Subordinated Capital Notes will constitute subordinated indebtedness for the purposes of the Bank Act. In the event of the Bank's insolvency or winding-up, the Subordinated Capital Notes will rank ahead of the Bank's common shares and Preferred Shares.

Upon the occurrence of certain specified trigger events relating to the viability of the Bank, the Subordinated Capital Notes will immediately and automatically be converted into common shares of the Bank. The number of common shares into which the Subordinated Capital Notes would be converted upon the occurrence of such a trigger event will be determined in accordance with a pre-determined conversion formula specified at the time of issuance of the Subordinated Capital Notes.

Certain Provisions of the Subordinated Capital Notes

Distributions and Restrictions on Dividend and Retirement of Shares

Interest on the Subordinated Capital Notes is paid semi-annually in arrears for the initial five years. Thereafter, the interest will reset every five years and accrue at a fixed rate. While interest is payable on a semi-annual basis, the Bank may, at its discretion, with prior notice, cancel the payments. If the Bank does not pay the interest in full to the note holders, the Bank will not declare dividends on its common shares or preferred shares or redeem, purchase or otherwise retire such shares until the month commencing after the Bank resumes full interest payments on the Subordinated Capital Notes.

Maturity and Redemption

The Subordinated Capital Notes have no scheduled maturity or redemption date. Accordingly, the Bank is not required to make any repayment of the principal amount of the Subordinated Capital Notes except in the event of bankruptcy or insolvency and provided that the NVCC requirements have not been triggered. The Subordinated Capital Notes are redeemable at par five years after issuance solely at the option of the Bank, or following certain regulatory or tax events, in accordance with their terms. All redemptions are subject to regulatory consent.

Purchase for Cancellation

Subject to regulatory consent, the Bank may at any time, purchase for cancellation any Subordinated Capital Notes at any price in the open market.

Events of Default

An event of default in respect of the Subordinated Capital Notes will occur only if the Bank becomes bankrupt or insolvent or becomes subject to the provisions of the *Winding-up and Restructuring Act* (Canada), or if the Bank goes into liquidation, either voluntarily or under an order of a court of competent jurisdiction, passes a resolution for the winding-up, liquidation or dissolution of the Bank or otherwise acknowledges its insolvency. Neither a failure to make a payment on the Subordinated Capital Notes when due (including any interest payment, whether as a result of cancellation or otherwise) nor an NVCC automatic conversion upon the occurrence of a trigger event will constitute an event of default.

Issuance of other Senior or Pari Passu Securities

The terms governing the Subordinated Capital Notes do not limit the Bank's ability to incur additional indebtedness or issue or repurchase securities, other than the restriction on retirement of shares noted above. The Bank may incur additional indebtedness without the authorization of the holders of the Subordinated Capital Notes.

Voting Rights

The holders of Subordinated Capital Notes are not entitled to any rights of holders of common shares, including any rights of shareholders to receive notice, to attend or to vote at any meeting of the shareholders of the Bank. If the Subordinated Capital Notes are converted into common shares of the Bank under NVCC requirements, holders of the Subordinated Capital Notes will become holders of the Bank's common shares and will only have rights as holders of common shares.

Description of Other Equity Instruments – Limited Recourse Capital Notes

The Bank currently has outstanding $1.25 billion 4.300% Limited Recourse Capital Notes, Series 1 (Non-Viability Contingent Capital (NVCC)) ("LRCN 1"), $750 million 5.625% Limited Recourse Capital Notes, Series 2 (Non-Viability Contingent Capital (NVCC)) ("LRCN 2") and $1 billion 7.325% Limited Recourse Capital Notes, Series 3 (Non-Viability Contingent Capital (NVCC)) ("LRCN 3", collectively with the LRCN 1 and LRCN 2, the "Limited Recourse Capital Notes") which are classified as equity and form part of the Bank's additional tier 1 non-viability contingent capital. The Limited Recourse Capital Notes are compound financial instruments that have both equity and liability features. For more details, see "Other Equity Instruments" in Note 16 of the 2023 Financial Statements.

The Limited Recourse Capital Notes are direct unsecured obligations of the Bank and, in the event of the Bank's insolvency or winding-up (prior to the occurrence of specified trigger events), will rank: (a) subordinate in right of payment to the prior payment in full of all indebtedness, including certain subordinated indebtedness (including but not limited to the Subordinated Capital Notes); and (b) in right of payment, equally with and not prior to indebtedness which by its terms ranks equally in right of payment with, or is subordinate to, the Limited Recourse Capital Notes (other than indebtedness which by its terms ranks subordinate to the Limited Recourse Capital Notes) in each case, from time to time outstanding, and will be subordinate in right of payment to the claims of the Bank's depositors and other unsubordinated creditors. The Limited Recourse Capital Notes will constitute subordinated indebtedness for the purposes of the Bank Act. In the event of the Bank's insolvency or winding-up, the Limited Recourse Capital Notes will rank ahead of the Bank's common shares and Preferred Shares.

In the event of a non-payment by the Bank of the principal amount of, or interest on the Limited Recourse Capital Notes when due, while a holder of Limited Recourse Capital Notes will have a claim against the Bank for the principal amount of the Limited Recourse Capital Notes and any accrued and unpaid interest (which will then be due and payable), the sole remedy of each holder of Limited Recourse Capital Notes is the delivery of such holder's proportionate share of the assets of a limited recourse trust. As of the date hereof, the limited recourse trust's assets in respect of the LRCN 1 consist of 1,250,000 Class B Preferred Shares, Series 48 (Non-Viability Contingent Capital (NVCC)) ("Class B Preferred Shares Series 48 (NVCC)"), in respect of the LRCN 2 consist of 750,000 Class B Preferred Shares, Series 49 (Non-Viability Contingent Capital (NVCC)) ("Class B Preferred Shares Series 49 (NVCC)") and in respect of the LRCN 3 consist of 1,000,000 Class B Preferred Shares, Series 51 (Non-Viability Contingent Capital (NVCC)) ("Class B Preferred Shares Series 51 (NVCC)").

Upon the occurrence of certain specified trigger events relating to the viability of the Bank, the Class B Preferred Shares Series 48 (NVCC), Class B Preferred Shares Series 49 (NVCC) and Class B Preferred Shares Series 51 (NVCC) will immediately and automatically be converted into common shares of the Bank. The number of common shares into which the Class B Preferred Shares Series 48 (NVCC), Class B Preferred Shares Series 49 (NVCC) and Class B Preferred Shares Series 51 (NVCC) would be converted upon the occurrence of such a trigger event will be determined in accordance with a pre-determined conversion formula specified at the time of the issuance of the Class B Preferred Shares Series 48 (NVCC), Class B Preferred Shares Series 49 (NVCC) and Class B Preferred Shares Series 51 (NVCC). Subject to certain limitations, each holder of the Limited Recourse Capital Notes would receive such holder's proportionate share of such common shares of the Bank.

Certain Provisions of the Limited Recourse Capital Notes

Distributions and Restrictions on Dividend and Retirement of Shares

Interest on the Limited Recourse Capital Notes is paid semi-annually in arrears for the initial five years. Thereafter, the interest will reset every five years and accrue at a fixed rate.

Until revoked, the trustee of the limited recourse trust has waived its right to receive any and all dividends on the Class B Preferred Shares Series 48 (NVCC). Accordingly, until such waiver is revoked by the trustee of the limited recourse trust, no dividends are expected to be declared or paid on the Class B Preferred Shares Series 48 (NVCC). To the extent the waiver is no longer in effect and the limited recourse trust is the sole holder of the Class Preferred Shares Series 48 (NVCC), if the Bank does not declare and pay dividends on the Class B Preferred Shares Series 48 (NVCC), it will not declare and pay dividends on any of the other outstanding series of Class B Preferred Shares of the Bank.

Until revoked, the trustee of the limited recourse trust has waived its right to receive any and all dividends on the Class B Preferred Shares Series 49 (NVCC). Accordingly, until such waiver is revoked by the trustee of the limited recourse trust, no dividends are expected to be declared or paid on the Class B Preferred Shares Series 49 (NVCC). To the extent the waiver is no longer in effect and the limited recourse trust is the sole holder of the Class Preferred Shares Series 49 (NVCC), if the Bank does not declare and pay dividends on the Class B Preferred Shares Series 49 (NVCC), it will not declare and pay dividends on any of the other outstanding series of Class B Preferred Shares of the Bank.

Until revoked, the trustee of the limited recourse trust has waived its right to receive any and all dividends on the Class B Preferred Shares Series 51 (NVCC). Accordingly, until such waiver is revoked by the trustee of the limited recourse trust, no dividends are expected to be declared or paid on the Class B Preferred Shares Series 51 (NVCC). To the extent the waiver is no longer in effect and the limited recourse trust is the sole holder of the Class Preferred Shares Series 51 (NVCC), if the Bank does not declare and pay dividends on the Class B Preferred Shares Series 51 (NVCC), it will not declare and pay dividends on any of the other outstanding series of Class B Preferred Shares of the Bank.

Maturity and Redemption

The LRCN 1 are scheduled to mature on November 26, 2080. The LRCN 1 are redeemable, at the option of the Bank, at their principal amount every five years after issuance, or following certain regulatory or tax events, in accordance with their terms. Upon any redemption of the Class B Preferred Shares Series 48 (NVCC) held by the limited recourse trust, the Bank shall redeem LRCN 1 with an aggregate principal amount equal to the aggregate face amount of the Class B Preferred Shares Series 48 (NVCC) redeemed by the Bank. All redemptions are subject to regulatory consent.

The LRCN 2 are scheduled to mature on May 26, 2082. The LRCN 2 are redeemable, at the option of the Bank, at their principal amount every five years after issuance, or following certain regulatory or tax events, in accordance with their terms. Upon any redemption of the Class B Preferred Shares Series 49 (NVCC) held by the limited recourse trust, the Bank shall redeem LRCN 2 with an aggregate principal amount equal to the aggregate face amount of the Class B Preferred Shares Series 49 (NVCC) redeemed by the Bank. All redemptions are subject to regulatory consent.

The LRCN 3 are scheduled to mature on November 26, 2082. The LRCN 3 are redeemable, at the option of the Bank, at their principal amount every five years after issuance, or following certain regulatory or tax events, in accordance with their terms. Upon any redemption of the Class B Preferred Shares Series 51 (NVCC) held by the limited recourse trust, the Bank shall redeem LRCN 3 with an aggregate principal amount equal to the aggregate face amount of the Class B Preferred Shares Series 51 (NVCC) redeemed by the Bank. All redemptions are subject to regulatory consent.

Purchase for Cancellation

Subject to regulatory consent, the Bank may at any time, purchase for cancellation any LRCN 1, LRCN 2 and LRCN 3 at any price in the open market. Prior to any such cancellation, the Bank shall, subject to regulatory consent, redeem, as applicable, a corresponding number of Class B Preferred Shares Series 48 (NVCC), Class B Preferred Shares Series 49 (NVCC) or Class B Preferred Shares Series 51 (NVCC) (the aggregate face amount of which shall equal the aggregate principal amount of the Notes to be cancelled) then held by the limited recourse trust for cancellation.

Events of Default

An event of default in respect of the Limited Recourse Capital Notes ("Event of Default"), will occur only if the Bank becomes bankrupt or insolvent or becomes subject to the provisions of the *Winding-up and Restructuring Act* (Canada), or if the Bank goes into liquidation, either voluntarily or under an order of a court of competent jurisdiction, passes a resolution for the winding-up, liquidation or dissolution of the Bank or otherwise acknowledges its insolvency. Upon an Event of Default, the sole remedy of each holder of LRCN 1 is the delivery of such holder's proportionate share of the Class B Preferred Shares Series 48 (NVCC), the sole remedy of each holder of LRCN 2 is the delivery of such holder's proportionate share of the Class B Preferred Shares Series 49 (NVCC) and the sole remedy of each holder of LRCN 3 is the delivery of such holder's proportionate share of the Class B Preferred Shares Series 51 (NVCC).

Issuance of other Senior or Pari Passu Securities

The terms governing the Limited Recourse Capital Notes do not limit the Bank's ability to incur additional indebtedness or issue or repurchase securities. The Bank may incur additional indebtedness without the authorization of the holders of the Limited Recourse Capital Notes.

Voting Rights

The holders of the Limited Recourse Capital Notes are not entitled to any rights of holders of common shares, including any rights of shareholders to receive notice, to attend or to vote at any meeting of the shareholders of the Bank. If the Class B Preferred Shares Series 48 (NVCC), Class B Preferred Shares Series 49 (NVCC) or Class B Preferred Shares Series 51 (NVCC) are converted into common shares of the Bank, holders of the LRCN 1, LRCN 2 and LRCN 3, as applicable, will become holders of the Bank's common shares and will only have rights as holders of common shares.

This Certain Provisions of the Limited Recourse Capital Notes section contains forward-looking statements. Please see the Caution Regarding Forward-Looking Statements on page 2.

Restraints on Bank Shares under the Bank Act

The Bank Act restricts the beneficial ownership of shares of a bank. No person may be a major shareholder of a bank if the bank has equity of $12 billion or more, which applies to the Bank. A major shareholder is defined as a person, or group of persons under common control or acting jointly or in concert, that beneficially owns more than 20% of any class of voting shares or more than 30% of any class of non-voting shares of the bank.

In addition, no person may have a significant interest in any class of shares of a bank, including the Bank, unless the person first receives the approval of the Minister of Finance. A person has a significant interest in a class of shares of a bank when the person, or group of persons under common control or acting jointly or in concert, beneficially owns more than 10% of any class of shares of the bank.

Governments and their agents are also restricted from acquiring shares of a bank, except for certain cases that require the Minister of Finance's consent.

Ratings

The credit ratings that external rating agencies assign to some of the Bank's securities are important in the raising of both capital and funding to support the Bank's business operations. Maintaining strong credit ratings allows the Bank to access the capital markets at competitive pricing levels. Should the Bank's credit ratings experience a downgrade, its cost of funds would likely increase and its access to funding and capital through capital markets could be reduced. A material downgrade of the Bank's ratings could also have other consequences, including those set out in Note 8 of the 2023 Financial Statements, which Note the Bank incorporates herein by reference.

The following table sets out ratings the Bank has received for its outstanding securities from the rating agencies, which are current as at November 30, 2023.

	S&P		Moody's		DBRS		Fitch	
	Rating	**Rank[1]**	**Rating**	**Rank[1]**	**Rating**	**Rank[1]**	**Rating**	**Rank[1]**
Short-term instruments	A-1	1 of 6	P-1	1 of 4	R-1 (high)	1 of 6	F1+	1 of 7
Senior debt[3]	A-	3 of 10	A2	3 of 9	AA (low)	2 of 10	AA-	2 of 10
Long Term Deposits / Legacy Senior Debt[4]	A+	3 of 10	Aa2	2 of 9	AA	2 of 10	AA	2 of 10
Subordinated debt	A-	3 of 10	Baa1	4 of 9	A (high)	3 of 10	A	3 of 10
Subordinated debt – NVCC[2]	BBB+	4 of 10	Baa1(hyb)	4 of 9	A (low)	3 of 10	A	3 of 10
Subordinated Capital Notes – NVCC[2]	BBB-	4 of 10	Baa3(hyb)	4 of 9	N/A	N/A	N/A	N/A
Limited Recourse Capital Notes – NVCC[2]	BBB-	4 of 10	Baa3(hyb)	4 of 9	BBB (high)	4 of 10	N/A	N/A
Preferred shares	BBB	3 of 9	Baa3	4 of 9	Pfd-2 (high)	2 of 6	N/A	N/A
Preferred shares – NVCC[2]	BBB-	3 of 9	Baa3(hyb)	4 of 9	Pfd-2	2 of 6	N/A	N/A
Trend/Outlook	Stable	--	Stable	--	Stable	--	Stable	--

Notes: [1] Rank, according to each rating agency's public website, refers to the assigned ratings ranking of all major assignable ratings for each debt or share class, 1 being the highest. Each assignable major rating may be modified further (+/-, high/low) to show relative standing within the major rating categories.
[2] Non-viability contingent capital or NVCC.
[3] Subject to conversion under the Bail-In Regime.
[4] Long Term Deposits / Legacy Senior Debt Includes: (a) Senior debt issued prior to September 23, 2018; and (b) Senior debt issued on or after September 23, 2018 which is excluded from the Bail-In Regime.

A definition of the categories of each rating as at November 30, 2023 from each rating agency's website is outlined in Appendix II to this Annual Information Form. Further information may be obtained from the applicable rating agency. S&P, Moody's, DBRS and Fitch each have a stable outlook on BMO's long-term credit ratings.

During fiscal 2023 there were no changes to ratings assigned by S&P, Moody's, DBRS or Fitch. On June 20, 2023, Fitch revised its outlook on BMO to stable from negative, reflecting solid and above-target capital adequacy levels after the successful closing of the acquisition of Bank of the West.

Credit ratings are not recommendations to purchase, hold, or sell securities and do not address the market price or suitability of a specific security for a particular investor. Credit ratings may not reflect the potential impact of all risks on the value of securities. In addition, real or anticipated changes in the rating assigned to a security will generally affect the market value of that security. The Bank cannot know for certain that a rating will remain in effect for any given period of time or that a rating agency will not revise or withdraw it entirely in the future.

The Bank paid fees to credit rating agencies to obtain its credit ratings. The Bank may also pay fees for other services from credit rating agencies in the ordinary course of business.

This Ratings section contains forward-looking statements. Please see the Caution Regarding Forward-Looking Statements on page 2.

MARKET FOR SECURITIES

Trading Price and Volume

The outstanding common shares of the Bank are listed for trading on the Toronto Stock Exchange (TSX) and on the New York Stock Exchange (NYSE) under the trading symbol BMO. The outstanding preferred shares of the Bank set out below are listed on the TSX with the following trading symbols: BMO.PR.S for the Class B Preferred Shares Series 27 (Non-Viability Contingent Capital (NVCC)), BMO.PR.T for the Class B Preferred Shares Series 29 (Non-Viability Contingent Capital (NVCC)), BMO.PR.W for the Class B Preferred Shares Series 31 (Non-Viability Contingent Capital (NVCC)), BMO.PR.Y for the Class B Preferred Shares Series 33 (Non-Viability Contingent Capital (NVCC)), BMO.PR.E for the Class B Preferred Shares Series 44 (Non-Viability Contingent Capital (NVCC)) and BMO.PR.F for the Class B Preferred Shares Series 46 (Non-Viability Contingent Capital (NVCC)).

The following table sets out the reported high and low trading prices in Canadian dollars and the trading volumes of the common and preferred shares of Bank of Montreal on the TSX for the given periods. Prices are based on the reported data from the TSX Historical Data Access.

	BMO Common Shares	PR.S Series 27	PR.T Series 29	PR.W Series 31	PR.Y Series 33	PR.E Series 44	PR.F Series 46
November 2022							
- High Price ($)	133.98	19.27	18.34	18.70	19.39	22.50	24.96
- Low Price ($)	123.37	17.71	16.82	17.11	18.00	21.10	23.02
- Volume	49,875,159	249,952	184,737	182,554	76,244	157,213	67,517
December 2022							
- High Price ($)	134.69	18.41	17.67	17.95	18.69	21.96	24.95
- Low Price ($)	119.52	17.50	16.76	17.27	17.77	20.18	23.45
- Volume	42,260,966	263,221	179,659	165,416	159,771	246,515	131,803
January 2023							
- High Price ($)	135.33	19.53	19.03	19.15	19.93	22.47	25.10
- Low Price ($)	123.24	17.65	17.26	17.42	18.04	20.40	23.60
- Volume	52,859,262	128,121	278,156	62,611	129,693	174,113	97,999
February 2023							
- High Price ($)	137.64	18.99	18.21	18.35	19.89	21.80	24.70
- Low Price ($)	128.06	18.30	17.59	17.62	19.00	21.27	24.25
- Volume	39,243,629	99,243	318,843	71,804	57,689	154,817	94,552
March 2023							
- High Price ($)	131.72	18.48	17.95	17.96	19.19	21.99	24.70
- Low Price ($)	113.47	16.79	15.86	16.25	16.91	20.14	23.37
- Volume	50,263,547	279,106	377,629	177,138	101,582	326,299	100,728
April 2023							
- High Price ($)	124.27	18.65	18.13	17.90	19.05	22.00	24.51
- Low Price ($)	118.51	17.75	16.77	16.95	17.85	20.32	23.55
- Volume	51,379,271	276,878	200,907	155,143	86,066	215,805	85,590
May 2023							
- High Price ($)	123.17	17.88	17.09	17.05	18.12	21.30	24.11
- Low Price ($)	111.88	16.88	15.98	15.95	16.74	20.00	22.40
- Volume	57,467,672	276,529	114,608	156,882	63,582	224,043	59,989
June 2023							
- High Price ($)	120.04	18.16	17.32	17.22	18.46	22.01	24.98
- Low Price ($)	112.31	17.15	16.34	16.10	16.95	20.49	23.44
- Volume	38,574,799	125,758	114,700	258,015	99,655	110,177	61,690
July 2023							
- High Price ($)	124.25	19.03	17.60	17.57	18.43	22.05	24.95
- Low Price ($)	118.11	17.69	16.93	16.80	17.70	21.30	23.70
- Volume	54,337,971	179,463	109,272	72,910	64,567	187,795	84,625
August 2023							
- High Price ($)	122.32	18.40	17.48	17.30	18.29	22.40	24.32
- Low Price ($)	111.18	17.38	16.54	16.25	17.24	21.59	23.51
- Volume	46,463,419	514,933	235,226	156,877	129,937	149,555	86,318
September 2023							
- High Price ($)	120.38	18.89	17.49	17.15	17.94	22.78	24.40
- Low Price ($)	112.89	17.16	16.40	16.12	16.97	21.41	23.25
- Volume	31,002,057	317,448	289,873	168,333	79,303	306,222	169,661
October 2023							
- High Price ($)	114.48	18.58	17.58	17.17	17.50	23.50	24.25
- Low Price ($)	102.67	17.80	16.72	16.25	16.07	21.52	22.36
- Volume	52,572,414	350,291	217,709	190,077	152,157	304,394	123,706

Prior Sales

From time to time, the Bank issues principal at risk notes, securities for which the amount payable at maturity is determined by reference to the price, value or level of an underlying interest such as a stock index, an exchange traded fund or a notional portfolio of equities or other securities. In addition, the Bank periodically issues subordinated debt, preferred shares and other equity instruments which are not listed or quoted on a marketplace.

For information about the Bank's issuances of common shares, preferred shares, subordinated indebtedness and other equity instruments since October 31, 2022, see the "Subordinated Debt" and "Equity" sections on pages 68 to 69 of the 2023 MD&A and Notes 15 and 16 of the 2023 Financial Statements, which page and Notes are incorporated herein by reference. Also refer to the Description of Common Shares, Description of Preferred Shares, Description of Other Equity Instruments – Subordinated Capital Notes and Description of Other Equity Instruments – Limited Recourse Capital Notes sections above.

ESCROWED SECURITIES AND SECURITIES SUBJECT TO CONTRACTUAL RESTRICTION ON TRANSFER

Designation of class	Number of securities held in escrow or that are subject to a contractual restriction on transfer	Percentage of class
Class B Preferred Shares Series 48 (NVCC) [1]	1,250,000	100% of the Class B Preferred Shares Series 48 (NVCC)
Class B Preferred Shares Series 49 (NVCC) [2]	750,000	100% of the Class B Preferred Shares Series 49 (NVCC)
Class B Preferred Shares Series 51 (NVCC) [3]	1,000,000	100% of the Class B Preferred Shares Series 51 (NVCC)

[1] The Class B Preferred Shares Series 48 (NVCC) are held in a limited recourse trust and are restricted from being transferred except to satisfy the recourse of the holders of the LRCN 1 in respect of non-payment by the Bank of the principal amount of, or interest on, the LRCN 1 when due.

[2] The Class B Preferred Shares Series 49 (NVCC) are held in a limited recourse trust and are restricted from being transferred except to satisfy the recourse of the holders of the LRCN 2 in respect of non-payment by the Bank of the principal amount of, or interest on, the LRCN 2 when due.

[3] The Class B Preferred Shares Series 51 (NVCC) are held in a limited recourse trust and are restricted from being transferred except to satisfy the recourse of the holders of the LRCN 3 in respect of non-payment by the Bank of the principal amount of, or interest on, the LRCN 3 when due.

Also refer to the Certain Provisions of the Limited Recourse Capital Notes section above.

DIRECTORS AND EXECUTIVE OFFICERS

Board of Directors

As at November 30, 2023, the following were directors of the Bank.

DIRECTOR NAME AND PRINCIPAL OCCUPATION	MUNICIPALITY OF RESIDENCE	DIRECTOR SINCE
Jan Babiak Corporate Director	Nashville, Tennessee USA	October 23, 2012
Sophie Brochu, C.M. Corporate Director	Bromont, Québec Canada	March 22, 2011
Craig Broderick Corporate Director	Greenwich, Connecticut	August 27, 2018
Hazel Claxton Corporate Director	Toronto, Ontario Canada	August 30, 2023
George A. Cope, C.M. Chair of the Board, Bank of Montreal	Toronto, Ontario Canada	July 25, 2006
Stephen Dent Managing Director and co-founder Birch Hill Equity Partners, a private equity firm	Toronto, Ontario Canada	April 7, 2021
Christine Edwards Corporate Director	Lake Forest, Illinois U.S.A.	August 1, 2010
Dr. Martin S. Eichenbaum Charles Moskos Professor of Economics Northwestern University	Glencoe, Illinois U.S.A.	March 31, 2015
David Harquail Chair of the Board Franco-Nevada Corporation, a royalty and streaming company	Toronto, Ontario	April 5, 2018
Linda S. Huber Chief Financial Officer FactSet Research Systems Inc., a provider of financial information and analytical applications	New York, New York U.S.A.	April 4, 2017
Eric R. La Flèche President and Chief Executive Officer Metro Inc., a food retailer and distributor	Montreal, Québec Canada	March 20, 2012
Lorraine Mitchelmore Corporate Director	Calgary, Alberta Canada	March 31, 2015
Madhu Ranganathan Executive Vice President and Chief Financial Officer OpenText Corporation, an information management software company	Saratoga, California U.S.A	April 7, 2021
Darryl White Chief Executive Officer BMO Financial Group	Toronto, Ontario Canada	May 24, 2017

A director of the Bank holds office until the next annual meeting of shareholders or until a successor is elected or appointed, unless their seat is vacated before they can do so.

Since November 1, 2018, the directors have held the principal occupations above, or other positions with the same, predecessor, or associated firms except for Ms. Brochu who before December 30, 2019 was President and Chief Executive Officer of Energir and who before April 2023 was President and Chief Executive Officer of Hydro-Québec, Mr. Cope who before January 2020 was CEO of BCE Inc., Ms. Edwards who before February 2021 was a capital partner at Winston & Strawn LLP, Mr. Harquail who before May 6, 2020 was Chief Executive Officer of Franco-Nevada Corporation and Ms. Huber who before October 2020 was Chief Financial Officer and Treasurer of MSCI Inc.

Board Committee Members

There are four committees of the Board of Directors made up of the following members:

Audit and Conduct Review Committee: Jan Babiak (Chair), Craig Broderick, Hazel Claxton, Dr. Martin S. Eichenbaum, Linda S. Huber and Madhu Ranganathan.

Governance and Nominating Committee: Christine Edwards (Chair), Jan Babiak, Sophie Brochu, Craig Broderick, George Cope and Lorraine Mitchelmore.

Human Resources Committee: Lorraine Mitchelmore (Chair), Sophie Brochu, George Cope, Christine Edwards, Eric La Flèche and David Harquail.

Risk Review Committee: Craig Broderick (Chair), Stephen Dent, Dr. Martin S. Eichenbaum, David Harquail, Linda S. Huber and Lorraine Mitchelmore.

Executive Officers

As at November 30, 2023, the following were executive officers of the Bank:

EXECUTIVE OFFICER NAME	PRINCIPAL OCCUPATION	MUNICIPALITY OF RESIDENCE
Darryl White	Chief Executive Officer	Toronto, Ontario Canada
Piyush Agrawal	Chief Risk Officer	Short Hills, New Jersey U.S.A.
Darrel Hackett	U.S. Chief Executive Officer, BMO Financial Corp.	Chicago, Illinois U.S.A
Sharon Haward-Laird	General Counsel	Toronto, Ontario Canada
Nadim Hirji	Group Head, BMO Commercial Bank, North America and Co-Head, Personal and Commercial Banking	Mississauga, Ontario Canada
Ernie (Erminia) Johannson	Group Head, North American Personal and Business Banking and Co-Head, Personal and Commercial Banking	Toronto, Ontario Canada
Deland Kamanga	Group Head, BMO Wealth Management	Toronto, Ontario Canada
Mona Malone	Chief Human Resources Officer and Head of People, Culture & Brand	Toronto, Ontario Canada
Alan Tannenbaum	Group Head, BMO Capital Markets	Bearsville, New York U.S.A
Steve Tennyson	Chief Technology Officer & Operations Officer	Toronto, Ontario Canada
Tayfun Tuzun	Chief Financial Officer	Cincinnati, Ohio U.S.A.

All the executive officers named above have held their present positions or other senior positions with Bank of Montreal or its subsidiaries for the past five years, other than Mr. Tuzun and Mr. Agrawal. Prior to joining BMO, Mr. Tuzun was Executive Vice President and Chief Financial Officer, Fifth Third Bancorp, where he held positions including Senior Vice President, Treasurer and other senior treasury and finance roles. Prior to joining BMO, Mr. Agrawal was Chief Risk Officer and Global Head of Climate Risk, Citibank, N.A., where he held positions including Chief Operating Officer of Citibank N.A., Chief Risk Officer of Asia Pacific, and Head of Corporate Strategy.

Shareholdings of Directors and Executive Officers

To the knowledge of the Bank, as at October 31, 2023, the directors and executive officers of Bank of Montreal, as a group, beneficially owned, directly or indirectly, or exercised control or direction over an aggregate of 250,914 common shares of Bank of Montreal, representing less than 0.1% of Bank of Montreal's issued and outstanding common shares.

Additional Disclosure for Directors and Executive Officers

To the Bank's knowledge, no director or executive officer of the Bank:

(a) is, as at November 30, 2023, or was, within the 10 years before, a director, chief executive officer or chief financial officer of any company (including the Bank):

  (i) subject to an order (including a cease trade order or an order similar to a cease trade order or an order that denied the relevant company access to any exemption under securities legislation for a period of more than 30 consecutive days), that was issued while the director or executive officer was acting in the capacity as director, chief executive officer or chief financial officer; or

  (ii) subject to an order (including a cease trade order or an order similar to a cease trade order or an order that denied the relevant company access to any exemption under securities legislation for a period of more than 30 consecutive days) that was issued after the director or executive officer ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer;

(b) is, as at November 30, 2023, or has been, within the 10 years before, a director or executive officer of any company (including the Bank), that while that person was acting in that capacity or within a year of the person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets; or

(c) has, within the 10 years before November 30, 2023, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the director or executive officer.

To the Bank's knowledge, none of its directors or executive officers have been subject to: (a) any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or (b) any other penalties or sanctions imposed by a court or regulatory body, that would likely be considered important to a reasonable investor in making an investment decision.

LEGAL PROCEEDINGS AND REGULATORY ACTIONS

A description of certain legal proceedings to which the Bank is a party appears under the heading "Legal Proceedings" in Note 24 of the 2023 Financial Statements, which Note the Bank incorporates herein by reference.

In the ordinary course of business, the Bank and its subsidiaries may be assessed fees or fines by a Canadian securities regulatory authority in relation to administrative matters, including late filings or reporting, which may be considered penalties or sanctions pursuant to Canadian securities regulations but which are not, individually or in the aggregate, material to the Bank. In addition, the Bank and its subsidiaries are subject to numerous regulatory authorities around the world, and accordingly fees, administrative penalties, settlement agreements and sanctions may be categorized differently by certain regulators. Any such penalties imposed under these categories against the Bank and its subsidiaries in the 2023 fiscal year, however, are not material, nor would they likely be considered important to a reasonable investor in making an investment decision. Since November 1, 2022, the Bank and its subsidiaries have not entered into any material settlement agreements with a court relating to securities legislation or with a securities regulatory authority.

TRANSFER AGENT AND REGISTRAR

The registrar and transfer agent for the Bank's common and preferred shares is Computershare Trust Company of Canada. This agent has transfer facilities in Montreal, Toronto, Calgary and Vancouver. In addition, Computershare Investor Services PLC and Computershare Trust Company, N.A. serve as transfer agents and registrars for the common shares in Bristol, United Kingdom and Canton, Maine, respectively.

INTERESTS OF EXPERTS

The Bank's Shareholders' Auditors are KPMG LLP. KPMG LLP audited the Bank's 2023 Financial Statements, which comprise the consolidated balance sheets as at October 31, 2023 and October 31, 2022, the consolidated statements of income, comprehensive income, changes in equity and cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies. KPMG LLP have confirmed that they are independent with respect to the Bank within the meaning of the relevant rules and related interpretations prescribed by the relevant professional bodies in Canada and any applicable legislation or regulation, and are independent with respect to the Bank in accordance with the U.S. federal securities laws and the applicable rules and regulations of the U.S. Securities and Exchange Commission and the Public Company Accounting Oversight Board.

AUDIT AND CONDUCT REVIEW COMMITTEE INFORMATION

Composition of the Audit and Conduct Review Committee

The following six members make up the Bank's Audit and Conduct Review Committee: Jan Babiak (Chair), Craig Broderick, Hazel Claxton, Dr. Martin S. Eichenbaum, Linda S. Huber and Madhu Ranganathan. The Committee's responsibilities and duties are set out in the Committee's charter, which is included in Appendix I to this Annual Information Form.

The Board of Directors has determined that the members of the Audit and Conduct Review Committee reflect a high level of financial literacy and expertise. Each member of the Audit and Conduct Review Committee is "independent" and "financially literate" according to the definitions under Canadian and United States securities laws and the NYSE corporate governance listing standards, and each of Ms. Babiak, Mr. Broderick, Ms. Huber and Ms. Ranganathan is an "Audit Committee Financial Expert" as defined under United States securities laws. The Board bases these decisions on each Committee member's education and experience. The following paragraphs describe the relevant education and experience of each Committee member:

Ms. Babiak holds a B.B.A. in accounting from the University of Oklahoma and an M.B.A. from Baldwin Wallace University. She is a Chartered Accountant in the United Kingdom and a Certified Public Accountant in the United States. Ms. Babiak serves on the boards of other public and private companies and was formerly a Managing Partner at Ernst & Young LLP.

Mr. Broderick holds a B.A. from the College of William and Mary. He was formerly a Senior Director, the Chief Risk Officer, a member of the Management Committee, and chair or co-chair of key risk committees of Goldman, Sachs & Co. He spent 32 years with Goldman Sachs, primarily in the risk field.

Ms. Claxton holds a B.Comm (Honours) from Queen's University and the ICD.D designation from the Institute of Corporate Directors. She is also a Chartered Professional Accountant and Chartered Accountant in Ontario. Ms. Claxton serves on the boards of other public and private companies and was formerly Executive Vice President and Chief HR Officer of Morneau Shepell Inc. (now part of TELUS Health). Prior to that, Ms. Claxton spent 29 years at PwC Canada, where she progressed to hold several leadership roles.

Dr. Eichenbaum received a B.Comm from McGill University and a Doctorate in Economics from the University of Minnesota. He served on the advisory council of the Global Markets Institute at Goldman Sachs. He completed a four-year term as co-editor of the American Economic Review in 2015. He has served as a consultant to the Federal Reserve Banks in Atlanta and Chicago and the International Monetary Fund.

Ms. Huber holds an M.B.A. from the Stanford Graduate School of Business and a B.S. (with high honors) in business and economics from Lehigh University. Ms. Huber is the Chief Financial Officer of FactSet Research Systems Inc. Prior to October 2020, she was the Chief Finance Officer and Treasurer of MSCI. Before joining MSCI in 2019, she was Executive Vice President and Chief Financial Officer of Moody's Corporation. Before joining Moody's in 2005, Ms. Huber served in several senior roles in financial services, including Executive Vice President and Chief Financial Officer at U.S. Trust Company, a subsidiary of Charles Schwab & Company, Inc.; Managing Director at Freeman & Co.; Vice President of Corporate Strategy and Development and Vice President and Assistant Treasurer at PepsiCo.

Ms. Ranganathan holds an M.B.A. from the University of Massachusetts and a B.S. Accounting from the University of Madras. She is a member of the Institute of Chartered Accountants in India and member of the American Institute of Certified Public Accountants in the United States. Ms. Ranganathan is the Executive Vice President and Chief Financial Officer of OpenText Corporation. Prior to March 2018, she was the Chief Finance Officer of [24]7.ai, Inc. Ms. Ranganathan currently serves as a Board Member & Audit Committee Chair for Akamai Technologies, Inc.

Shareholders' Auditors' Pre-Approval Policies and Procedures and Fees

For information about the fees paid to KPMG LLP, in the years ended October 31, 2023 and 2022, and the relatedpre-approval policies and procedures, see page 124 of the 2023 MD&A, which page the Bank incorporates herein by reference.

ADDITIONAL INFORMATION

You can find additional information about Bank of Montreal on the Bank's web site at https://www.bmo.com/main/about-bmo/banking/investor-relations/home, on SEDAR+ (System for Electronic Document Analysis and Retrieval) atwww.sedarplus.ca, and on the SEC's web site at www.sec.gov/edgar. Information contained in or otherwise accessible through the websites mentioned herein does not form part of this document.

The Bank's proxy circulars contain more information, including directors' and executive officers' compensation, debt, principal holders of the Bank's securities, and shareholdings under equity compensation plans, in each case where applicable. The most recent circular is dated February 6, 2023, in connection with the Bank's Annual Meeting of Shareholders on April 18, 2023 (the 2023 Proxy Circular). The Bank expects the next proxy circular to be approved January 26, 2024 and dated as of February 5, 2024, in connection with the Bank's Annual Meeting of Shareholders on April 16, 2024.

The 2023 Financial Statements and the 2023 MD&A for the fiscal year ended October 31, 2023 provide additional financial information.

You can get copies of this Annual Information Form, as well as copies of the 2023 Financial Statements, the 2023 MD&A, the Bank's 2023 Annual Report, and the 2023 Proxy Circular (after the Bank has mailed these documents to shareholders) by contacting the Bank at:

Bank of Montreal
Corporate Secretary's Department
100 King Street West
1 First Canadian Place, 9th Floor
Toronto, Ontario
Canada M5X 1A1

Telephone: 416 867 6785
Email: corp.secretary@bmo.com

APPENDIX I

BANK OF MONTREAL

AUDIT AND CONDUCT REVIEW COMMITTEE CHARTER

The Committee is responsible for assisting the Board in fulfilling its oversight responsibilities for the integrity of the Bank's financial reporting and sustainability reporting on environmental, social and governance ("ESG") matters; the effectiveness of the Bank's internal controls; the independent auditor's qualifications, independence and performance; the Bank's compliance with legal and regulatory requirements; transactions involving related parties; conflicts of interest and confidential information; standards of business conduct and ethics; and consumer protection measures and complaints.

In addition, the Committee will also act as the audit and conduct review committee of Designated Subsidiaries.

PART I
MANDATE

The Committee will, either directly or through one or more sub-committees, perform the duties set out in this Charter and such other duties as may be necessary or appropriate including:

1.1 Financial Reporting

1.1.1 reviewing, together with management and the Shareholders' Auditors:

(i) the appropriateness of, and any changes to, the Bank's accounting and financial reporting;

(ii) the accounting treatment, presentation and impact of significant risks and uncertainties;

(iii) any material relevant proposed changes in accounting standards and securities policies or regulations;

(iv) key estimates and judgments of management;

(v) significant auditing and financial reporting issues and the method of resolution;

(vi) tax matters that are material to the financial statements; and

(vii) enterprise sustainability disclosures required to be included in financial reporting.

1.1.2 reviewing, together with management and the Shareholders' Auditors, and approving or, if appropriate, recommending to the Board:

(i) prior to Board review or public disclosure, the audited annual and unaudited interim financial statements and related management's discussion and analysis, the annual information form, and any other financial or non-financial (as considered appropriate) information in material public disclosure documents (other than earnings coverage ratios, capitalization tables and summary financial information derived from any of the foregoing); and

(ii) such returns to OSFI requiring review under the *Bank Act* (Canada);

1.1.3 seeking confirmation from management that the Bank's annual and interim financial filings, fairly present in all material respects the financial condition, results of operations and cash flows of the Bank as of the relevant date and for the relevant periods, prior to recommending to the Board for approval;

1.1.4 reviewing the types of information to be provided and types of presentations to be made to rating agencies and analysts (if any) relating to earnings guidance, and

1.1.5 satisfying itself that adequate procedures are in place for the review of financial information extracted or derived from the Bank's financial statements that is to be publicly disclosed and has not otherwise been reviewed by the Committee.

1.2 Internal Controls

1.2.1 overseeing the design, implementation, maintenance and effectiveness of the Bank's internal controls, including those related to the prevention, identification and detection of fraud; and reviewing and monitoring other Bank Corporate Policies as the Committee considers appropriate;

1.2.2 requiring management to design, implement, and maintain appropriate internal control procedures;

1.2.3 reviewing management's certifications and assessment of the Bank's internal control over financial reporting and the associated Shareholders' Auditors' report;

1.2.4 reviewing reports on the effectiveness of disclosure controls and procedures;

1.2.5 reviewing and discussing reports from management and the Chief Auditor as to the identification of any significant deficiencies or material weaknesses in the design or operation of the Bank's internal control, risk management, and governance systems and processes, including controls over financial reporting; reviewing any recommendations, as well as remediation plans, including the status of remediation plans implemented by management to rectify any such deficiencies identified; and discussing whether similar or related deficiencies may exist elsewhere in the Bank; and

1.2.6 reviewing as required, correspondence relating to inquiries or investigations by regulators concerning internal controls.

1.3 Internal Audit Function

1.3.1 overseeing and reviewing at least annually the overall internal audit function, its resources and independence, and reviewing and approving the annual audit plan, including assurance that the audit plan is risk-based and encompasses appropriate audit coverage, audit cycle requirements, and provides a basis for reliance by the Committee;

1.3.2 reviewing and approving the Bank's Corporate Audit Mandate setting out the terms of reference of the internal audit function and the Chief Auditor;

1.3.3 reviewing, and jointly with the Human Resources Committee, recommending to the Board, the appointment,re-assignment or dismissal of the Chief Auditor, as required; and annually assessing the effectiveness of the Chief Auditor, in conjunction with the Human Resources Committee, and reviewing and approving his or her mandate;

1.3.4 annually reviewing and approving the organizational structure, budget, resource plan and strategic priorities of the Corporate Audit function and assessing its effectiveness having regard to its role as an independent control function;

1.3.5 reviewing the results of periodic independent reviews of the Corporate Audit function;

1.3.6 reviewing the quarterly report of the Chief Auditor, together with management's response;

1.3.7 reviewing any other reports submitted to the Committee by the Chief Auditor; and

1.3.8 communicating directly with the Chief Auditor and participating in his or her initial and ongoing engagement and evaluation.

1.4 Shareholders' Auditors

1.4.1 reviewing and evaluating the quality, independence, objectivity and professional skepticism of the Shareholders' Auditors and the lead auditor;

1.4.2 annually reviewing the performance of the Shareholders' Auditors including assessing their effectiveness and quality of service, to facilitate an informed recommendation on re-appointment of the Shareholders' Auditors and, on a periodic basis, performing a comprehensive review of the performance of the Shareholders' Auditors over multiple years to assess the audit firm, its independence and application of professional skepticism;

1.4.3 reviewing Shareholders' Auditors' audit findings reports with the Shareholders' Auditors, the Chief Auditor, and management including:

(i) the quality of the financial statements;

(ii) the Shareholders' Auditors' evaluation of the Bank's internal control over financial reporting;

(iii) the degree of cooperation the Shareholders' Auditors received from management; any problems or difficulties experienced by the Shareholders' Auditors in conducting the audit, including management's responses in respect thereof, any restrictions imposed by management or significant accounting issues on which there was a disagreement with management;

(iv) any concerns expressed by the Shareholders' Auditors related to accounting and auditing matters, including the risk of material misstatements;

(v) the appropriateness and quality of all critical accounting policies and practices used by the Bank and of the selection of new policies and practices; and

(vi) any material judgments that have been discussed with management, the ramifications of their use and the Shareholders' Auditors' preferred treatment, as well as any other material communications with management, and advising the Board of these matters as considered appropriate;

1.4.4 overseeing the resolution of any disagreements between the Shareholders' Auditors and management;

1.4.5 reviewing all material correspondence between the Shareholders' Auditors and management related to audit findings;

1.4.6 reviewing the Shareholders' Auditors' report under Section 328 of the *Bank Act* (Canada);

1.4.7 obtaining and reviewing a report from the Shareholders' Auditors at least annually addressing: (i) the Shareholders' Auditors' internal quality control procedures; (ii) any material issues raised by the most recent internal quality-control review or peer review of the Shareholders' Auditors, or by any inquiry or investigation by governmental or professional authorities including the Canadian Public Accountability Board and the Public Company Accounting Oversight Board, within the preceding five years, respecting one or more audits carried out by the Shareholders' Auditors; (iii) any steps taken to deal with any such issues; (iv) the Shareholders' Auditors' internal procedures to ensure independence; and (v) the delineation of all relationships between the Shareholders' Auditors and the Bank;

1.4.8 reviewing any notices required to be communicated/delivered by the Shareholders' Auditors to the Committee, including those required by the Canadian Public Accountability Board, Office of the Superintendent of Financial Institutions, and the U.S. Public Accounting Oversight Board, and taking such action and making recommendations to the Board as appropriate in connection therewith;

1.4.9 reviewing the terms of the Shareholders' Auditors' engagement, the annual audit plan, including assurance that the audit plan is risk-based and appropriately addresses the risks of material misstatement, as well as any change in the materiality level used by the Shareholders' Auditors, and total fees payable and making recommendations to the Board as appropriate;

1.4.10 reviewing an annual written confirmation of the Shareholders' Auditors that they are independent in accordance with applicable independence rules and report directly to the Committee, as representatives of the Bank's shareholders;

1.4.11 reviewing and recommending to the Board the approval of the Bank's Auditor Independence Standard;

1.4.12 pre-approving audit services and permitted non-audit services by the Shareholders' Auditors in accordance with the Bank's Auditor Independence Standard; and

1.4.13 reviewing and approving the Bank's policies for hiring current or former partners or employees of the current or former Shareholders' Auditors and reviewing the Shareholders' Auditors' partner rotation.

1.5 Finance, Legal & Regulatory Compliance Functions

1.5.1 reviewing and, jointly with the Human Resources Committee, recommending to the Board the respective appointment,re-assignment or dismissal of the Chief Financial Officer, the General Counsel and the Chief Compliance Officer, as required; and annually assessing, in conjunction with the Human Resources Committee, the effectiveness of the Chief Financial Officer, the General Counsel and the Chief Compliance Officer, and reviewing and approving their respective mandates;

1.5.2 annually reviewing and approving the organizational structure, budget, resource plan and strategic priorities of the finance and legal & compliance functions and assessing their effectiveness having regard to their respective roles as independent control functions;

1.5.3 reviewing the results of periodic independent reviews of the finance and compliance functions; and

1.5.4 reviewing and overseeing the status of remediation plans implemented by management to rectify any deficiencies identified.

1.6 Financial Risk Management

1.6.1 monitoring the Bank's major financial risk exposures and the steps management has taken to monitor and control such exposures; and

1.6.2 reviewing investments or transactions that could adversely affect the wellbeing of the Bank which the Shareholders' Auditors or any officer of the Bank may bring to the Committee's attention.

1.7 Legal & Regulatory Compliance

1.7.1 reviewing and approving the Legal, Regulatory and Reputation Risk Corporate Policy;

1.7.2 reviewing, with the Bank's General Counsel and the Chief Compliance Officer, the adequacy and effectiveness of the Bank's enterprise compliance program and the results of related monitoring and oversight activities;

1.7.3 reviewing with the Bank's General Counsel an annual report on significant matters arising from litigation, asserted claims or regulatory non-compliance and reviewing quarterly any material developments;

1.7.4 reviewing and approving the Bank's Anti-Money Laundering and Anti-Terrorist Financing Program framework, including key policies and any significant amendments;

1.7.5 meeting, at least annually, with the Chief Anti-Money Laundering Officer and the Chief Auditor to review their respective reports on the Anti-Money Laundering and Anti-Terrorist Financing Program;

1.7.6 meeting annually with representatives of OSFI as a Committee or as part of the Board, to receive OSFI's report on the results of its annual examination of the Bank; and

1.7.7 reviewing any other relevant reports of regulators to the Bank and any required action by management.

1.8 Business Conduct and Sustainability

1.8.1 reviewing and recommending for Board approval BMO's Code of Conduct;

1.8.2 approving any exceptions from BMO's Code of Conduct, as appropriate;

1.8.3 assessing the effectiveness of the Bank's governance frameworks aimed at (i) fostering an ethical culture, (ii) encouraging compliance with both the letter and spirit of applicable laws, regulations and consumer protections, and (iii) reducing misconduct;

1.8.4 reviewing BMO's Whistleblower Process for the confidential anonymous submission and handling of misconduct concerns, including concerns about financial fraud, accounting irregularities, internal controls over financial reporting or auditing matters, by anyone inside or outside of the Bank;

1.8.5 reviewing reports from the Chief Ethics Officer and Head, Customer Complaint Appeals relating to whistleblower and/or customer concerns;

1.8.6 approving prior to disclosure BMO's Sustainability Report and Public Accountability Statement, including the BMO Climate Report, and related disclosures, overseeing internal controls on sustainability reporting, and overseeing any external assurances or attestations regarding reported sustainability metrics; and

1.8.7 assessing the effectiveness of the Bank's governance of sustainability issues.

1.9 Self Dealing

1.9.1 overseeing the effectiveness of self-dealing identification and procedures established by management for related and affected parties and monitoring compliance with applicable laws;

1.9.2 reviewing and approving as considered appropriate: (i) practices to identify related party transactions that could have a material effect on the stability or solvency of the Bank and; (ii) the measurement criteria and benchmarks for permitted related party transactions;

1.9.3 reviewing and, if advisable, approving the terms and conditions of related party loans that exceed established benchmarks; and

1.9.4 reviewing reports to the Committee on related and affected party transactions.

1.10 Conflicts of Interest and Confidential Information

1.10.1 overseeing the Bank's procedures to identify, resolve and, where possible, reduce incidences of, conflicts of interest;

1.10.2 overseeing the Bank's procedures to restrict the use and disclosure of confidential information;

1.10.3 reviewing and approving the Bank's Disclosure Standard;

1.10.4 reviewing reports to the Committee relating to the use and disclosure of customer and employee information; and

1.10.5 overseeing the Bank's compliance with privacy legislation.

1.11 Consumer Protection Measures and Complaints

1.11.1 overseeing and reviewing the Bank's consumer protection procedures to comply with the Consumer Provisions, as such term is defined in the *Financial Consumer Agency of Canada Act*;

1.11.2 reviewing an annual report on the implementation of the consumer protection procedures, and on any other activities that the Bank carries out in relation to the protection of its customers;

1.11.3 reviewing the annual report of the Customer Complaint Appeal Office on complaint resolution; and

1.11.4 overseeing the Bank's compliance with any orders or compliance agreements imposed by the FCAC.

1.12 Aircraft and Chief Executive Officer Expense Accounts

1.12.1 reviewing and approving, on an annual basis, the report on Bank aircraft and Chief Executive Officer expense accounts; and

1.12.2 the chair of the Committee will review, on a quarterly basis, the report on Chief Executive Officer expense accounts.

PART II

COMPOSITION

2.1 Members

2.1.1 The Committee will consist of three or more directors as determined by the Board. At least a majority of the members of the Committee will not be "affiliated" with the Bank for the purposes of the *Bank Act* (Canada). Each member of the Committee will be: (i) a director who is not an officer or employee of the Bank or an affiliate of the Bank; and (ii) "independent" for the purposes of applicable Canadian and United States securities laws and the New York Stock Exchange Rules.

2.1.2 Committee members will be Financially Literate or become so within a reasonable period after appointment to the Committee. At least one Committee member will qualify as an Audit Committee Financial Expert. Committee members will not serve on more than three public company audit committees without the approval of the Board.

2.1.3 The Board will, having considered the recommendation of the Governance and Nominating Committee, appoint the members of the Committee and the chair of the Committee annually following the meeting of the shareholders at which directors are elected each year. The Board may appoint a member to fill a vacancy which occurs in the Committee between annual elections of directors and increase the number of Committee members as it determines appropriate. If a member of the Committee becomes "affiliated" with the Bank for the purposes of the *Bank Act* (Canada), the member may continue as a member of the Committee with the approval of the Governance and Nominating Committee, in consultation with the Bank's General Counsel. Any member of the Committee may be removed or replaced at any time by the Board.

2.1.4 In addition to any orientation provided by the Governance and Nominating Committee, the chair of the Committee will provide orientation to new members of the Committee with respect to their duties and responsibilities as members of the Committee.

2.1.5 The Committee may invite other directors to attend Committee meetings or otherwise provide input as needed to acquire additional specific skills as required to carry out its mandate.

PART III

COMMITTEE PROCEDURE

3.1 Meetings

3.1.1 The Committee will meet as frequently as it determines necessary but not less than once each quarter. Meetings may be called by the Chair of the Board, the chair of the Committee or any two members of the Committee. The chair of the Committee must call a meeting when requested to do so by any member of the Committee, the Shareholders' Auditors, the Chief Auditor, the Chair of the Board, the Chief Executive Officer, the Chief Financial Officer or the General Counsel

3.1.2 Notice of the time and place of each meeting of the Committee, other than *ad hoc* meetings, will be given to each member of the Committee and the Shareholders' Auditors, not less than 48 hours before the time when the meeting is to be held. A quorum of the Committee will be a majority of its members. The powers of the Committee may be exercised at a meeting at which a quorum of the Committee is present in person or by telephone or other electronic means or by a resolution signed by all members entitled to vote on that resolution at a meeting of the Committee. Each member is entitled to one vote in Committee proceedings.

3.1.3 Notice of the time and place of *ad hoc* meetings will be given to each member not less than two hours before the time when the meeting is to be held.

3.1.4 The chair of the Committee will preside at all meetings of the Committee at which he or she is present and will, in consultation with the Chief Financial Officer, the Chief Auditor, the General Counsel and the Shareholders' Auditors, develop the agenda for each Committee meeting. The agenda for each meeting of the Committee, other than *ad hoc* meetings, will be delivered together with such other materials as the chair determines necessary, to each member of the Committee at least 48 hours prior to the meeting. The chair will designate from time to time a person who may be, but need not be, a member of the Committee, to be secretary of the Committee. Minutes will be kept of all meetings of the Committee and will be maintained by the Bank's Corporate Secretary.

3.1.5 The procedure at meetings is to be determined by the Committee unless otherwise determined by the By-Laws of the Bank, by a resolution of the Board or by this Charter.

3.1.6 The Committee will meet at least quarterly in separate private sessions with each of the Shareholders' Auditors and the Chief Auditor, and as appropriate with management including the Chief Financial Officer, the General Counsel, the Chief Compliance Officer and the Chief Anti-Money Laundering Officer.

3.1.7 The Committee will meet at the end of each meeting with only members of the Committee present.

3.1.8 The Committee may invite any director, officer or employee of the Bank or the Bank's counsel or the Shareholders' Auditors or any other person, as appropriate, to attend meetings of the Committee to assist in the discussion and examination of the matters under consideration by the Committee. The Shareholders' Auditors will, at the expense of the Bank, be entitled to attend and be heard at any meeting of the Committee.

3.2 Reports

3.2.1 The Committee will report the proceedings of each meeting and all recommendations made by the Committee at such meeting to the Board at the Board's next meeting. The Committee will make such recommendations to the Board as it may deem appropriate and will have such decision-making authority as the Board may determine from time to time. The Committee will approve the report of the Committee to be included in the Bank's Management Proxy Circular and such other reports relating to the activities of the Committee as may be required by the Bank or the Board from time to time. In addition, the Committee will prepare and submit to the Board for its review and approval the reports required to be submitted by the Board within 90 days after the financial year-end of the Bank concerning the activities of the Committee during the year to (i) OSFI in carrying out its conduct review responsibilities and (ii) the FCAC in carrying out its consumer protection review responsibilities.

3.3 Access to Management and Outside Advisors and Continuing Education

3.3.1 The Committee will have full, free and unrestricted access to management and employees, the Chief Auditor and the Shareholders' Auditors. The Committee has the authority to engage independent legal counsel, consultants or other advisors, with respect to any issue or to assist it in fulfilling its responsibilities without consulting or obtaining the approval of any officer of the Bank and the Bank will provide appropriate funding, as determined by the Committee, for the payment of: compensation to the Shareholders' Auditors engaged for the purpose of preparing or issuing an auditor's report or performing the audit, review or attest services for the Bank; compensation to any advisors employed by the Committee; and ordinary administrative expenses of the Committee that are necessary or appropriate in carrying out its duties.

3.3.2 The Committee will have access to continuing education programs to assist the Committee in fulfilling its responsibilities and the Bank will provide appropriate funding for such programs.

3.4 Annual Review and Assessment

3.4.1 The Committee will ensure that an annual review and assessment of the Committee's performance and effectiveness, including a review of its compliance with this Charter, will be conducted in accordance with the process developed by the Board's Governance and Nominating Committee and approved by the Board. The results thereof will be reported in accordance with the process established by the Board's Governance and Nominating Committee and approved by the Board.

3.4.2 The Committee will review and assess the adequacy of this Charter on an annual basis taking into account all legislative and regulatory requirements applicable to the Committee as well as any best practice guidelines recommended by regulators or stock exchanges with whom the Bank has a reporting relationship and, if appropriate, will recommend changes to the Board's Governance and Nominating Committee.

3.5 Definitions

"**Audit Committee Financial Expert**" means a person who has the following attributes:

(i) an understanding of generally accepted accounting principles and financial statements;

(ii) the ability to assess the general application of such principles in connection with the accounting for estimates, accruals and reserves;

(iii) experience preparing, auditing, analyzing or evaluating financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of issues that can reasonably be expected to be raised by the Bank's financial statements, or experience actively supervising one or more persons engaged in such activities;

(iv) an understanding of internal control over financial reporting; and

(v) an understanding of audit committee functions, acquired through any one or more of the following:

a) education and experience as a principal financial officer, principal accounting officer, controller, public accountant or auditor or experience in one or more positions that involve the performance of similar functions;

b) experience actively supervising a principal financial officer, principal accounting officer, controller, public accountant, auditor or person performing similar functions;

c) experience overseeing or assessing the performance of companies or public accountants with respect to the preparation, auditing or evaluation of financial statements; or

d) other relevant experience.

"Auditor Independence Standard" means the Bank's Auditor Independence Standard that provides guidance for engaging the Shareholders' Auditors to perform audit and permitted non-audit services for the Bank, its subsidiaries and material entities over which the Bank has significant influence.

"Bank" means Bank of Montreal and as the context requires, subsidiaries of the Bank.

"Board" means the Board of Directors of Bank of Montreal.

"Committee" means the Audit and Conduct Review Committee of the Board of Directors of Bank of Montreal.

"Chief Anti-Money Laundering Officer" means the Bank's officer appointed as Chief Anti-Money Laundering Officer.

"Designated Subsidiary" means as requested by the Board, those subsidiaries of the Bank for which the Committee will act as audit and conduct review committee.

"FCAC" means the Financial Consumer Agency of Canada.

"Financially Literate" means the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of the issues that can reasonably be expected to be raised by the Bank's financial statements.

"OSFI" means the Office of the Superintendent of Financial Institutions.

"Shareholders' Auditors" mean the independent financial statement auditors of the Bank.

APPENDIX II

CREDIT RATING CATEGORIES

(a) Standard & Poor's ("S&P")

S&P has different rating scales for short-term debt, long-term debt and preferred shares. S&P short-term issue credit ratings are generally assigned to those obligations considered short-term in the relevant market. Short-term ratings are also used to indicate the creditworthiness of an obligor with respect to put features on long-term obligations. A short-term obligation rated A-1 indicates S&P's view that the Bank's capacity to meet its financial commitments on these obligations is strong.

S&P long-term issue credit ratings are based, in varying degrees, on the analysis of the following considerations: likelihood of payment—capacity and willingness of the obligor to meet its financial commitments on an obligation in accordance with the terms of the obligation; nature of and provisions of the financial obligation; and protection afforded to, and relative position of, the financial obligation in the event of bankruptcy, reorganization, or other arrangement under the laws of bankruptcy and other laws affecting creditors' rights. An obligation rated A means the obligation is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligations in higher-rated categories, however, the obligor's capacity to meet its financial commitment on the obligation is still strong. An obligation rated BBB indicates that the obligation exhibits adequate protection parameters, however, adverse economic conditions or changing circumstances are more likely to weaken the obligor's capacity to meet its financial commitments on the obligation. Ratings from AA to CCC may be modified by the addition of a plus (+) or minus (–) sign to show relative standing within the rating categories.

The S&P preferred share rating on the Canadian scale is a forward-looking opinion about the creditworthiness of an obligor with respect to a specific preferred share obligation issued in the Canadian market, relative to preferred shares issued by other issuers in the Canadian market. The Canadian scale rating is fully determined by the applicable global scale rating, and there are no additional analytical criteria associated with the determination of ratings on the Canadian scale. The BBB and BBB- preferred share ratings on the Global Scale correspond to a P-2 and P-2(Low) rating, respectively, on the Canadian National Preferred Share Scale.

A rating outlook assesses the potential direction of a long-term credit rating over the intermediate term (generally up to two years). In determining a rating outlook, consideration is given to any changes in the economic and/or fundamental business conditions. A positive or negative outlook is not necessarily a precursor of a future rating change or CreditWatch listing.

The "Stable" rating outlook means that a rating is not likely to change.

(b) Moody's Investors Service ("Moody's")

Moody's has different rating scales for short-term ratings and long-term ratings.

Ratings assigned by Moody's are forward-looking opinions of the relative credit risks of financial obligations issued by non-financial corporates, financial institutions, structured finance vehicles, project finance vehicles, and public sector entities.

Moody's short-term ratings are assigned to obligations with an original maturity of 13 months or less and reflect both on the likelihood of a default or impairment on contractual financial obligations and the expected financial loss suffered in the event of default or impairment. The P-1 rating is the highest of four rating categories and indicates issuers (or supporting institutions) that have a superior ability to repay short-term debt obligations.

Moody's long-term ratings are assigned to issuers or obligations with an original maturity of 11 months or more and reflect both on the likelihood of a default or impairment on contractual financial obligations and the expected financial loss suffered in the event of default or impairment. Obligations rated Aa are judged to be of high quality and are subject to very low credit risk. Obligations rated A are judged to be upper-medium grade and subject to low credit risk. Obligations rated Baa are judged to be medium-grade and subject to moderate credit risk and as such may possess certain speculative characteristics. Moody's appends numerical modifiers 1, 2, and 3 to each generic rating classification from Aa through Caa. The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category. Additionally, a "(hyb)" indicator is appended to all ratings of hybrid securities issued by banks, insurers, finance companies, and securities firms.

Moody's Issuer Ratings are opinions of the ability of entities to honour senior unsecured debt and debt-like obligations.

The Moody's rating outlook is an opinion regarding the likely rating direction over the medium term.

The "Stable" outlook indicates a low likelihood of a rating change over the medium term.

(c) DBRS Limited ("DBRS")

DBRS has different rating scales for short-term debt, long-term debt and preferred shares. DBRS rating approach is based on a combination of quantitative and qualitative considerations.

The DBRS short-term debt rating scale provides an opinion on the risk that an issuer will not meet its short-term financial obligations in a timely manner. The R-1 and R-2 rating categories are further denoted by the subcategories "high", "middle" and "low". An obligation rated R-1(high) is of the highest credit quality and indicates the capacity for the payment of short-term financial obligations as they fall due is exceptionally high; unlikely to be adversely affected by future events.

The DBRS long-term rating scale provides an opinion on the risk of default. That is, the risk that an issuer will fail to satisfy its financial obligations in accordance with the terms under which the obligations have been issued. All rating categories other than AAA and D also contain subcategories "(high)" and "(low)". The absence of either a "(high)" or "(low)" designation indicates the rating is in the middle of the category. Long-term financial obligations rated AA are of superior credit quality and the capacity for payment is considered high; credit quality differs from AAA only to a small degree; unlikely to be significantly vulnerable to future events. Long-term financial obligations rated A are of good credit quality and the capacity for payment is considered substantial, but of lesser credit quality than AA; may be vulnerable to future events but qualifying negative factors are considered manageable.

The DBRS preferred share rating scale is used in the Canadian securities market and reflects an opinion on the risk that an issuer will not fulfill its obligations with respect to both dividend and principal commitments in accordance with the terms under which the relevant preferred shares were issued. Each rating category may be denoted by the subcategories "high" and "low". The absence of either a "high" or "low" designation indicates the rating is in the middle of the category. The Pfd-2 rating generally indicates good credit quality.

The Rating Trend indicates the direction in which DBRS Morningstar considers the rating may move if present circumstances continue.

The "Stable" rating trend indicates a lower likelihood that the rating could change in the future than would be the case if the rating trend was "Positive" or "Negative".

(d) Fitch

Fitch publishes opinions on a variety of scales.

A short-term issuer or obligation rating is based on the short-term vulnerability to default of the rated entity and relates to the capacity to meet financial obligations in accordance with the documentation governing the relevant obligation. For banks, "short term" typically means up to 13 months. A rating of F1+ indicates the highest short-term credit quality. The added "+" denotes an exceptionally strong credit feature.

Rated entities in a number of sectors, including financial and non-financial corporations, are generally assigned Issuer Default Ratings ("IDRs"). IDRs opine on an entity's relative vulnerability to default on financial obligations. A rating of AA indicates a very high credit quality and denotes expectation of very low default risk. A rating of A indicates a high credit quality and denotes expectation of low default risk. The modifiers "+" or "-" may be appended to a rating to denote relative status within major rating categories.

Rating Outlooks indicate the direction a rating is likely to move over a one to two-year period. They reflect financial or other trends that have not yet reached or been sustained at the level that would cause a rating action, but which may do so if such trends continue. A Positive or Negative Rating Outlook does not imply that a rating change is inevitable.

The "Stable" rating outlook means that the rating is not likely to change over a one to two-year period.

Enhanced Disclosure Task Force

The Enhanced Disclosure Task Force (EDTF) was established by the Financial Stability Board to provide guidance and recommendations for best practice risk disclosures for banks. We have adopted these recommendations at BMO in order to prepare and deliver high-quality, transparent risk disclosures. The index below details these recommendations and references the presentation of the disclosures in our 2023 Annual Report, Supplementary Financial Information (SFI) and Supplementary Regulatory Capital Information (SRCI). Information on BMO's website, including information within the SFI or SRCI, is not, and should not be considered to be, incorporated by reference into this 2023 Annual Report.

Topic	EDTF Disclosure	Page number		
		Annual Report	SFI	SRCI
General	1. Risk-related information in each report, including an index for easy navigation	78-118	Index	Index
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	3. Top and emerging risks	78-80		
	4. Plans to meet new key regulatory ratios once applicable rules are finalized	72		
Risk Governance, Risk Management and Business Model	5. Risk management and governance framework, processes and key functions	82-86		
	6. Risk culture, risk appetite and procedures to support the culture	86		
	7. Risks that arise from business models and activities	84-85		
	8. Stress testing within the risk governance and capital frameworks	85-86		
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	10. Composition of capital components and reconciliation of the accounting balance sheet to the regulatory balance sheet. A main features template can be found at: https://www.bmo.com/main/about-bmo/investor-relations/regulatory-disclosure	73-74		5-7,16-17
	11. Flow statement of movements in regulatory capital, including changes in Common Equity Tier 1 Capital, Additional Tier 1 Capital and Tier 2 Capital			8
	12. Capital management and strategic planning	69,75-76		
	13. Risk-weighted assets (RWA) by operating group	74		14
	14. Analysis of capital requirements for each method used in calculating RWA	73-74,87-90		14-15,22-44, 51-62,83-84
	15. Tabulate credit risk in the banking book for Basel asset classes and major portfolios			22-44,46-62, 84
	16. Flow statement that reconciles movements in RWA by credit risk and market risk			45,80
	17. Basel validation and back-testing process, including estimated and actual loss parameter information	112		85-89
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Management's Discussion and Analysis

BMO's Chief Executive Officer and Chief Financial Officer have signed a statement outlining management's responsibility for financial information in the audited annual consolidated financial statements and Management's Discussion and Analysis (MD&A). The statement also explains the roles of the Audit and Conduct Review Committee and Board of Directors in respect of that financial information.

The MD&A comments on our operations and financial condition for the years ended October 31, 2023 and 2022. The MD&A should be read in conjunction with the audited annual consolidated financial statements for the year ended October 31, 2023. The MD&A commentary is as at November 30, 2023. Unless otherwise indicated, all amounts are stated in Canadian dollars and have been derived from audited annual consolidated financial statements prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board. We also comply with interpretations of IFRS by our regulator, the Office of the Superintendent of Financial Institutions (OSFI). References to generally accepted accounting principles (GAAP) mean IFRS.

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Regulatory Filings
BMO's continuous disclosure materials, including our interim consolidated financial statements and interim MD&A, audited annual consolidated financial statements and annual MD&A, Annual Information Form and Notice of Annual Meeting of Shareholders and Management Proxy Circular, are available on our website at www.bmo.com/investorrelations, on the Canadian Securities Administrators' website at www.sedarplus.ca and on the EDGAR section of the U.S. Securities and Exchange Commission's (SEC) website at www.sec.gov. BMO's Chief Executive Officer and Chief Financial Officer certify the appropriateness and fairness of BMO's annual and interim consolidated financial statements, annual MD&A and Annual Information Form, the effectiveness of BMO's disclosure controls and procedures and the effectiveness of, and any material weaknesses relating to, BMO's internal control over financial reporting. Information contained in, or otherwise accessible through, our website (www.bmo.com) or any third-party websites mentioned herein, does not form part of this document.

Caution
The About BMO, Financial Objectives and Value Measures, Supporting a Sustainable and Inclusive Future, Recent Acquisitions, Economic Developments and Outlook, Provision for Income Taxes and Other Taxes, 2024 Areas of Focus, Business Environment and Outlook, Enterprise-Wide Capital Management, Off-Balance Sheet Arrangements, Enterprise-Wide Risk Management, Future Changes in Accounting Policies and Other Regulatory Developments sections contain certain forward-looking statements. By their nature, forward-looking statements require us to make assumptions and are subject to inherent risks and uncertainties. Refer to the Caution Regarding Forward-Looking Statements section for a discussion of such risks and uncertainties and the material factors and assumptions related to the statements set forth in such sections.

Factors That May Affect Future Results

As noted in the following Caution Regarding Forward-Looking Statements, all forward-looking statements and information, by their nature, are subject to inherent risks and uncertainties, both general and specific, which may cause actual results to differ materially from the expectations expressed in any forward-looking statement. The Enterprise-Wide Risk Management section describes a number of risks, including credit and counterparty, market, insurance, liquidity and funding, operational non-financial, legal and regulatory, strategic, environmental and social, and reputation risk. Should our risk management framework prove ineffective, there could be a material impact on our financial position and results.

Caution Regarding Forward-Looking Statements

Bank of Montreal's public communications often include written or oral forward-looking statements. Statements of this type are included in this document, and may be included in other filings with Canadian securities regulators or the U.S. Securities and Exchange Commission, or in other communications. All such statements are made pursuant to the "safe harbor" provisions of, and are intended to be forward-looking statements under, the United States *Private Securities Litigation Reform Act of 1995* and any applicable Canadian securities legislation. Forward-looking statements in this document may include, but are not limited to, statements with respect to our objectives and priorities for fiscal 2024 and beyond, our strategies or future actions, our targets and commitments (including with respect to net zero emissions), expectations for our financial condition, capital position, the regulatory environment in which we operate, the results of, or outlook for, our operations or the Canadian, U.S. and international economies, plans for the combined operations of BMO and Bank of the West, and include statements made by our management. Forward-looking statements are typically identified by words such as "will", "would", "should", "believe", "expect", "anticipate", "project", "intend", "estimate", "plan", "goal", "commit", "target", "may", "might", "schedule", "forecast", "outlook", "timeline", "suggest", "seek" and "could" or negative or grammatical variations thereof.

By their nature, forward-looking statements require us to make assumptions and are subject to inherent risks and uncertainties, both general and specific in nature. There is significant risk that predictions, forecasts, conclusions or projections will not prove to be accurate, that our assumptions may not be correct, and that actual results may differ materially from such predictions, forecasts, conclusions or projections. We caution readers of this document not to place undue reliance on our forward-looking statements, as a number of factors – many of which are beyond our control and the effects of which can be difficult to predict – could cause actual future results, conditions, actions or events to differ materially from the targets, expectations, estimates or intentions expressed in the forward-looking statements.

The future outcomes that relate to forward-looking statements may be influenced by many factors, including, but not limited to: general economic and market conditions in the countries in which we operate, including labour challenges; the anticipated benefits from acquisitions, including Bank of the West, are not realized; changes to our credit ratings; the emergence or continuation of widespread health emergencies or pandemics, and their impact on local, national or international economies, as well as their heightening of certain risks that may affect our future results; cyber and cloud security, including the threat of data breaches, hacking, identity theft and corporate espionage, as well as the possibility of denial of service resulting from efforts targeted at causing system failure and service disruption; technology resiliency; failure of third parties to comply with their obligations to us; political conditions, including changes relating to, or affecting, economic or trade matters; climate change and other environmental and social risks; the Canadian housing market and consumer leverage; inflationary pressures; technological innovation and competition; changes in monetary, fiscal or economic policy; changes in laws, including tax legislation and interpretation, or in supervisory expectations or requirements, including capital, interest rate and liquidity requirements and guidance, and the effect of such changes on funding costs and capital requirements; weak, volatile or illiquid capital or credit markets; the level of competition in the geographic and business areas in which we operate; exposure to, and the resolution of, significant litigation or regulatory matters, our ability to successfully appeal adverse outcomes of such matters and the timing, determination and recovery of amounts related to such matters; the accuracy and completeness of the information we obtain with respect to our customers and counterparties; our ability to execute our strategic plans, complete proposed acquisitions or dispositions and integrate acquisitions, including obtaining regulatory approvals; critical accounting estimates and judgments, and the effects of changes to accounting standards, rules and interpretations on these estimates; operational and infrastructure risks, including with respect to reliance on third parties; global capital markets activities; the possible effects on our business of war or terrorist activities; natural disasters and disruptions to public infrastructure, such as transportation, communications, power or water supply; and our ability to anticipate and effectively manage risks arising from all of the foregoing factors.

We caution that the foregoing list is not exhaustive of all possible factors. Other factors and risks could adversely affect our results. For more information, please refer to the discussion in the Risks That May Affect Future Results section, and the sections related to credit and counterparty, market, insurance, liquidity and funding, operational non-financial, legal and regulatory, strategic, environmental and social, and reputation risk in the Enterprise-Wide Risk Management section, as updated by quarterly reports, all of which outline certain key factors and risks that may affect our future results. Investors and others should carefully consider these factors and risks, as well as other uncertainties and potential events, and the inherent uncertainty of forward-looking statements. We do not undertake to update any forward-looking statements, whether written or oral, that may be made from time to time by the organization or on its behalf, except as required by law. The forward-looking information contained in this document is presented for the purpose of assisting shareholders and analysts in understanding our financial position as at and for the periods ended on the dates presented, as well as our strategic priorities and objectives, and may not be appropriate for other purposes.

Material economic assumptions underlying the forward-looking statements contained in this document include those set out in the Economic Developments and Outlook section, and the Allowance for Credit Losses section, as updated by quarterly reports. Assumptions about the performance of the Canadian and U.S. economies, as well as overall market conditions and their combined effect on our business, are material factors we consider when determining our strategic priorities, objectives and expectations for our business. In determining our expectations for economic growth, we primarily consider historical economic data, past relationships between economic and financial variables, changes in government policies, and the risks to the domestic and global economy.

About BMO

Established in 1817, BMO Financial Group (BMO, Bank of Montreal, the bank, we, our, us) is the eighth largest bank in North America by assets, with total assets of $1.29 trillion. We are a highly diversified financial institution providing a broad range of personal and commercial banking, wealth management, global markets and investment banking products and services. We serve thirteen million customers across Canada and the United States, and in select markets globally, through three integrated operating groups: Personal and Commercial Banking, BMO Wealth Management and BMO Capital Markets.

At BMO, we continue to build a high-performing, digitally-enabled, future-ready bank with engaged employees and a winning culture. We are focused on helping our customers make real financial progress, and on financing our clients' growth and innovation, while also investing in our workforce. Anchored by our Purpose, we are driven by our strategic priorities for growth, strengthened by our approach to sustainability and guided by our values as we build a foundation of trust with our stakeholders.

Our Purpose: Boldly Grow the Good *in business and life*

BMO has a deep sense of purpose – to be a champion of progress and a catalyst for change. We are leveraging our position as a leading financial services provider in order to create opportunities for our communities and our stakeholders to make positive, sustainable change – because we believe that success can and must be mutual. Our bold commitments for a thriving economy, a sustainable future and an inclusive society are reflected in our active, direct response to today's most pressing challenges:

- **Thriving economy** – Providing access to capital and valuable financial advice – investing in businesses, supporting home ownership and strengthening the communities we serve, while driving innovation that makes banking easier.
- **Sustainable future** – Being our clients' lead partner in the transition to a net zero world, delivering on our commitments to sustainable financing and responsible investing.
- **Inclusive society** – Committing to zero barriers to inclusion through investments, financial products and services, and partnerships that remove systemic barriers for under-represented customers, employees and communities – and drive inclusion and equitable growth for everyone.

Our Strategic Priorities

The strength and consistency of our performance are essential to realizing our Purpose. We aim to deliver top-tier total shareholder return and achieve our financial objectives by aligning our operations with, and executing on, our strategic priorities. Keeping the fundamentals of our strategy consistent, we renewed our priorities for fiscal 2024 to reflect our strong momentum in an environment of ongoing transformation:

- **World-class** loyalty and growth, powered by One Client leadership, bringing the full suite of BMO's products, services and advice to our clients
- **Winning culture** driven by alignment, empowerment and recognition
- **Digital First** for speed, scale and the elimination of complexity
- **Be our clients' lead partner** in the **transition** to a **net zero world**
- **Superior management** of **risk, capital** and **funding** performance

Our group strategic priorities align with and support our enterprise-wide strategy, positioning us well to achieve competitive performance. The operating group strategies are outlined in the 2023 Operating Groups Performance Review.

Our Approach to Sustainability

Our commitment to sustainability is embedded in our strategy and is fundamental to our Purpose. We identify the most significant effects of our business operations, products and services on our stakeholders and the communities in which we operate. We take steps to manage our business in a manner that is consistent with our sustainability objectives, while also considering the interests of our stakeholders. We apply a variety of environmental, social and governance (ESG) practices and benchmarks to capture opportunities and manage risks in key areas such as sustainable finance, climate change, human rights, and diversity, equity and inclusion.

Our Values

Four core values shape our culture and underpin our choices and actions:

- **Integrity**
- **Diversity**
- **Responsibility**
- **Empathy**

Caution
This About BMO section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

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Financial Objectives and Value Measures

Results and measures in this section are presented on a reported and an adjusted basis, as well as a gross and net revenue basis, and management considers all of these to be useful in assessing our performance. We believe that the non-GAAP measures and ratios presented here, read together with our GAAP results, provide readers with a better understanding of how management assesses results and are a better reflection of ongoing business performance.

Adjusted results and measures in this section, including earnings per share (EPS), EPS growth, return on equity (ROE), return on tangible common equity (ROTCE), net income, revenue, non-interest expense, efficiency ratio and operating leverage, are non-GAAP amounts, measures and ratios, and are discussed in the Non-GAAP and Other Financial Measures section.

We also present reported and adjusted revenue on a basis that is net of insurance claims, commissions and changes in policy benefit liabilities (CCPB), and we calculate our efficiency ratio and operating leverage on a similar basis. Insurance revenue can experience variability arising from fluctuations in the fair value of insurance assets, caused by movements in interest rates and equity markets, that is largely offset in CCPB. Presenting our revenue, efficiency ratio and operating leverage on a net basis allows for a better assessment of operating results.

Measures and ratios on a net revenue basis are non-GAAP amounts. For more information on CCPB, refer to the Non-GAAP and Other Financial Measures section. Information regarding the composition of each of these measures is also provided in the Glossary of Financial Terms.

Financial Objectives

As at and for the periods ended October 31, 2023	Financial objectives (adjusted)	Reported basis			Adjusted basis (1)		
		1-year	3-year (2)	5-year (2)	1-year	3-year (2)	5-year (2)
Earnings per share growth (%)	7-10%	(71.6)	(9.1)	(7.0)	(11.4)	15.0	5.5
Average return on equity (%)	15% or more	6.0	14.6	13.3	12.3	14.7	13.6
Average return on tangible common equity (%)	18% or more	8.2	16.8	15.5	15.8	17.1	15.9
Operating leverage, net of CCPB (%) (3)	2% or more	(45.9)	(6.8)	(3.2)	(8.2)	–	0.7
Common Equity Tier 1 Ratio (%)	Exceed regulatory requirement	12.5	na	na	na	na	na
Total shareholder return (%)	Top-tier	(12.5)	14.3	5.6	na	na	na

(1) Adjusted results and measures are non-GAAP amounts and measures and are discussed in the Non-GAAP and Other Financial Measures section.
(2) The 3-year and 5-year EPS growth rate and operating leverage, net of CCPB, reflect compound annual growth rates (CAGR).
(3) Operating leverage, net of CCPB, on a reported and adjusted basis presented in this table are non-GAAP measures and are discussed in the Non-GAAP and Other Financial Measures section.
na – not applicable

BMO's business planning process is rigorous, sets ambitious goals and considers prevailing economic conditions, our risk appetite, our customers' evolving needs and the opportunities available across our lines of business. It includes clear and direct accountability for annual performance that is measured against both internal and external benchmarks and progress toward our strategic priorities.

We have established medium-term financial objectives for certain important performance measures, which are set out above. Medium-term is generally defined as three to five years, and performance is assessed on an adjusted basis. We aim to deliver top-tier total shareholder return and achieve our financial objectives by aligning our operations with, and executing on, our strategic priorities.

These objectives serve as guideposts and they assume a normal business environment. Our ability to meet these objectives in any single period may be adversely affected by changes in the economic environment, or extraordinary developments. We recognize that in managing our operations and our exposure to risk, current profitability and our ability to meet these objectives in a single period must be balanced with the need to invest in our businesses for long-term sustainability and future growth.

Our financial objectives and our performance against these objectives are outlined in the table above and described in the sections that follow.

Earnings per Share Growth

All references to earnings per share (EPS) are to diluted EPS, unless otherwise indicated.

EPS was $5.68 in 2023, a decrease of $14.31 or 72% from $19.99 in 2022. Adjusted EPS was $11.73, a decrease of $1.50 or 11% from $13.23 in 2022. The decrease in EPS reflected lower earnings and a higher number of common shares outstanding. Net income available to common shareholders decreased 70% year-over-year on a reported basis, and decreased 5% on an adjusted basis. The average number of diluted common shares outstanding increased 7% from 2022, reflecting common shares issued during the year through a public offering, private placements, the dividend reinvestment plan, acquisitions and the stock option plan.

Earnings per Share (EPS) is calculated by dividing net income attributable to bank shareholders, after deducting preferred share dividends and distributions on other equity instruments, by the average number of common shares outstanding. Adjusted EPS is calculated in the same manner, using adjusted net income attributable to bank shareholders. Diluted EPS, which is BMO's basis for measuring performance, adjusts for possible conversions of financial instruments into common shares if those conversions would reduce EPS, and is more fully explained in Note 23 of the audited annual consolidated financial statements.



Return on Equity and Return on Tangible Common Equity

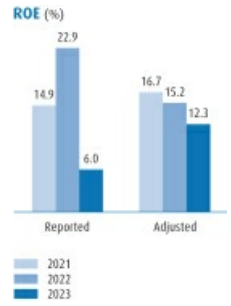
Reported return on equity (ROE) was 6.0% in 2023 and adjusted ROE was 12.3%, compared with 22.9% and 15.2%, respectively, in 2022. Reported ROE decreased due to lower net income, primarily due to lower revenue in the current year resulting from the impact of fair value management actions related to the acquisition of Bank of the West, and higher expenses in the current year due to higher acquisition and integration-related costs. Reported and adjusted ROE decreased due to the impact of share issuances, as well as lower earnings.

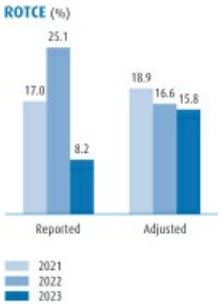
There was a decrease of $9,272 million in reported net income available to common shareholders and a decrease of $476 million in adjusted net income available to common shareholders in the current year. Average common shareholders' equity increased $9.4 billion or 16% from 2022, primarily due to the issuance of common shares and growth in retained earnings, partially offset by a decrease in accumulated other comprehensive income.

Reported return on tangible common equity (ROTCE) was 8.2%, compared with 25.1% in 2022, and adjusted ROTCE was 15.8%, compared with 16.6% in 2022. Reported and adjusted ROTCE decreased due to lower earnings, partially offset by lower tangible common equity. Book value per share increased 2% from the prior year to $97.17, reflecting the increase in shareholders' equity.

Return on Common Shareholders' Equity (ROE) is calculated as net income, less preferred dividends and distributions on other equity instruments, as a percentage of average common shareholders' equity. Common shareholders' equity comprises common share capital, contributed surplus, accumulated other comprehensive income (loss) and retained earnings. Adjusted ROE is calculated using adjusted net income rather than reported net income.

Return on Tangible Common Equity (ROTCE) is calculated as net income available to common shareholders, adjusted for the amortization of acquisition-related intangible assets, as a percentage of average tangible common equity. Average tangible common equity comprises common shareholders' equity, less goodwill and acquisition-related intangible assets, net of related deferred tax liabilities. Adjusted ROTCE is calculated using adjusted net income rather than reported net income.





Efficiency Ratio and Operating Leverage

BMO's reported gross efficiency ratio was 68.0% in 2023, compared with 48.0% in 2022. On a net revenue basis [(1)], the reported efficiency ratio was 72.5%, compared with 47.1% in 2022, and the adjusted efficiency ratio was 59.8%, compared with 55.8% in 2022. The increase in the efficiency ratio reflected revenue growth that was more than offset by higher expense growth, as well as the impact of Bank of the West, which operated at a higher efficiency ratio.

Reported operating leverage was negative 38.5%. On a net revenue basis, reported operating leverage was negative 45.9%, and adjusted operating leverage was negative 8.2%.

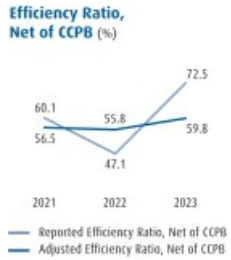
(1) Net revenue comprises revenue, net of insurance claims, commissions and changes in policy benefit liabilities (CCPB).

Efficiency Ratio (or expense-to-revenue ratio) is a measure of productivity. It is calculated as non-interest expense divided by total revenue (on a taxable equivalent basis in the operating groups), expressed as a percentage.

Efficiency Ratio, net of insurance claims, commissions and changes in policy benefits (CCPB), is calculated as non-interest expense divided by total revenue, net of CCPB (on a taxable equivalent basis in the operating groups), expressed as a percentage. Adjusted efficiency ratio, net of CCPB, is calculated in the same manner as efficiency ratio, net of CCPB, utilizing adjusted revenue, net of CCPB, and adjusted non-interest expense.

Operating Leverage is the difference between the growth rates of revenue and non-interest expense, and adjusted operating leverage is the difference between the growth rates of adjusted revenue and adjusted non-interest expense.

Operating Leverage, net of insurance claims, commissions and changes in policy benefit liabilities (CCPB), is the difference between the growth rates of revenue, net of CCPB (net revenue) and non-interest expense. Adjusted operating leverage, net of CCPB, is calculated using the growth rates of adjusted net revenue and adjusted non-interest expense. The bank evaluates performance using adjusted net revenue.



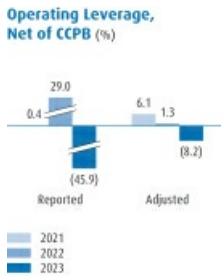


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Common Equity Tier 1 Ratio

Our Common Equity Tier 1 (CET1) Ratio was 12.5% as at October 31, 2023, compared with 16.7% as at October 31, 2022. Our CET1 Ratio was elevated at the end of fiscal 2022, primarily driven by fair value management actions related to the acquisition of Bank of the West. The CET1 Ratio decreased from the prior year, primarily as a result of the acquisition and integration of Bank of the West.

Common Equity Tier 1 (CET1) Ratio is calculated as CET1 capital, which comprises common shareholders' equity, net of deductions for goodwill, intangible assets, pension assets, certain deferred tax assets and other items (which may include a portion of expected credit loss provisions), divided by risk-weighted assets. The CET1 Ratio is calculated in accordance with OSFI's Capital Adequacy Requirements (CAR) Guideline.



Total Shareholder Return

For the year ended October 31	2023	2022	2021	2020	2019	3-year CAGR (1)	5-year CAGR (1)
Closing market price per common share ($)	**104.79**	125.49	134.37	79.33	97.50	**9.7**	**1.3**
Dividends paid ($ per share)	**5.72**	5.11	4.24	4.21	3.99	**10.8**	**9.0**
Dividend yield (%)	**5.5**	4.3	3.2	5.3	4.2	**nm**	**nm**
Increase (decrease) in share price (%)	**(16.5)**	(6.6)	69.4	(18.6)	(0.9)	**nm**	**nm**
Total annual shareholder return (%) (2)	**(12.5)**	(3.1)	75.9	(14.6)	3.2	**14.3**	**5.6**
Canadian peer group average (excluding BMO) (3)	**(8.8)**	(6.2)	56.1	(11.5)	11.4	**10.0**	**5.5**

(1) Compound annual growth rate (CAGR) expressed as a percentage.
(2) Total annual shareholder return assumes reinvestment of quarterly dividends and therefore does not equal the sum of dividend and share price returns in the table.
(3) As at October 31, 2023; peers: BNS, CIBC, NB, RBC, TD.

nm – not meaningful

The average annual total shareholder return (TSR) is a key measure of shareholder value, and over time, we expect that execution on our strategic priorities will drive value creation for our shareholders. The one-year, three-year and five-year average annual TSR was negative 12.5%, positive 14.3% and positive 5.6%, respectively, compared with our Canadian peer group average (excluding BMO) of negative 8.8%, positive 10.0% and positive 5.5%, respectively.

The table above summarizes dividends paid on BMO's common shares over the past five years and the movements in our share price. An investment of $1,000 in BMO common shares made at the beginning of fiscal 2019 would have been worth $1,315 as at October 31, 2023, assuming reinvestment of dividends, for a total return of 31.5%.

Dividends declared per common share in fiscal 2023 totalled $5.80, an increase of $0.36 from $5.44 in the prior year. Dividends paid over a five-year period have increased at an average annual compound rate of approximately 9%.

The annual **Total Shareholder Return (TSR)** represents the average annual total return earned on an investment in BMO common shares made at the beginning of the respective period. The return includes the change in share price and assumes dividends received were reinvested in additional common shares.

Caution
This Financial Objectives and Value Measures section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Supporting a Sustainable and Inclusive Future

In support of our customers, communities and employees, in 2023 we:

- Launched BMO EMpower™ 2.0, pledging more than US$40 billion to support organizations in communities across the United States focused on advancing home ownership, growing small businesses, strengthening communities, and creating a more equitable society.
- Exceeded BMO's annual Employee Giving Campaign target with our employees contributing more than $31 million to the United Way and thousands of other community organizations across North America, while also setting a new record for pledges.
- Announced the 2022 recipients of $150,000 in grants awarded to twelve Canadian women entrepreneurs as part of the BMO Celebrating Women Grant Program for women-owned businesses across Canada, in collaboration with Deloitte. The program is in its third year and has supported 56 women-owned businesses to date in Canada, with grants totalling $530,000.
- Were named to the United Nations Principles for Responsible Banking, Nature Target Setting Working Group, focused on developing guidance for setting biodiversity and nature targets – the only Canadian bank among 34 signatories from 24 countries.
- Invested $15 million in the Feel Out Loud campaign, sponsored by Kids Help Phone to expand access to clinical care and services in Canada through its e-mental health platform for youth. As a founding partner of Kids Help Phone, and with the help of our employees, we have raised more than $40 million to support this campaign to date.
- Continued to drive progress for mental health treatment with a $5 million donation to the Centre for Addiction and Mental Health (CAMH) to support independent research at its Krembil Centre for Neuroinformatics and help build a research centre. We also donated $2 million to the Royal Ottawa Health Care Group (The Royal) to support the newly-established BMO Innovative Clinic for Depression, providing more treatment options for people living with depression.
- Released Wîcihitowin, our third annual Indigenous Partnerships and Progress Report, highlighting our focus on advancing education, employment and economic empowerment in First Nations, Inuit and Métis communities. In addition, we announced six new members of our Indigenous Advisory Council (IAC), which now includes leaders from across Canada.

BMO's leadership continues to be recognized in a significant number of rankings, including:

- Ranked among the most sustainable companies on the Dow Jones Sustainability Indices (DJSI). In addition, BMO ranked in the 95th percentile among banks globally and earned the highest possible score in the areas of Environmental Reporting, Social Reporting and Financial Inclusion.
- Named one of *Corporate Knights*' 2023 Global 100 Most Sustainable Corporations in the World and, for the fourth consecutive year, ranked as North America's most sustainable bank. We ranked eighth in the world and in the top 15% of banks globally for Sustainable Revenue and received high marks for diversity on our Board of Directors and the representation of diversity in our senior leadership.
- Included in *Corporate Knights'* list of Canada's Best 50 Corporate Citizens, with top-quartile scores in board gender diversity and the representation of visible minorities in our executive leadership – the only Canadian bank named to this listing. We also received a top-quartile Sustainable Revenue score, demonstrating our ongoing commitment to sustainable financing and responsible investing.
- Recognized by the World Benchmarking Alliance (WBA) as the world's top-ranked financial institution for supporting progress toward a just and sustainable economy.
- Included for the eighth consecutive year in the Bloomberg Gender-Equality Index (GEI), in recognition of BMO's global leadership in gender equity and inclusion within the workplace and the community, and for publicly demonstrating our commitment to equality and the advancement of women.
- Recognized by Ethisphere Institute as one of the World's Most Ethical Companies for the sixth consecutive year, remaining the only Canadian bank to be honoured with this designation since its inception in 2007. The designation affirms our commitment to doing what is right and operating with transparency, good governance and integrity in support of a thriving economy, a sustainable future and an inclusive society.
- Included for the third consecutive year in the 2023 Women Lead Here list published by the *Globe and Mail* in its Report on Business magazine to recognize Canadian businesses for excellence in gender diversity in executive roles. Our objective for gender equality in our senior leadership has been above 40% since 2016, and we continue to support advancing diversity, equity and inclusion across the bank.
- Received a top score on the Disability Equality Index (DEI) for the eighth consecutive year. BMO was named one of the Best Places to Work for Disability Inclusion by Disability:IN and the American Association of People with Disabilities (AAPD), in recognition of our continued focus and progress on building an inclusive society for our employees and the communities we serve.

Caution

This Supporting a Sustainable and Inclusive Future section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

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Financial Highlights

(Canadian $ in millions, except as noted)	2023	2022
Summary Income Statement (1)		
Net interest income	**18,681**	15,885
Non-interest revenue	**12,518**	17,825
Revenue	**31,199**	33,710
Insurance claims, commissions and changes in policy benefit liabilities (CCPB)	**1,939**	(683)
Revenue, net of CCPB (2)	**29,260**	34,393
Provision for credit losses on impaired loans	**1,180**	502
Provision for (recovery of) credit losses on performing loans	**998**	(189)
Total provision for credit losses (PCL)	**2,178**	313
Non-interest expense	**21,219**	16,194
Provision for income taxes	**1,486**	4,349
Net income	**4,377**	13,537
Net income available to common shareholders	**4,034**	13,306
Adjusted net income	**8,675**	9,039
Adjusted net income available to common shareholders	**8,332**	8,808
Common Share Data ($, except as noted) (1)		
Basic earnings per share	**5.69**	20.04
Diluted earnings per share	**5.68**	19.99
Adjusted diluted earnings per share	**11.73**	13.23
Book value per share	**97.17**	95.60
Closing share price	**104.79**	125.49
Number of common shares outstanding (in millions)		
End of period	**720.9**	677.1
Average basic	**709.4**	664.0
Average diluted	**710.5**	665.7
Market capitalization ($ billions)	**75.5**	85.0
Dividends declared per share	**5.80**	5.44
Dividend yield (%)	**5.5**	4.3
Dividend payout ratio (%)	**102.0**	27.1
Adjusted dividend payout ratio (%)	**49.4**	41.0
Financial Measures and Ratios (%) (1)		
Return on equity	**6.0**	22.9
Adjusted return on equity	**12.3**	15.2
Return on tangible common equity	**8.2**	25.1
Adjusted return on tangible common equity	**15.8**	16.6
Efficiency ratio	**68.0**	48.0
Adjusted efficiency ratio, net of CCPB (2)	**59.8**	55.8
Operating leverage	**(38.5)**	19.6
Adjusted operating leverage, net of CCPB (2)	**(8.2)**	1.3
Net interest margin on average earning assets	**1.63**	1.62
Net interest margin on average earning assets excluding trading revenue and trading assets	**1.82**	1.72
Effective tax rate	**25.3**	24.3
Adjusted effective tax rate	**22.3**	22.8
Total PCL-to-average net loans and acceptances	**0.35**	0.06
PCL on impaired loans-to-average net loans and acceptances	**0.19**	0.10
Liquidity coverage ratio (LCR) (3)	**128**	135
Net stable funding ratio (NSFR) (3)	**115**	114
Balance Sheet and Other Information (as at October 31, $ millions, except as noted)		
Assets	**1,293,276**	1,139,199
Average earning assets	**1,145,632**	979,341
Gross loans and acceptances	**668,396**	567,191
Net loans and acceptances	**664,589**	564,574
Deposits	**909,676**	769,478
Common shareholders' equity	**70,051**	64,730
Total risk-weighted assets (4)	**424,197**	363,997
Assets under administration	**808,985**	744,442
Assets under management	**332,947**	305,462
Capital Ratios (%) (4)		
Common Equity Tier 1 Ratio	**12.5**	16.7
Tier 1 Capital Ratio	**14.1**	18.4
Total Capital Ratio	**16.2**	20.7
Leverage Ratio	**4.2**	5.6
TLAC Ratio	**27.0**	33.1
Foreign Exchange Rates ($)		
As at October 31, Canadian/U.S. dollar	**1.3868**	1.3625
Average Canadian/U.S. dollar	**1.3492**	1.2918

(1) Adjusted results exclude certain items from reported results and are used to calculate our adjusted measures as presented in the above table. Management assesses performance on a reported basis and an adjusted basis, and considers both to be useful. Revenue, net of CCPB, as well as reported ratios calculated net of CCPB, and adjusted results, measures and ratios in this table are non-GAAP amounts. For further information, refer to the Non-GAAP and Other Financial Measures section; for details on the composition ofnon-GAAP amounts, measures and ratios, as well as supplementary financial measures, refer to the Glossary of Financial Terms.

(2) We present revenue, efficiency ratio and operating leverage on a basis that is net of CCPB, which reduces the variability in insurance revenue resulting from changes in fair value that are largely offset by changes in the fair value of policy benefit liabilities, the impact of which is reflected in CCPB. For further information, refer to the Insurance Claims, Commissions and Changes in Policy Benefits section.

(3) LCR and NSFR are disclosed in accordance with the Liquidity Adequacy Requirements (LAR) Guideline as set out by the Office of the Superintendent of Financial Institutions (OSFI), as applicable.

(4) Capital ratios and risk-weighted assets are disclosed in accordance with the Capital Adequacy Requirements (CAR) Guideline, as set out by OSFI, as applicable.

Non-GAAP and Other Financial Measures

Results and measures in this document are presented on a generally accepted accounting principles (GAAP) basis. Unless otherwise indicated, all amounts are in Canadian dollars and have been derived from our audited annual consolidated financial statements prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board. References to GAAP mean IFRS. We use a number of financial measures to assess our performance, as well as the performance of our operating segments, including amounts, measures and ratios that are presented on a non-GAAP basis, as described below. We believe that these non-GAAP amounts, measures and ratios, read together with our GAAP results, provide readers with a better understanding of how management assesses results.

Non-GAAP amounts, measures and ratios do not have standardized meanings under GAAP. They are unlikely to be comparable to similar measures presented by other companies and should not be viewed in isolation from, or as a substitute for, GAAP results.

For further information regarding the composition of non-GAAP and other financial measures, including supplementary financial measures, refer to the Glossary of Financial Terms.

Our non-GAAP measures broadly fall into the following categories:

Adjusted measures and ratios

Management considers both reported and adjusted results and measures to be useful in assessing underlying ongoing business performance. Adjusted results and measures remove certain specified items from revenue, non-interest expense, provision for credit losses and income taxes, as detailed in the following table. Adjusted results and measures presented in this document are non-GAAP amounts. Presenting results on both a reported basis and an adjusted basis permits readers to assess the impact of certain items on results for the periods presented, and to better assess results excluding those items that may not be reflective of ongoing business performance. As such, the presentation may facilitate readers' analysis of trends. Except as otherwise noted, management's discussion of changes in reported results in this document applies equally to changes in the corresponding adjusted results.

Measures net of insurance claims, commissions and changes in policy benefit liabilities

We also present reported and adjusted revenue on a basis that is net of insurance claims, commissions and changes in policy benefit liabilities (CCPB), and our efficiency ratio and operating leverage are calculated on a similar basis. Measures and ratios presented on a basis net of CCPB are non-GAAP amounts. Insurance revenue can experience variability arising from fluctuations in the fair value of insurance assets caused by movements in interest rates and equity markets. The investments that support policy benefit liabilities are predominantly fixed income assets recorded at fair value, with changes in fair value recorded in insurance revenue in the Consolidated Statement of Income. These fair value changes are largely offset by changes in the fair value of policy benefit liabilities, the impact of which is reflected in CCPB. The presentation and discussion of revenue, efficiency ratios and operating leverage on a net basis reduces this variability, which allows for a better assessment of operating results. For more information, refer to the Insurance Claims, Commissions and Changes in Policy Benefit Liabilities section.

Tangible common equity and return on tangible common equity

Tangible common equity is calculated as common shareholders' equity, less goodwill and acquisition-related intangible assets, net of related deferred tax liabilities. Return on tangible common equity is commonly used in the North American banking industry and is meaningful because it measures the performance of businesses consistently, whether they were acquired or developed organically.

Caution

This Non-GAAP and Other Financial Measures section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

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Non-GAAP and Other Financial Measures

(Canadian $ in millions, except as noted)	2023	2022	2021
Reported Results			
Net interest income	**18,681**	15,885	14,310
Non-interest revenue	**12,518**	17,825	12,876
Revenue	**31,199**	33,710	27,186
Insurance claims, commissions and changes in policy benefit liabilities (CCPB)	**(1,939)**	683	(1,399)
Revenue, net of CCPB	**29,260**	34,393	25,787
Provision for credit losses	**(2,178)**	(313)	(20)
Non-interest expense	**(21,219)**	(16,194)	(15,509)
Income before income taxes	**5,863**	17,886	10,258
Provision for income taxes	**(1,486)**	(4,349)	(2,504)
Net income	**4,377**	13,537	7,754
Diluted EPS ($)	**5.68**	19.99	11.58
Adjusting Items Impacting Revenue (Pre-tax)			
Impact of divestitures (1)	**–**	(21)	29
Management of fair value changes on the purchase of Bank of the West (2)	**(2,011)**	7,713	–
Legal provision (including related interest expense and legal fees) (3)	**(30)**	(515)	–
Impact of Canadian tax measures (4)	**(138)**	–	–
Impact of adjusting items on revenue (pre-tax)	**(2,179)**	7,177	29
Adjusting Items Impacting Provision for Credit Losses (Pre-tax)			
Initial provision for credit losses on purchased performing loans (pre-tax) (5)	**(705)**	–	–
Adjusting Items Impacting Non-Interest Expense (Pre-tax)			
Acquisition and integration costs (6)	**(2,045)**	(326)	(9)
Amortization of acquisition-related intangible assets (7)	**(357)**	(31)	(88)
Impact of divestitures (1)	**–**	(16)	(886)
Legal provision (including related interest expense and legal fees) (3)	**3**	(627)	–
Restructuring (costs) reversals (8)	**–**	–	24
Impact of Canadian tax measures (4)	**(22)**	–	–
Impact of adjusting items on non-interest expense (pre-tax)	**(2,421)**	(1,000)	(959)
Impact of adjusting items on reported net income (pre-tax)	**(5,305)**	6,177	(930)
Adjusting Items Impacting Revenue (After-tax)			
Impact of divestitures (1)	**–**	(23)	22
Management of fair value changes on the purchase of Bank of the West (2)	**(1,461)**	5,667	–
Legal provision (including related interest expense and legal fees) (3)	**(23)**	(382)	–
Impact of Canadian tax measures (4)	**(115)**	–	–
Impact of adjusting items on revenue (after-tax)	**(1,599)**	5,262	22
Adjusting Items Impacting Provision for Credit Losses (After-tax)			
Initial provision for credit losses on purchased performing loans (after-tax) (5)	**(517)**	–	–
Adjusting Items Impacting Non-Interest Expense (After-tax)			
Acquisition and integration costs (6)	**(1,533)**	(245)	(7)
Amortization of acquisition-related intangible assets (7)	**(264)**	(23)	(66)
Impact of divestitures (1)	**–**	(32)	(864)
Legal provision (including related interest expense and legal fees) (3)	**2**	(464)	–
Restructuring (costs) reversals (8)	**–**	–	18
Impact of Canadian tax measures (4)	**(16)**	–	–
Impact of adjusting items on non-interest expense (after-tax)	**(1,811)**	(764)	(919)
Adjusting Items Impacting Provision for Income Taxes			
Impact of Canadian tax measures (4)	**(371)**	–	–
Impact of adjusting items on reported net income (after-tax)	**(4,298)**	4,498	(897)
Impact on diluted EPS ($)	**(6.05)**	6.76	(1.38)
Adjusted Results			
Net interest income	**19,094**	16,352	14,310
Non-interest revenue	**14,284**	10,181	12,847
Revenue	**33,378**	26,533	27,157
Insurance claims, commissions and changes in policy benefit liabilities (CCPB)	**(1,939)**	683	(1,399)
Revenue, net of CCPB	**31,439**	27,216	25,758
Provision for credit losses	**(1,473)**	(313)	(20)
Non-interest expense	**(18,798)**	(15,194)	(14,550)
Income before income taxes	**11,168**	11,709	11,188
Provision for income taxes	**(2,493)**	(2,670)	(2,537)
Net income	**8,675**	9,039	8,651
Diluted EPS ($)	**11.73**	13.23	12.96

(1) Reported net income included the impact of divestitures related to the sale of our EMEA and U.S. Asset Management businesses and our Private Banking business. Fiscal 2022 included a gain of $6 million ($8 million pre-tax) related to the transfer of certain U.S. asset management clients and a $29 million (pre-tax and after-tax) loss related to foreign currency translation reclassified from accumulated other comprehensive income, both recorded in non-interest revenue, and expenses of $32 million ($16 million pre-tax), including taxes of $22 million on closing of the sale of the business recorded in non-interest expense. Fiscal 2021 included a $779 million (pre-tax and after-tax) write-down of goodwill related to the sale of our EMEA and U.S. Asset Management businesses recorded in non-interest expense, a $22 million ($29 million pre-tax) net gain on the sale of our Private Banking business recorded in non-interest revenue, and $85 million ($107 million pre-tax) of divestiture-related costs for both transactions recorded in non-interest expense. These amounts were recorded in Corporate Services.

(2) Fiscal 2023 reported net income included a loss of $1,461 million ($2,011 million pre-tax) related to the acquisition of Bank of the West resulting from the management of the impact of interest rate changes between the announcement and closing of the acquisition on its fair value and goodwill, comprising $1,628 million of mark-to-market losses on certain interest rate swaps recorded in trading revenue and $383 million of losses on a portfolio of primarily U.S. treasuries and other balance sheet instruments recorded in net interest income. Fiscal 2022 included revenue of $5,667 million ($7,713 million pre-tax), comprising $7,665 million of mark-to-market gains and $48 million of non-trading interest income. These amounts were recorded in Corporate Services. For further information on this acquisition, refer to the Recent Acquisitions section.

(3) Fiscal 2023 reported net income included the impact of a lawsuit associated with a predecessor bank, M&I Marshall and Ilsley Bank, of $21 million ($27 million pre-tax), comprising interest expense of $30 million and a net non-interest expense recovery of $3 million. Fiscal 2022 included a provision of $846 million ($1,142 million pre-tax), comprising interest expense of $515 million and non-interest expense of $627 million. These amounts were recorded in Corporate Services. For further information, refer to the Provisions and Contingent Liabilities section in Note 24 of the audited annual consolidated financial statements.

(4) Fiscal 2023 reported net income included the impact of certain tax measures enacted by the Canadian government. These tax measures included a one-time tax expense of $371 million, comprising a Canada Recovery Dividend (CRD) of $312 million and $59 million related to the pro-rated fiscal 2022 impact of the 1.5% tax rate increase, net of a deferred tax asset remeasurement, and a charge of $131 million ($160 million pre-tax) related to the amended GST/HST definition for financial services, comprising $138 million recorded in non-interest revenue and $22 million recorded in non-interest expense. These amounts were recorded in Corporate Services.

(5) Fiscal 2023 reported net income included a provision for credit losses of $517 million ($705 million pre-tax) on the purchased Bank of the West performing loan portfolio, recorded in Corporate Services.

(6) Fiscal 2023 reported net income included acquisition and integration costs of $1,533 million ($2,045 million pre-tax), comprising $1,520 million ($2,027 million pre-tax) related to Bank of the West, $4 million ($5 million pre-tax) related to Radicle and Clearpool, and $9 million ($13 million pre-tax) related to AIR MILES. Fiscal 2022 included acquisition and integration costs of $245 million ($326 million pre-tax), comprising $237 million ($316 million pre-tax) related to Bank of the West and $8 million ($10 million pre-tax) related to Radicle, Clearpool and KGS-Alpha. Fiscal 2021 included acquisition and integration costs of $7 million ($9 million pre-tax) related to Clearpool and KGS-Alpha. These amounts were recorded in non-interest expense. Bank of the West acquisition and integration costs were recorded in Corporate Services; Radicle, Clearpool and KGS-Alpha costs were recorded in BMO Capital Markets; and AIR MILES costs were recorded in Canadian P&C.

(7) Amortization of acquisition-related intangible assets of $264 million ($357 million pre-tax) in fiscal 2023, $23 million ($31 million pre-tax) in fiscal 2022, and $66 million ($88 million pre-tax) in fiscal 2021 were recorded in non-interest expense in the related operating group.

(8) Fiscal 2021 reported net income included a partial reversal of $18 million ($24 million pre-tax) of restructuring charges related to severance recorded in 2019 in non-interest expense, in Corporate Services.

Summary of Reported and Adjusted Results by Operating Segment

(Canadian $ in millions, except as noted)	Canadian P&C	U.S. P&C	Total P&C	BMO Wealth Management	BMO Capital Markets	Corporate Services	Total Bank	U.S. Segment (1) (US$ in millions)
2023								
Reported net income (loss)	**3,718**	**2,724**	**6,442**	**1,126**	**1,682**	**(4,873)**	**4,377**	**90**
Acquisition and integration costs	**9**	**–**	**9**	**–**	**4**	**1,520**	**1,533**	**1,124**
Amortization of acquisition-related intangible assets	**6**	**234**	**240**	**4**	**20**	**–**	**264**	**186**
Management of fair value changes on the purchase of Bank of the West	**–**	**–**	**–**	**–**	**–**	**1,461**	**1,461**	**1,093**
Legal provision (including related interest expense and legal fees)	**–**	**–**	**–**	**–**	**–**	**21**	**21**	**15**
Impact of Canadian tax measures	**–**	**–**	**–**	**–**	**–**	**502**	**502**	**–**
Initial provision for credit losses on purchased performing loans	**–**	**–**	**–**	**–**	**–**	**517**	**517**	**379**
Adjusted net income (loss)	**3,733**	**2,958**	**6,691**	**1,130**	**1,706**	**(852)**	**8,675**	**2,887**
2022								
Reported net income	3,826	2,497	6,323	1,251	1,772	4,191	13,537	6,079
Acquisition and integration costs	–	–	–	–	8	237	245	185
Amortization of acquisition-related intangible assets	1	5	6	3	14	–	23	17
Impact of divestitures	–	–	–	–	–	55	55	(45)
Management of fair value changes on the purchase of Bank of the West	–	–	–	–	–	(5,667)	(5,667)	(4,312)
Legal provision (including related interest expense and legal fees)	–	–	–	–	–	846	846	621
Adjusted net income (loss)	3,827	2,502	6,329	1,254	1,794	(338)	9,039	2,545

(1) U.S. segment reported and adjusted results comprise net income recorded in U.S. P&C and our U.S. operations in BMO Wealth Management, BMO Capital Markets and Corporate Services.

Refer to footnotes (1) to (8) in the Non-GAAP and Other Financial Measures table for further information on adjusting items.

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Net Revenue, Efficiency Ratio and Operating Leverage

(Canadian $ in millions, except as noted) For the year ended October 31	2023	2022	2021
Reported			
Net interest income	**18,681**	15,885	14,310
Non-interest revenue	**12,518**	17,825	12,876
Revenue	**31,199**	33,710	27,186
Insurance claims, commissions and changes in policy benefit liabilities (CCPB)	**1,939**	(683)	1,399
Revenue, net of CCPB	**29,260**	34,393	25,787
Non-interest expense	**21,219**	16,194	15,509
Efficiency ratio (%)	**68.0**	48.0	57.0
Efficiency ratio, net of CCPB (%)	**72.5**	47.1	60.1
Revenue growth (%)	**(7.5)**	24.0	7.9
Revenue growth, net of CCPB (%)	**(14.9)**	33.4	9.8
Non-interest expense growth (%)	**31.0**	4.4	9.4
Operating leverage (%)	**(38.5)**	19.6	(1.5)
Operating leverage, net of CCPB (%)	**(45.9)**	29.0	0.4
Adjusted (1)			
Net interest income	**19,094**	16,352	14,310
Non-interest revenue	**14,284**	10,181	12,847
Revenue	**33,378**	26,533	27,157
Insurance claims, commissions and changes in policy benefit liabilities (CCPB)	**1,939**	(683)	1,399
Revenue, net of CCPB	**31,439**	27,216	25,758
Non-interest expense	**18,798**	15,194	14,550
Efficiency ratio (%)	**56.3**	57.3	53.6
Efficiency ratio, net of CCPB (%)	**59.8**	55.8	56.5
Revenue growth, net of CCPB (%)	**15.5**	5.7	9.7
Non-interest expense growth (%)	**23.7**	4.4	3.6
Operating leverage, net of CCPB (%)	**(8.2)**	1.3	6.1

(1) Refer to footnotes (1) to (8) in the Non-GAAP and Other Financial Measures table for further information on adjusting items.

Return on Equity and Return on Tangible Common Equity

(Canadian $ in millions, except as noted) For the year ended October 31	2023	2022	2021
Reported net income	**4,377**	13,537	7,754
Net income attributable to non-controlling interest in subsidiaries	**12**	–	–
Net income attributable to bank shareholders	**4,365**	13,537	7,754
Dividends on preferred shares and distributions on other equity instruments	**(331)**	(231)	(244)
Net income available to common shareholders (A)	**4,034**	13,306	7,510
After-tax amortization of acquisition-related intangible assets	**264**	23	66
Net income available to common shareholders after adjusting for amortization of acquisition-related intangible assets (B)	**4,298**	13,329	7,576
After-tax impact of other adjusting items (1)	**4,034**	(4,521)	831
Adjusted net income available to common shareholders (C)	**8,332**	8,808	8,407
Average common shareholders' equity (D)	**67,486**	58,078	50,451
Goodwill	**(13,466)**	(5,051)	(5,836)
Acquisition-related intangible assets	**(2,197)**	(130)	(381)
Net of related deferred liabilities	**856**	251	271
Average tangible common equity (E)	**52,679**	53,148	44,505
Return on equity (%) (= A/D)	**6.0**	22.9	14.9
Adjusted return on equity (%) (= C/D)	**12.3**	15.2	16.7
Return on tangible common equity (%) (= B/E)	**8.2**	25.1	17.0
Adjusted return on tangible common equity (%) (= C/E)	**15.8**	16.6	18.9

(1) Refer to footnotes (1) to (8) in the Non-GAAP and Other Financial Measures table for further information on adjusting items.

Return on Equity by Operating Segment (1)

(Canadian $ in millions, except as noted)	2023 Canadian P&C	U.S. P&C	Total P&C	BMO Wealth Management	BMO Capital Markets	Corporate Services	Total Bank	U.S. Segment (2) (US$ in millions)
Reported								
Net income available to common shareholders	**3,677**	**2,672**	**6,349**	**1,118**	**1,648**	**(5,081)**	**4,034**	**56**
Total average common equity	**13,672**	**27,889**	**41,561**	**6,356**	**11,856**	**7,713**	**67,486**	**27,203**
Return on equity (%)	**26.9**	**9.6**	**15.3**	**17.6**	**13.9**	**na**	**6.0**	**0.2**
Adjusted (3)								
Net income available to common shareholders	**3,692**	**2,906**	**6,598**	**1,122**	**1,672**	**(1,060)**	**8,332**	**2,853**
Total average common equity	**13,672**	**27,889**	**41,561**	**6,356**	**11,856**	**7,713**	**67,486**	**27,203**
Return on equity (%)	**27.0**	**10.4**	**15.9**	**17.7**	**14.1**	**na**	**12.3**	**10.5**

(Canadian $ in millions, except as noted)	2022 Canadian P&C	U.S. P&C	Total P&C	BMO Wealth Management	BMO Capital Markets	Corporate Services	Total Bank	U.S. Segment (2) (US$ in millions)
Reported								
Net income available to common shareholders	3,783	2,461	6,244	1,243	1,732	4,087	13,306	6,052
Total average common equity	11,798	13,815	25,613	5,282	11,556	15,627	58,078	17,081
Return on equity (%)	32.1	17.8	24.4	23.5	15.0	na	22.9	35.4
Adjusted (3)								
Net income available to common shareholders	3,784	2,466	6,250	1,246	1,754	(442)	8,808	2,518
Total average common equity	11,798	13,815	25,613	5,282	11,556	15,627	58,078	17,081
Return on equity (%)	32.1	17.8	24.4	23.6	15.2	na	15.2	14.7

(1) Return on equity is based on allocated capital. In fiscal 2023, following the closing of the Bank of the West acquisition, capital was allocated from Corporate Services to U.S. P&C and BMO Wealth Management. For further information, refer to the How BMO Reports Operating Group Results section.
(2) U.S. segment reported and adjusted results comprise net income and allocated capital recorded in U.S. P&C and our U.S. operations in BMO Wealth Management, BMO Capital Markets and Corporate Services.
(3) Refer to footnotes (1) to (8) in the Non-GAAP and Other Financial Measures table for further information on adjusting items.

na – not applicable

Capital is allocated to the operating segments based on the amount of regulatory capital required to support business activities. Effective the first quarter of fiscal 2023, our capital allocation rate increased to 11.0% of risk-weighted assets, compared with 10.5% in 2022, to reflect increased regulatory capital requirements. Unallocated capital is reported in Corporate Services. Capital allocation methodologies are reviewed annually.

Recent Acquisitions

On February 1, 2023, we completed our acquisition of Bank of the West, including its subsidiaries, from BNP Paribas. Bank of the West provides a broad range of banking products and services, primarily in the Western and Midwestern regions of the United States. The acquisition strengthens our position in North America with increased scale and greater access to growth opportunities in strategic new markets. We completed the conversion of Bank of the West customer accounts and systems to our respective BMO operating platforms in September 2023. The acquisition has been reflected in our results as a business combination, primarily in the U.S. P&C and BMO Wealth Management reporting segments.

On closing, we recognized purchase accounting fair value marks on Bank of the West's loans and deposits of $3.0 billion and discounts on securities of $3.5 billion on our balance sheet, in accordance with International Financial Reporting Standards (IFRS). As previously disclosed, to manage the exposure of our regulatory capital to the risk of changes in the fair value of the assets and liabilities of Bank of the West due to changes in interest rates between the announcement and closing of the acquisition, we entered into interest rate swaps that resulted in cumulative mark-to-market gains of $5.7 billion on closing. Any exposure to interest rate risk in relation to these interest rate swaps was largely offset by our purchase of a portfolio of matched-duration U.S. treasuries and other balance sheet instruments. On closing, the swaps were neutralized and replaced with fair value accounting hedges, which in effect crystallized the unrealized loss position on our balance sheet. Accretion of the fair value marks and the discount on securities will increase net interest income, and the amortization of the fair value hedge will decrease net interest income over the remaining term of these instruments, both of which will be recorded in Corporate Services.

On June 1, 2023, we completed the acquisition of the AIR MILES Reward Program (AIR MILES) business of LoyaltyOne Co. The AIR MILES business operates as a wholly-owned subsidiary of BMO. The acquisition was accounted for as a business combination and the acquired business and corresponding goodwill are included in our Canadian P&C reporting segment.

For more information on the acquisition of Bank of the West and AIR MILES, refer to Note 10 of the audited annual consolidated financial statements.

Caution
This Recent Acquisitions section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Economic Developments and Outlook

Economic Developments in 2023 and Outlook for 2024 (1)

After reaching 3.8% in 2022, growth in Canada's real gross domestic product (GDP) will likely slow to a modest estimated rate of 1.0% in 2023, due to the impact of higher interest rates and weaker global demand. The economy is expected to expand by only 0.5% in 2024, although activity should improve later in the year when interest rates are projected to begin to decline. A moderation in the pace of employment growth, coupled with rapid expansion of the population and labour force, has lifted the unemployment rate to 5.7% in October 2023 from a half-century low of 4.9% in July 2022, and we anticipate this rate will rise to approximately 6.5% in the summer of 2024. Looser labour market conditions are starting to relieve upward pressure on wages and prices. Year-over-year growth in the consumer price index has declined from a four-decade high of 8.1% in June 2022 to 3.1% in October 2023. Although inflation is projected to moderate further, it will likely remain above the Bank of Canada's 2% target until late 2024 due to elevated oil prices and lingering wage pressures. After raising the policy rate by 475 basis points from March 2022 to July 2023, the Bank of Canada has since held the policy rate steady at 5%. With the rate of economic growth and inflation projected to slow, the Bank of Canada will likely forgo further interest rate increases, before gradually reducing rates starting in mid-2024 to more neutral levels below 3.0% in early 2026. Interest rate concerns and a weaker economy have depressed equity markets. Housing market activity rebounded earlier this year due to steadier mortgage rates and strong population growth, but sales have weakened recently and will likely be held back by the ongoing lack of affordability. Housing prices are expected to decline moderately in response to lower demand. Industry-wide growth in residential mortgage balances has decelerated from more than 10% year-over-year in early 2022 to 3.2% in September 2023, and will likely moderate somewhat further. Year-over-year growth in consumer credit balances (excluding mortgages), which was 2.4% in September 2023, has been restrained by high interest rates, and is anticipated to moderate further as households curtail spending. After rising strongly in recent years, growth in non-financial corporate credit balances has decelerated sharply in 2023 in response to higher interest rates, a weakening economy and elevated cash balances, and will likely slow further in 2024.

The U.S. economy is estimated to grow at a moderate rate of 2.4% in 2023, up from 1.9% in 2022, before likely slowing to 1.3% in 2024. Resiliency in the first three quarters of 2023, amid expansionary fiscal policies and pent-up demand for entertainment, travel and automobiles, is expected to give way to much weaker activity at the turn of the year in response to higher interest rates, tighter lending conditions and the resumption of student loan repayments. Housing market activity remains depressed due to high mortgage rates and rising home prices, and sales are anticipated to remain soft as the economy weakens. The unemployment rate is projected to rise from 3.9% in October 2023 to 4.4% by the middle of 2024, which is still low by historical standards. Lower commodity prices and smoother-running supply chains have reduced year-over-year growth in the consumer price index from 9.1% in June 2022 to 3.2% in October 2023. However, inflation is expected to moderate more slowly in the year ahead, reflecting continued pressure from elevated energy prices and rising wages. The Federal Reserve held its policy rate steady in the fall of 2023 after cumulative increases of 525 basis points since March 2022. We anticipate that the policy rate will hold steady at around 5.4% until the fall of 2024, before returning to more neutral levels below 3.0% by early 2026. The yield on 10-year Treasury bonds has risen to 16-year highs due to the economy's resiliency, elevated inflation and restrictive monetary policies, but is forecast to decline gradually in 2024 ahead of an easing in monetary policy. Equity markets have been volatile as a result of rising long-term interest rates and fears of a recession. Earlier strong growth in industry-wide residential mortgage balances has slowed considerably as a result of weaker housing market activity, and will likely moderate somewhat further given the ongoing lack of affordability. Year-over-year growth in consumer credit balances has also decelerated and is projected to slow further amid elevated interest rates, higher unemployment and slower consumer spending. Non-financial corporate credit growth has decelerated from its previously strong pace and will remain impacted by high interest rates, a slowing economy, and a drawdown of deposit balances.

The economic outlook is subject to several risks that could potentially cause a contraction of the North American economy. The persistence of elevated inflation could lead to additional increases in interest rates and renewed stress in the U.S. regional banking sector. Any escalation of the conflicts in Ukraine and the Middle East could raise energy prices, unsettle financial markets and weaken global growth. Other risks stem from ongoing trade tensions with China, and a deterioration in diplomatic relations between Canada and India that could impede trade and tourism in Canada.

Caution

This Economic Developments and Outlook section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

(1) All time periods in this section refer to the calendar year rather than BMO's fiscal year.

2023 Financial Performance Review

This section provides a review of BMO's enterprise financial performance for 2023 that focuses on the Consolidated Statement of Income in BMO's audited annual consolidated financial statements. A review of the operating groups' strategies and performance follows the enterprise review.

We use a number of financial measures to assess our performance, as well as the performance of our operating segments, including amounts, measures and ratios that are presented on a non-GAAP basis. We believe that these non-GAAP amounts, measures and ratios, read together with our GAAP results, provide readers with a better understanding of how management assesses results.

Non-GAAP amounts, measures and ratios do not have standardized meanings under GAAP. They are unlikely to be comparable to similar measures presented by other companies and should not be viewed in isolation from, or as a substitute for, GAAP results.

Further discussion of non-GAAP amounts, measures and ratios is provided in the Non-GAAP and Other Financial Measures section.

For further information regarding the composition of non-GAAP and other financial measures, including supplementary financial measures, refer to the Glossary of Financial Terms.

Foreign Exchange

(Canadian $ in millions, except as noted)	2023 vs. 2022
Canadian/U.S. dollar exchange rate (average)	
2023	**1.3492**
2022	**1.2918**
Effects on U.S. segment reported results	
Increased (Decreased) net interest income	**273**
Increased (Decreased) non-interest revenue	**476**
Increased (Decreased) total revenue	**749**
Decreased (Increased) provision for credit losses	**1**
Decreased (Increased) non-interest expense	**(285)**
Decreased (Increased) provision for income taxes	**(117)**
Increased (Decreased) net income	**348**
Impact on earnings per share ($)	**0.52**
Effects on U.S. segment adjusted results	
Increased (Decreased) net interest income	**292**
Increased (Decreased) non-interest revenue	**142**
Increased (Decreased) total revenue	**434**
Decreased (Increased) provision for credit losses	**1**
Decreased (Increased) non-interest expense	**(246)**
Decreased (Increased) provision for income taxes	**(43)**
Increased (Decreased) net income	**146**
Impact on earnings per share ($)	**0.22**

Adjusted results are on a non-GAAP basis and are discussed in the Non-GAAP and Other Financial Measures section.

The table above indicates the relevant average Canadian/U.S. dollar exchange rates and the impact of changes in those rates on BMO's U.S. segment reported and adjusted results.

The Canadian dollar equivalents of BMO's U.S. segment results that are denominated in U.S. dollars increased in 2023 relative to 2022, due to changes in the Canadian/U.S. dollar exchange rate. References in this document to the impact of the U.S. dollar do not include U.S. dollar-denominated amounts recorded outside of BMO's U.S. segment.

Economically, our U.S. dollar income stream was not hedged against the risk of changes in foreign exchange rates during 2023 and 2022. Changes in exchange rates will affect future results measured in Canadian dollars, and the impact on those results is a function of the periods in which revenue, expenses and provisions for (or recoveries of) credit losses and income taxes arise.

Refer to the Enterprise-Wide Capital Management section for a discussion of the impact that changes in foreign exchange rates can have on BMO's capital position.

Net Income

Reported net income was $4,377 million, compared with $13,537 million in the prior year, and adjusted net income was $8,675 million, a decrease of $364 million or 4%. The inclusion of Bank of the West results in the current year decreased reported net income by $1,498 million, and increased adjusted net income by $592 million. The impact of the stronger U.S. dollar increased net income by 1% on a reported basis, and 2% on an adjusted basis.

Adjusted results in the current year and the prior year excluded the following items:

- Acquisition and integration costs of $1,533 million ($2,045 million pre-tax) in the current year and $245 million ($326 million pre-tax) in the prior year, recorded in non-interest expense. The current year included acquisition and integration costs of $1,520 million ($2,027 million pre-tax) related to Bank of the West.
- A loss of $1,461 million ($2,011 million pre-tax) in the current year related to the management of the impact of interest rate changes between the announcement and closing of the Bank of the West acquisition on its fair value and goodwill, comprising $1,628 million of mark-to-market losses on certain interest rate swaps recorded in non-interest trading revenue and $383 million of losses on a portfolio of primarily U.S. treasuries and other balance sheet instruments recorded in net interest income. The prior year included revenue of $5,667 million ($7,713 million pre-tax), comprising $7,665 million of non-interest trading revenue and $48 million of net interest income.
- Initial provision for credit losses of $517 million ($705 million pre-tax) in the current year on the purchased Bank of the West performing loan portfolio.
- Amortization of acquisition-related intangible assets of $264 million ($357 million pre-tax) in the current year and $23 million ($31 million pre-tax) in the prior year, recorded in non-interest expense. The current year included amortization of acquisition-related intangible assets of $231 million ($311 million pre-tax) related to Bank of the West.
- The impact of certain tax measures enacted by the Canadian government in the current year, including a one-time tax expense of $371 million, comprising a Canada Recovery Dividend (CRD) of $312 million and $59 million related to the pro-rated fiscal 2022 impact of a 1.5% tax rate increase, net of a deferred tax asset remeasurement, and a charge of $131 million ($160 million pre-tax) related to the amended GST/HST definition for financial services, comprising $138 million recorded in non-interest revenue and $22 million recorded in non-interest expense.
- The impact of a lawsuit associated with a predecessor bank, M&I Marshall and Ilsley Bank, of $21 million ($27 million pre-tax) in the current year, comprising interest expense of $30 million and a net non-interest expense recovery of $3 million. The prior year included $846 million ($1,142 million pre-tax), comprising interest expense of $515 million and non-interest expense of $627 million.
- The impact of divestitures of $55 million ($37 million pre-tax) in the prior year related to the sale of our EMEA business and the transfer of certain U.S. asset management clients, comprising a net loss of $21 million recorded in non-interest revenue and expenses of $16 million, including taxes of $22 million on closing of the sale.

Reported net income decreased from the prior year, primarily due to the items noted above, which in aggregate reduced net income by $4,298 million, compared with a gain of $4,498 million in the prior year. Adjusted net income decreased, as the inclusion of Bank of the West and higher underlying revenue were more than offset by higher expenses and a higher provision for credit losses. Reported and adjusted net income increased in U.S. P&C and decreased in BMO Wealth Management, Canadian P&C and BMO Capital Markets. On a reported basis, Corporate Services recorded a net loss, compared with net income in the prior year, primarily due to the items noted above. On an adjusted basis, Corporate Services recorded a higher net loss.

Further discussion is provided in the 2023 Operating Groups Performance Review section.

For further information on non-GAAP amounts, measures and ratios in this Net Income section, refer to the Non-GAAP and Other Financial Measures section.

Revenue

(Canadian $ in millions, on a pre-tax basis) For the year ended October 31	2023	2022
Net interest income	**18,681**	15,885
Non-interest revenue	**12,518**	17,825
Total revenue	**31,199**	33,710
Insurance claims, commissions and changes in policy benefit liabilities (CCPB) (1)	**1,939**	(683)
Revenue, net of CCPB (1)	**29,260**	34,393
Impact of divestitures (2)	**–**	21
Management of fair value changes on the purchase of Bank of the West (3)	**2,011**	(7,713)
Legal provision (including related interest expense and legal fees) (4)	**30**	515
Impact of Canadian tax measures (5)	**138**	–
Impact of adjusting items on revenue	**2,179**	(7,177)
Adjusted revenue (2) (3) (4)	**33,378**	26,533
Adjusted revenue, net of CCPB (1) (2) (3) (4)	**31,439**	27,216

(1) Insurance revenue can experience variability arising from fluctuations in the fair value of insurance assets caused by movements in interest rates and equity markets. The investments that support policy benefit liabilities are predominantly fixed income assets recorded at fair value, with changes in fair value recorded in insurance revenue in the Consolidated Statement of Income. These fair value changes are largely offset by changes in the fair value of policy benefit liabilities, the impact of which is reflected in CCPB. The presentation of revenue on a basis net of CCPB, reduces variability in results, which allows for a better assessment of operating results. For further information, refer to the Insurance Claims, Commissions and Changes in Policy Benefits section.

(2) Fiscal 2022 reported revenue included non-interest revenue related to the sale of our EMEA and U.S. Asset Management businesses, comprising a gain of $8 million related to the transfer of certain U.S. asset management clients and a $29 million loss related to foreign currency translation reclassified from accumulated other comprehensive income to non-interest revenue, recorded in Corporate Services.

(3) Reported revenue included revenue (losses) related to the acquisition of Bank of the West resulting from the management of the impact of interest rate changes between the announcement and closing of the acquisition on its fair value and goodwill. Fiscal 2023 included a loss of $2,011 million, comprising $1,628 million of mark-to-market losses on certain interest rate swaps recorded in trading revenue and $383 million of losses on a portfolio of primarily U.S. treasuries and other balance sheet instruments recorded in net interest income. Fiscal 2022 included revenue of $7,713 million, comprising $7,665 million of mark-to-market gains and $48 million of non-trading interest income. These amounts were recorded in Corporate Services. For further information on this acquisition, refer to the Recent Acquisitions section.

(4) Reported revenue included the impact of a lawsuit associated with a predecessor bank, M&I Marshall and Ilsley Bank. Interest expense of $30 million was recorded in fiscal 2023 and $515 million was recorded in fiscal 2022. These amounts were recorded in Corporate Services. For further information, refer to the Provisions and Contingent Liabilities section in Note 24 of the audited annual consolidated financial statements.

(5) Fiscal 2023 reported revenue included the impact of certain tax measures enacted by the Canadian government. These tax measures included a charge of $138 million related to the amended GST/HST definition for financial services, recorded in non-interest revenue in Corporate Services.

Revenue, net of CCPB, and adjusted results are on a non-GAAP basis and are discussed in the Non-GAAP and Other Financial Measures section.

Reported revenue was $31,199 million, a decrease of $2,511 million or 7% from the prior year. On a basis that nets insurance claims, commissions and changes in policy benefit liabilities (CCPB) against insurance revenue (net revenue), reported net revenue was $29,260 million, a decrease of $5,133 million or 15% from the prior year, and adjusted net revenue was $31,439 million, an increase of $4,223 million or 16%. The inclusion of Bank of the West contributed $3,143 million to both reported and adjusted revenue in the current year. The impact of the stronger U.S. dollar increased revenue by 2% on both a reported and an adjusted basis.

The decrease in reported net revenue primarily reflected the impact of fair value management actions and the impact of certain tax measures enacted by the Canadian government, partially offset by lower interest expense due to the legal provision related to the lawsuit associated with M&I Marshall and Ilsley Bank in the prior year. Net revenue increased across all operating groups and decreased in Corporate Services on both a reported and an adjusted basis.

BMO analyzes revenue at the consolidated level based on GAAP revenue as reported in the audited annual consolidated financial statements, on a basis net of insurance CCPB, and on an adjusted basis.

Further discussion is provided in the 2023 Operating Groups Performance Review section.

For further information on non-GAAP amounts, measures and ratios, and results presented on a net revenue basis in this Revenue section, refer to the Non-GAAP and Other Financial Measures section.

Net Interest Income comprises earnings on assets, such as loans and securities, including interest and certain dividend income, less interest expense paid on liabilities, such as deposits. Net interest income, excluding trading, is presented on a basis that excludes trading-related interest income and earning assets.

Net Interest Margin is the ratio of net interest income to average earning assets, expressed as a percentage or in basis points. Net interest margin, excluding trading, is computed in the same manner, excluding trading-related interest income and earning assets.

Net Non-Interest Revenue is non-interest revenue, net of insurance claims, commissions and changes in policy benefit liabilities (CCPB).

Average Earning Assets represents the daily average balance of deposits at central banks, deposits with other banks, securities borrowed or purchased under resale agreements, securities, and loans over a one-year period.

Trading-Related Revenue includes net interest income and non-interest revenue earned from on-balance sheet and off-balance sheet positions undertaken for trading purposes, and is dependent on, among other things, the volume of activities undertaken for clients who enter into transactions with BMO to mitigate their risks or to invest, as well as market conditions. We earn a spread or profit on the net sum of our client positions by profitably managing, within prescribed limits, the overall risk of our net positions. On a limited basis, we also earn revenue from our principal trading positions. The management of these positions typically includes marking them to market on a daily basis. Trading-related revenue also includes income (expense) and gains (losses) from both on-balance sheet instruments and interest rate, foreign exchange (including spot positions), equity, commodity and credit contracts.

Net Interest Income

Reported net interest income was $18,681 million, an increase of $2,796 million or 18% from the prior year, and adjusted net interest income was $19,094 million, an increase of $2,742 million or 17%.

The increase in reported net interest income primarily reflected lower interest expense related to the lawsuit associated with M&I Marshall and Ilsley Bank in the prior year, partially offset by the impact of fair value management actions in the current year.

Adjusted net interest income increased due to the inclusion of Bank of the West, higher balances and margins in Canadian P&C and higher margins in U.S. P&C, as well as the impact of the stronger U.S. dollar, partially offset by a decrease in trading-related interest income, lower net interest income in Corporate Services and the impact of risk transfer transactions. Trading-related net interest income was $900 million, a decrease of $772 million, and was largely offset in trading non-interest revenue.

BMO's overall reported net interest margin of 1.63% increased 1 basis point from the prior year. Adjusted net interest margin, excluding trading-related net interest income and trading-related earning assets, was 1.86%, an increase of 8 basis points, primarily due to higher margins in our P&C businesses, including the impact of Bank of the West, partially offset by higher low-yielding assets and lower net interest income in Corporate Services.

Change in Net Interest Income, Average Earning Assets and Net Interest Margin (1)

(Canadian $ in millions, except as noted) For the year ended October 31	Net interest income (2)		Average earning assets (3)		Net interest margin (in basis points)	
	2023	2022	**2023**	2022	**2023**	2022
Canadian P&C	**8,308**	7,449	**303,855**	278,022	**273**	268
U.S. P&C	**7,853**	5,037	**202,155**	138,094	**388**	364
Personal and Commercial Banking (P&C)	**16,161**	12,486	**506,010**	416,116	**319**	300
All other operating groups and Corporate Services (4)	**2,520**	3,399	**639,622**	563,225	**na**	na
Total reported	**18,681**	15,885	**1,145,632**	979,341	**163**	162
Total adjusted	**19,094**	16,352	**1,145,632**	979,341	**167**	167
Trading-related net interest income and earning assets	**900**	1,672	**168,686**	153,875	**na**	na
Total excluding trading net interest income and earning assets	**17,781**	14,213	**976,946**	825,466	**182**	172
Total adjusted excluding trading net interest income and earning assets	**18,194**	14,680	**976,946**	825,466	**186**	178
U.S. P&C (US$ in millions)	**5,818**	3,893	**149,767**	106,829	**388**	364

(1) Adjusted results and ratios are on a non-GAAP basis and are discussed in the Non-GAAP and Other Financial Measures section.
(2) Operating group revenue is presented on a taxable equivalent basis (teb) in net interest income. For further information, refer to the How BMO Reports Operating Group Results section.
(3) Average earning assets represents the daily average balance of deposits with central banks, deposits with other banks, securities borrowed or purchased under resale agreements, securities, and loans, over a one-year period.
(4) For further information on net interest income for these other operating groups and Corporate Services, refer to the 2023 Operating Groups Performance Review section.

na – not applicable

Non-Interest Revenue

(Canadian $ in millions) For the year ended October 31	**2023**	2022
Securities commissions and fees	**1,025**	1,082
Deposit and payment service charges	**1,517**	1,318
Trading revenue	**(216)**	8,250
Lending fees	**1,548**	1,440
Card fees	**700**	548
Investment management and custodial fees	**1,851**	1,770
Mutual fund revenue	**1,244**	1,312
Underwriting and advisory fees	**1,107**	1,193
Securities gains, other than trading	**181**	281
Foreign exchange, other than trading	**235**	181
Insurance revenue (loss)	**2,498**	(157)
Share of profit in associates and joint ventures	**185**	274
Other	**643**	333
Total reported	**12,518**	17,825
Insurance claims, commissions and changes in policy benefit liabilities (CCPB)	**1,939**	(683)
Reported non-interest revenue, net of CCPB	**10,579**	18,508
Management of fair value changes on the purchase of Bank of the West (1)	**1,628**	(7,665)
Impact of divestitures (2)	**–**	21
Impact of Canadian tax measures (3)	**138**	–
Adjusted non-interest revenue	**14,284**	10,181
Adjusted non-interest revenue, net of CCPB	**12,345**	10,864
Insurance revenue, net of CCPB	**559**	526

(1) Fiscal 2023 reported non-interest revenue included $1,628 million of mark-to-market losses on certain interest rate swaps related to the acquisition of Bank of the West resulting from the management of the impact of interest rate changes between the announcement and closing of the acquisition on its fair value and goodwill. Fiscal 2022 included $7,665 million of mark-to-market gains. These amounts were recorded in Corporate Services. For further information on this acquisition, refer to the Recent Acquisitions section.
(2) Fiscal 2022 reported non-interest revenue included the impact of divestitures related to the sale of our EMEA and U.S. Asset Management businesses of $21 million of non-interest losses, comprising a gain of $8 million related to the transfer of certain U.S. asset management clients and a $29 million loss related to foreign currency translation reclassified from accumulated other comprehensive income to non-interest revenue, recorded in Corporate Services.
(3) Fiscal 2023 reported non-interest revenue included the impact of certain tax measures enacted by the Canadian government. These tax measures included a charge of $138 million related to the amended GST/HST definition for financial services, recorded in non-interest revenue in Corporate Services.

Reported and adjusted revenue measures, net of CCPB, in this section are on a non-GAAP basis and are discussed in the Non-GAAP and Other Financial Measures section.

Reported non-interest revenue was $12,518 million, a decrease of $5,307 million from the prior year. Reported non-interest revenue, net of CCPB, was $10,579 million, a decrease of $7,929 million or 43% from the prior year, and adjusted non-interest revenue, net of CCPB, was $12,345 million, an increase of $1,481 million or 14%. The inclusion of Bank of the West contributed $461 million to non-interest revenue. The impact of the stronger U.S. dollar increased non-interest revenue by 1% on both a reported and an adjusted basis.

Reported non-interest revenue, net of CCPB, decreased primarily due to the loss related to fair value management actions in the current year, compared with a gain in the prior year. Adjusted non-interest revenue, net of CCPB, increased due to the inclusion of Bank of the West and AIR MILES, higher trading and card-related revenue and the impact of the stronger U.S. dollar, partially offset by lower underwriting and advisory revenue and securities gains, other than trading. Trading-related revenue is discussed in the section that follows.

Gross insurance revenue was $2,498 million, compared with a loss of $157 million in the prior year, primarily due to changes in the fair value of investments and higher annuity sales. Insurance revenue can experience variability arising from fluctuations in the fair value of insurance assets caused by movements in interest rates and equity markets. The investments that support policy benefit liabilities are predominantly fixed income and equity assets recorded at fair value, with changes in fair value recorded in insurance revenue in the Consolidated Statement of Income. The impact of these fair value changes was largely offset by changes in the fair value of policy benefit liabilities, which are reflected in the Insurance Claims, Commissions and Changes in Policy Benefits section.

We believe analyzing revenue, net of CCPB, is useful given the extent to which insurance revenue can vary, and given that this variability is largely offset in CCPB.

For further information on results presented on a net revenue basis in this Non-Interest Revenue section, refer to the Non-GAAP and Other Financial Measures section.

Trading-Related Revenue (1)

(Canadian $ in millions) (taxable equivalent basis) For the year ended October 31	2023	2022
Interest rates	**770**	893
Foreign exchange	**638**	571
Equities	**931**	950
Commodities	**192**	189
Other	**(1,526)**	7,556
Total (teb) (2)	**1,005**	10,159
Teb offset	**321**	237
Reported total	**684**	9,922
Management of fair value changes on the purchase of Bank of the West (3)	**1,628**	(7,665)
Adjusted total trading revenue	**2,312**	2,257
Reported as:		
Net interest income	**1,221**	1,909
Non-interest revenue – trading revenue	**(216)**	8,250
Total (teb)	**1,005**	10,159
Teb offset	**321**	237
Reported total, net of teb offset	**684**	9,922
Adjusted total trading revenue	**2,312**	2,257

(1) Reported and adjusted revenue measures are on a non-GAAP basis and are discussed in the Non-GAAP and Other Financial Measures section.
(2) Trading-related revenue presented on a taxable equivalent basis (teb) is a non-GAAP measure. Similar to other banks, BMO analyzes trading-related revenue on a taxable equivalent basis (teb), which reflects an increase in net interest income on tax-exempt securities to equivalent pre-tax amounts and is useful in facilitating comparisons of income from taxable and tax-exempt sources.
(3) Fiscal 2023 trading-related revenue included $1,628 million of mark-to-market losses on certain interest rate swaps related to the announced acquisition of Bank of the West resulting from the management of the impact of interest rate changes between the announcement and closing of the acquisition on its fair value and goodwill. Fiscal 2022 included $7,665 million of mark-to-market gains. These amounts were recorded in other trading revenue, in Corporate Services. For further information on this acquisition, refer to the Recent Acquisitions section.

Reported trading-related revenue on a teb basis was $1,005 million, a decrease of $9,154 million, primarily due to the impact of fair value management actions related to the acquisition of Bank of the West. Adjusted trading-related revenue on a teb basis was $2,633 million, an increase of $139 million or 6%. Foreign exchange trading-related revenue increased $67 million or 12%, due to higher levels of client activity. Equities and commodities trading-related revenue was relatively unchanged from the prior year. Interest rate trading-related revenue decreased $123 million or 14%, due to lower levels of client activity. Adjusted other trading-related revenue on a teb basis increased $211 million, primarily due to mark-downs on loan underwriting commitments recorded in the prior year.

Refer to the Enterprise-Wide Risk Management – Market Risk section for more information on trading-related revenue.

Insurance Claims, Commissions and Changes in Policy Benefit Liabilities

Insurance claims, commissions and changes in policy benefit liabilities (CCPB) were $1,939 million in 2023, compared with negative $683 million in the prior year. CCPB increased, primarily due to changes in the fair value of policy benefit liabilities and the impact of higher annuity sales. The changes were largely offset in revenue.

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Total Provision for Credit Losses

(Canadian $ in millions)	Canadian P&C	U.S. P&C	Total P&C	BMO Wealth Management	BMO Capital Markets	Corporate Services	Total Bank
2023							
Provision for credit losses on impaired loans	**784**	**380**	**1,164**	**5**	**9**	**2**	**1,180**
Provision for credit losses on performing loans	**146**	**130**	**276**	**13**	**9**	**700**	**998**
Total provision for credit losses	**930**	**510**	**1,440**	**18**	**18**	**702**	**2,178**
Initial provision for credit losses on purchased performing loans (1)	**–**	**–**	**–**	**–**	**–**	**(705)**	**(705)**
Adjusted total provision for (recovery of) credit losses (2)	**930**	**510**	**1,440**	**18**	**18**	**(3)**	**1,473**
Total PCL-to-average net loans and acceptances (%) (3)	**0.30**	**0.26**	**0.28**	**0.04**	**0.02**	**nm**	**0.35**
PCL on impaired loans-to-average net loans and acceptances (%) (3)	**0.25**	**0.20**	**0.23**	**0.01**	**0.01**	**nm**	**0.19**
2022							
Provision for (recovery of) credit losses on impaired loans	432	107	539	2	(32)	(7)	502
Provision for (recovery of) credit losses on performing loans	(91)	(90)	(181)	(4)	(11)	7	(189)
Total provision for (recovery of) credit losses	341	17	358	(2)	(43)	–	313
Total PCL-to-average net loans and acceptances (%) (3)	0.12	0.01	0.09	(0.01)	(0.07)	nm	0.06
PCL on impaired loans-to-average net loans and acceptances (%) (3)	0.15	0.08	0.13	–	(0.05)	nm	0.10

(1) Fiscal 2023 comprised an initial provision for credit losses of $705 million on the purchased Bank of the West performing loan portfolio, recorded in Corporate Services.
(2) Adjusted results exclude certain items from reported results and are used to calculate our adjusted measures as presented in the above table. Management assesses performance on a reported basis and an adjusted basis, and considers both to be useful. For further information, refer to the Non-GAAP and Other Financial Measures section, and for details on the composition of non-GAAP amounts, measures and ratios, as well as supplementary financial measures, refer to the Glossary of Financial Terms.
(3) Ratios are presented on an annualized basis.
nm – not meaningful

The total provision for credit losses (PCL) was $2,178 million on a reported basis and $1,473 million on an adjusted basis, compared with $313 million on both a reported and adjusted basis in the prior year. Total PCL as a percentage of average net loans and acceptances was 35 basis points on a reported basis and 24 basis points on an adjusted basis, compared with 6 basis points on both a reported and adjusted basis in the prior year. PCL on impaired loans was $1,180 million, an increase of $678 million from the prior year, with higher provisions across all businesses. PCL on impaired loans as a percentage of average net loans and acceptances was 19 basis points, compared with 10 basis points in the prior year. The provision for credit losses on performing loans in the current year was $998 million on a reported basis and $293 million on an adjusted basis, compared with a reported and adjusted recovery of credit losses of $189 million in the prior year. Reported PCL on performing loans included an initial provision of $705 million on the purchased Bank of the West performing loan portfolio. On an adjusted basis, PCL on performing loans of $293 million in the current year primarily reflected portfolio credit migration, uncertainty in credit conditions and balance growth, partially offset by an improvement in the macroeconomic outlook and the continued benefit from risk transfer transactions.

Note 4 of the audited annual consolidated financial statements provides additional information on PCL, including on a geographic basis. Table 12 in the Supplemental Information provides further segmented PCL information.

Provision for Credit Losses (PCL) is a charge to income that represents an amount deemed adequate by management to fully provide for impairment in a portfolio of loans and acceptances and other credit instruments, given the composition of the portfolio, the probability of default, the economic outlook and the allowance for credit losses already established. PCL can comprise both a provision for credit losses on impaired loans and a provision for credit losses on performing loans. For further information, refer to the Credit and Counterparty Risk – Provision for Credit Losses section, the Critical Accounting Estimates and Judgments – Allowance for Credit Losses section and Note 4 of the audited annual consolidated financial statements.

Average Net Loans and Acceptances is the daily or monthly average balance of loans and customers' liability under acceptances, net of the allowance for credit losses, over a one-year period.

Non-Interest Expense [1]

(Canadian $ in millions, on a pre-tax basis)

For the year ended October 31	2023	2022
Employee compensation		
Salaries	**6,602**	4,467
Performance-based compensation	**3,565**	3,193
Employee benefits	**1,348**	1,135
Total employee compensation	**11,515**	8,795
Total premises and equipment	**4,879**	3,635
Amortization of intangible assets	**1,015**	604
Other expenses		
Advertising and business development	**814**	517
Communications	**368**	278
Professional fees	**1,147**	788
Other	**1,481**	1,577
Total other expenses	**3,810**	3,160
Total non-interest expense	**21,219**	16,194
Acquisition and integration costs [2]	**(2,045)**	(326)
Amortization of acquisition-related intangible assets [3]	**(357)**	(31)
Impact of divestitures [4]	**–**	(16)
Legal provision (including related interest expense and legal fees) [5]	**3**	(627)
Impact of Canadian tax measures [6]	**(22)**	–
Impact of adjusting items on non-interest expense	**(2,421)**	(1,000)
Total adjusted non-interest expense	**18,798**	15,194
Efficiency ratio (%)	**68.0**	48.0
Efficiency ratio, net of CCPB (%) [1]	**72.5**	47.1
Adjusted efficiency ratio (%)	**56.3**	57.3
Adjusted efficiency ratio, net of CCPB (%) [1]	**59.8**	55.8

(1) Reported and adjusted results, measures and ratios, net of CCPB, are on a non-GAAP basis. For a quantitative reconciliation of revenue, net of CCPB, and adjusted results, refer to the Revenue section and the Non-GAAP and Other Financial Measures section.

(2) Reported non-interest expense included acquisition and integration costs of $2,027 million in fiscal 2023 and $316 million in fiscal 2022 related to the acquisition of Bank of the West, recorded in Corporate Services. In addition, reported non-interest expense included acquisition and integration costs of $5 million related to Radicle and Clearpool in fiscal 2023 and $10 million related to KGS-Alpha and Clearpool in fiscal 2022, recorded in BMO Capital Markets. Fiscal 2023 included acquisition and integration costs of $13 million related to the acquisition of AIR MILES, recorded in Canadian P&C.

(3) Reported non-interest expense included amortization of acquisition-related intangible assets of $357 million in fiscal 2023 and $31 million in fiscal 2022, recorded in the related operating group.

(4) Fiscal 2022 reported non-interest expense included the impact of divestitures of $32 million, including taxes of $22 million, related to the sale of our EMEA and U.S. Asset Management businesses, recorded in Corporate Services.

(5) Reported non-interest expense included the impact of a lawsuit associated with a predecessor bank, M&I Marshall and Ilsley Bank. Fiscal 2023 included a net non-interest expense recovery of $3 million and fiscal 2022 included a provision of $627 million. These amounts were recorded in Corporate Services. For further information, refer to the Provisions and Contingent Liabilities section in Note 24 of the audited annual consolidated financial statements.

(6) Fiscal 2023 reported non-interest expense included the impact of certain tax measures enacted by the Canadian government, comprising $22 million related to the amended GST/HST definition for financial services, recorded in Corporate Services.

na – not applicable

Reported non-interest expense was $21,219 million, an increase of $5,025 million or 31% from the prior year. Adjusted non-interest expense was $18,798 million, an increase of $3,604 million or 24% from the prior year. The inclusion of Bank of the West contributed $4,284 million to reported non-interest expense and $2,181 million on an adjusted basis. The impact of the stronger U.S. dollar increased non-interest expense by 2% on both a reported and an adjusted basis.

Reported results included higher acquisition and integration costs and amortization of acquisition-related intangible assets compared with the prior year, partially offset by the lower legal expense related to the lawsuit associated with M&I Marshall and Ilsley Bank in the prior year.

Reported and adjusted non-interest expense increased, primarily due to the inclusion of Bank of the West, as well as higher employee-related, technology, advertising and business development costs, legal provisions in the current year and the impact of the stronger U.S. dollar.

For further information on non-GAAP amounts, measures and ratios in this Non-Interest Expense section, refer to the Non-GAAP and Other Financial Measures section.

Provision for Income Taxes and Other Taxes

(Canadian $ in millions, except as noted) For the year ended October 31	2023	2022
Payroll levies	**517**	398
Property taxes	**40**	34
Provincial capital taxes	**50**	45
Business taxes	**24**	11
Harmonized sales tax, GST, VAT and other sales taxes	**563**	459
Sundry taxes	**1**	1
Total government levies other than income taxes (other taxes) (1)	**1,195**	948
Provision for income taxes	**1,486**	4,349
Provision for income taxes and other taxes	**2,681**	5,297
Provision for income taxes and other taxes as a % of income before provision for income taxes and other taxes	**38.0**	28.1
Effective income tax rate (%)	**25.3**	24.3
Adjusted effective income tax rate (%)	**22.3**	22.8

(1) Other taxes are included in various non-interest expense categories.

Provision for income taxes and other taxes and the adjusted effective tax rate are on a non-GAAP basis and are discussed in the Non-GAAP and Other Financial Measures section.

The provision for income taxes and other taxes was $2,681 million in the current year. Of this amount, $1,345 million was incurred in Canada, with $498 million included in the provision for income taxes, and the remaining $847 million was recorded in total government levies other than income taxes (other taxes). The decrease from $5,297 million in the prior year primarily reflected a lower provision for income taxes.

The provision for income taxes presented in the Consolidated Statement of Income is based on transactions recorded in income, regardless of when such transactions are subject to taxation by tax authorities, with the exception of the repatriation of retained earnings from subsidiaries, as outlined in Note 22 of the audited annual consolidated financial statements.

Management assesses BMO's consolidated results and the associated provision for income taxes on a GAAP basis. We assess the performance of our operating groups and associated income taxes on a taxable equivalent basis, and we report accordingly.

The provision for income taxes was $1,486 million, compared with $4,349 million in the prior year. The reported effective tax rate was 25.3%, compared with 24.3% in the prior year, primarily due to the impact of certain Canadian tax measures during the 2023 fiscal year. The adjusted provision for income taxes was $2,493 million, compared with $2,670 million in the prior year. The adjusted effective tax rate was 22.3%, compared with 22.8% in the prior year.

BMO partially hedges, for accounting purposes, the foreign exchange risk arising from investments in foreign operations by funding the investments in the corresponding foreign currency. A gain or loss on hedging activities and an unrealized gain or loss on translation of foreign operations are charged or credited to other comprehensive income. For income tax purposes, a gain or loss on hedging activities results in an income tax charge or credit in the current period that is charged or credited to other comprehensive income, while the associated unrealized gain or loss on investments in foreign operations does not incur income taxes until the investments are liquidated. The income tax charge/benefit arising from a hedging gain/loss is a function of the fluctuations in exchange rates from period to period. Hedging of investments in foreign operations has given rise to an income tax recovery in other comprehensive income of $90 million in the current year, compared with a recovery of $124 million in the prior year. Refer to Note 22 of the audited annual consolidated financial statements for further information.

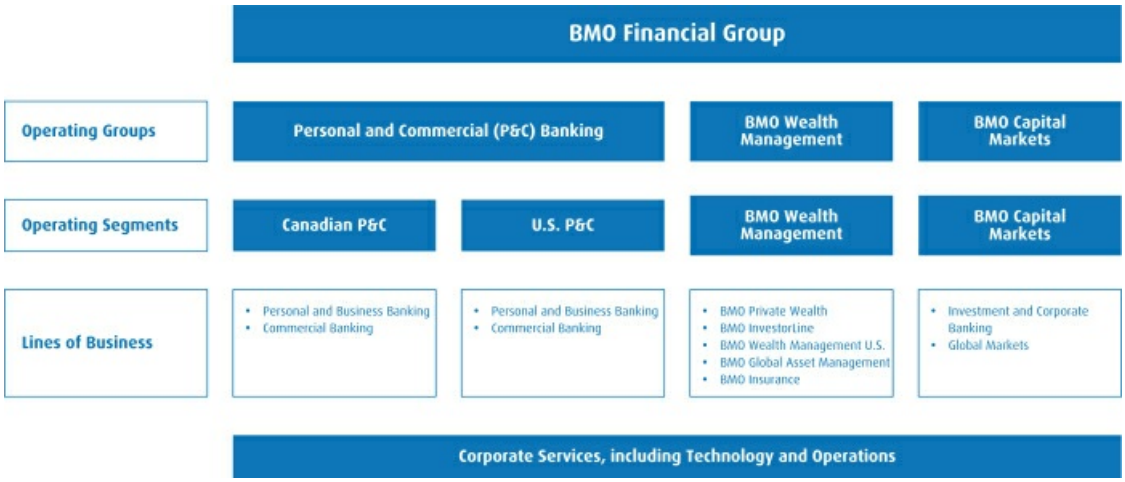
Legislative changes and changes in tax policy, including their interpretation by tax authorities and the courts, may impact our earnings. Refer to the discussion in the Critical Accounting Estimates and Judgments section for further information. In the table above we disclose provision for income taxes and other taxes as a percentage of income before the provision for income taxes and other taxes, which is a non-GAAP financial ratio and may not be comparable to similar financial measures disclosed by other issuers, to reflect the full impact of all government levies and taxes as a percentage of our income.

For further information on non-GAAP amounts, measures and ratios in this Provision for Income Taxes and Other Taxes section, refer to the Non-GAAP and Other Financial Measures section.

2023 Operating Groups Performance Review

Summary

This section includes an analysis of the financial results of BMO's operating groups and descriptions of their operating segments, businesses, strategies, challenges, achievements and outlooks.



How BMO Reports Operating Group Results

BMO reports financial results for its three operating groups, one of which comprises two operating segments, all of which are supported by Corporate Units and Technology and Operations (T&O) within Corporate Services. Operating segment results include allocations from Corporate Services for treasury-related revenue, corporate and T&O costs, and capital. The impact of the Bank of the West acquisition has been reflected in our results as a business combination, primarily in the U.S. P&C and BMO Wealth Management reporting segments.

BMO employs funds transfer pricing and liquidity transfer pricing between corporate treasury and the operating segments in order to assign the appropriate cost and credit to funds for the appropriate pricing of loans and deposits, and to help assess the profitability performance of each line of business. These practices also capture the cost of holding supplemental liquid assets to meet contingent liquidity requirements, as well as facilitating the management of interest rate risk and liquidity risk within our risk appetite framework and regulatory requirements. We review our transfer pricing methodologies at least annually, in order to align with our interest rate, liquidity and funding risk management practices, and update these as appropriate.

The costs of Corporate Units and T&O services are largely allocated to the four operating segments, with any remaining amounts retained in Corporate Services. Certain expenses, directly incurred to support a specific operating segment, are generally allocated to that operating segment. Other expenses are generally allocated across the operating segments in amounts that are reasonably reflective of the level of support provided to each operating segment. We review our expense allocation methodologies annually, and update these as appropriate.

Capital is allocated to the operating segments based on the amount of regulatory capital required to support business activities. Effective fiscal 2023, our capital allocation rate increased to 11.0% of risk-weighted assets, compared with 10.5% in fiscal 2022, in order to reflect an increase in capital requirements. Unallocated capital is reported in Corporate Services. We review our capital allocation methodologies annually, and update these as appropriate.

Periodically, certain lines of business and units within our organizational structure are realigned to support our strategic priorities, and comparative figures from prior periods have been reclassified to conform with the current period's presentation.

We analyze revenue at the consolidated level based on GAAP revenue as reported in the audited annual consolidated financial statements, rather than on a taxable equivalent basis, which is consistent with our Canadian banking peer group. Like many banks, BMO analyzes revenue on a taxable equivalent basis (teb) at the operating segment level. Revenue and the provision for income taxes in BMO Capital Markets and U.S. P&C are increased on tax-exempt securities to equivalent pre-tax amounts that facilitate comparisons of income from taxable andtax-exempt sources. The offset to the segment teb adjustments is reflected in Corporate Services revenue and provision for (recovery of) income taxes.

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Personal and Commercial Banking [1]

(Canadian $ in millions, except as noted) As at or for the year ended October 31	Canadian P&C 2023	Canadian P&C 2022	U.S. P&C 2023	U.S. P&C 2022	Total P&C 2023	Total P&C 2022
Net interest income (teb) (2)	**8,308**	7,449	**7,853**	5,037	**16,161**	12,486
Non-interest revenue	**2,519**	2,419	**1,573**	1,265	**4,092**	3,684
Total revenue (teb) (2)	**10,827**	9,868	**9,426**	6,302	**20,253**	16,170
Provision for credit losses on impaired loans	**784**	432	**380**	107	**1,164**	539
Provision for (recovery of) credit losses on performing loans	**146**	(91)	**130**	(90)	**276**	(181)
Total provision for (recovery of) credit losses	**930**	341	**510**	17	**1,440**	358
Non-interest expense	**4,770**	4,349	**5,502**	3,043	**10,272**	7,392
Income before income taxes	**5,127**	5,178	**3,414**	3,242	**8,541**	8,420
Provision for income taxes (teb) (2)	**1,409**	1,352	**690**	745	**2,099**	2,097
Reported net income	**3,718**	3,826	**2,724**	2,497	**6,442**	6,323
Acquisition and integration costs (3)	**9**	–	**–**	–	**9**	–
Amortization of acquisition-related intangible assets (4)	**6**	1	**234**	5	**240**	6
Adjusted net income	**3,733**	3,827	**2,958**	2,502	**6,691**	6,329
Net income available to common shareholders	**3,677**	3,783	**2,672**	2,461	**6,349**	6,244
Adjusted net income available to common shareholders	**3,692**	3,784	**2,906**	2,466	**6,598**	6,250

(1) Adjusted results are on a non-GAAP basis and are discussed in the Non-GAAP and Other Financial Measures section.
(2) Taxable equivalent basis (teb) amounts of $33 million in fiscal 2023 and $25 million in fiscal 2022 were recorded in net interest income, revenue and provision for income taxes.
(3) Acquisition and integration costs of $13 million pre-tax related to the acquisition of AIR MILES in fiscal 2023 were recorded in non-interest expense.
(4) Amortization of acquisition-related intangible assets pre-tax amounts of $323 million in fiscal 2023 and $7 million in fiscal 2022 were recorded in non-interest expense.

The Personal and Commercial Banking (P&C) operating group represents the sum of our two retail and commercial operating segments, Canadian Personal and Commercial Banking (Canadian P&C) and U.S. Personal and Commercial Banking (U.S. P&C). The P&C banking business reported net income was $6,442 million in 2023, an increase of $119 million or 2% from the prior year. Adjusted net income, which excludes acquisition and integration costs and the amortization of acquisition-related intangible assets, was $6,691 million in 2023, an increase of $362 million or 6% from the prior year. These operating segments are reviewed separately in the sections that follow.

For further information on non-GAAP amounts, measures and ratios in this 2023 Operating Groups Performance Review section, refer to the Non-GAAP and Other Financial Measures section.

Canadian Personal and Commercial Banking

Canadian Personal and Commercial Banking provides financial products and services to nearly eight million customers. Personal and Business Banking helps customers make real financial progress through a network of almost 900 branches, contact centres and digital banking platforms, with more than 3,200 automated teller machines. Commercial Banking serves clients across Canada, offering valuable industry expertise, local presence and a comprehensive range of commercial products and services.

Lines of Business

Personal and Business Banking (P&BB) provides customers with a wide range of products and services, including deposits, home lending, consumer credit, small business lending, credit cards, cash management, everyday financial and investment advice and other banking services, with an overall focus on providing customers with an exceptional experience in every interaction and helping them make real financial progress.

Commercial Banking provides clients with a comprehensive range of commercial products and services, including a variety of financing options and treasury and payment solutions, as well as risk management products. Our commercial bankers partner with clients to anticipate their financial needs, and share their unique expertise and industry knowledge to help them manage and grow their businesses.

Strategy and Key Priorities

2023 Priorities and Achievements

Key Priority: Build on our strong franchise to drive growth and customer loyalty by continuing to invest in differentiating capabilities and delivering enhanced One Client experiences

2023 Achievements

- Maintained strong customer loyalty in both Personal and Business Banking and Commercial Banking, as measured by Net Promoter Score (1)
- Ranked first by J.D. Power (2) for Personal Banking Customer Satisfaction among the Big 5 Banks in its 2023 Canada Retail Banking Satisfaction Study, as well as for Customer Satisfaction with Online Banking in its 2023 Canada Online Banking Satisfaction Study, with the highest scores among Canada's largest banks, demonstrating our dedication to support our customers' financial goals and achievements, as well as our focus on convenience and digital innovation across all customer channels
- Named Best Commercial Bank in Canada for the ninth consecutive year and Best Retail Bank in Canada for the second consecutive year by *World Finance* magazine, in recognition of our Digital First strategy and industry-leading delivery of personal and digital experiences that are meeting and exceeding our customers' evolving expectations, as well as best-in-class digital money management services
- Continued to grow our customer-facing, advice-based roles, strengthening our ability to engage with customers on the financial issues that are important to them

2024 Areas of Focus

- Drive strong customer loyalty, leveraging our enhanced capabilities across customer channels
- Leverage our One Client strategy to provide a connected and integrated experience to our clients, with a holistic approach to address their needs across our businesses

Key Priority: In Personal and Business Banking, continue to drive customer acquisition, increase share of wallet, enhance digital engagement and in-person guidance conversations, and help customers make real financial progress

2023 Achievements

- Continued to expand our digital sales and service capabilities, with more than a third of our core banking products purchased and delivered digitally, while more than 90% of service transactions were completed through self-serve channels, allowing our front-line employees to focus on delivering leading advisory services
- Improved market share in key categories, including deposits, mortgages and credit cards, supported by strong year-over-year customer acquisition
- Completed our acquisition of the AIR MILES Reward Program, one of Canada's most recognized loyalty programs, with more than 10 million active collector accounts. Added new partnerships and introduced robust new features, including an updated travel booking platform, an AIR MILES mobile app and new ways to earn Miles
- Helped customers grow their savings through our BMO Savings Goals feature and the BMO Savings Amplifier Account, as well as offering access to BMO's SmartProgress online financial literacy program
- Enhanced our offerings to support new Canadians, including the expansion of our industry-leading BMO NewStart® Pre-Arrival Account Opening program, and continued to develop and build strategic relationships with Immigration.ca and Immigrant Services Calgary to provide specialized guidance and resources aimed at helping newcomers transition to their new lives in Canada
- Launched the Greener Future Financing program for small and medium-sized agriculture businesses, committing $30 million to a climate-related financing product that supports investments in sustainable business practices and climate resilience measures
- Introduced *BMO for Indigenous Entrepreneurs*, providing Indigenous business owners with greater access to working capital, educational resources and professional partnerships

(1) Net Promoter Score (NPS): The percentage of customers surveyed who would recommend BMO to a friend or colleague.
(2) For more information, refer to www.jdpower.com/business.

2024 Areas of Focus

- Drive customer acquisition through our differentiated value proposition, enabled by analytics and digital marketing capabilities
- Deliver differentiated products and services that meet customers' needs and help them make real financial progress
- Accelerate growth of our AIR MILES Reward Program by strengthening the program's offering for collectors and program partners

Key Priority: In Commercial Banking, maintain focus on key sectors and geographies, and enhance the client experience through innovative capabilities and products, including climate transition and Digital First solutions

2023 Achievements

- Maintained a leadership position in lending in the Atlantic and British Columbia regions and reinforced our second-place ranking in national lending market share, as well as peer-leading deposit growth
- Introduced a new retrofits product, the first of its kind in Canada, which is anchored by our strategic relationships with energy services companies and the Canada Infrastructure Bank and bundled with conventional construction financing
- Launched BMO Marketplace, a one-stop shop for third-party partnerships, where our clients across North America can connect their accounts to create a more efficient and customized banking experience
- Launched mobile wallet functionality for physical and virtual cards, as well as contactless payments through Mastercard Extend, enabling our Corporate Card clients in Canada and the United States to manage their businesses more conveniently

2024 Areas of Focus

- Maintain focus on key sectors and geographies
- Deepen relationships through simplification and digital innovation to drive deposit growth
- Continue to develop climate and carbon transition solutions for our clients

Key Priority: Drive efficiencies by simplifying and streamlining operations, and investing in digital capabilities

2023 Achievements

- Introduced new digital solutions to address our customers' needs, including digital mortgage pre-qualification and recurring lump-sum mortgage payment features, as well as the PaySmart™ credit card instalment plan, which simplifies card transactions and helps customers build a credit history
- Continued to modernize our digital payments functionality and improve our customers' experiences and our operational efficiency, including platform upgrades, enhanced fraud detection capabilities and increased transaction limits, and optimized the BMO.com interface with the introduction of an advanced decision management tool that adapts quickly to changing market demands and regulations
- Received two 2023 Celent Model Bank Awards, the Retail Digital Banking Transformation Award and the Customer Financial Resilience Award, for our leadership in digital transformation and our commitment to enhancing the customer experience
- Recognized for innovation at the 2023 Cannes Lion festival, winning Gold for BMO NXT LVL, a first of its kind gaming platform on Twitch that educates and informs gamers about personal finance
- Ranked first in the Account Management, Digital Money Management and Alerts categories in the 2023 Insider Intelligence Canadian Mobile Banking Emerging Features Benchmark
- Named Overall Leader in the 2023 Javelin Canadian Mobile Banking Scorecard in the Financial Fitness, Money Movement and Account Opening categories
- Recognized for artificial intelligence (AI) and advanced analytics by Datos Insights, with the 2023 Impact Innovation Award in Cash Management and Payments
- Continued to deliver automated open-banking solutions for business clients through partnerships with Xero and FISPAN, enabling owners to spend more time growing their business

2024 Areas of Focus

- Continue to simplify and digitize processes to enhance efficiency
- Continue to strengthen digital capabilities, leveraging existing and new partnerships and delivering leading digital experiences to our customers

Key Priority: Foster a winning culture, focused on alignment, empowerment and recognition, with a commitment to a diverse and inclusive workplace

2023 Achievements

- Improved on strong employee engagement index scores – on par with the global benchmark for leading companies – with ongoing improvements in all priority areas of our winning culture
- Opened BMO Place in Toronto, a new workspace designed to support accessibility, sustainability, inclusion and collaboration – in alignment with our Purpose and our Zero Barriers to Inclusion strategy
- Launched a Personal and Business Banking rotation program, demonstrating our commitment to attracting and developing diverse talent by providing access to meaningful career experiences and development opportunities
- Recognized by the Office québécois de la langue française with a Mérites du français award for promoting the use of the French language in the workplace and preserving French culture within BMO

2024 Areas of Focus

- Continue to attract and develop a diverse workforce while promoting an inclusive workplace
- Maintain a world-class, winning culture and continue to drive strong employee engagement

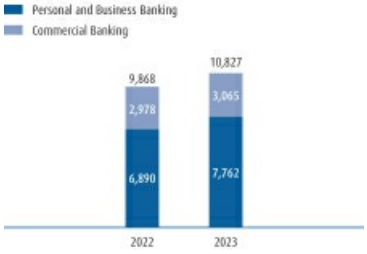
Canadian P&C [1]

(Canadian $ in millions, except as noted)

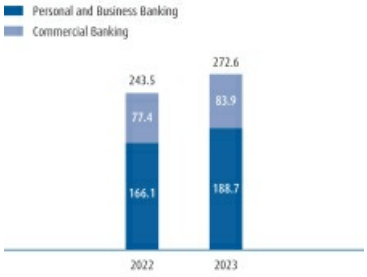
As at or for the year ended October 31	2023	2022
Net interest income	**8,308**	7,449
Non-interest revenue	**2,519**	2,419
Total revenue	**10,827**	9,868
Provision for credit losses on impaired loans	**784**	432
Provision for (recovery of) credit losses on performing loans	**146**	(91)
Total provision for credit losses	**930**	341
Non-interest expense	**4,770**	4,349
Income before income taxes	**5,127**	5,178
Provision for income taxes	**1,409**	1,352
Reported net income	**3,718**	3,826
Acquisition and integration costs [2]	**9**	–
Amortization of acquisition-related intangible assets [3]	**6**	1
Adjusted net income	**3,733**	3,827
Adjusted non-interest expense	**4,749**	4,348
Net income available to common shareholders	**3,677**	3,783
Adjusted net income available to common shareholders	**3,692**	3,784
Key Performance Metrics		
Personal and Business Banking revenue	**7,762**	6,890
Commercial Banking revenue	**3,065**	2,978
Return on equity (%) [4]	**26.9**	32.1
Adjusted return on equity (%) [4]	**27.0**	32.1
Operating leverage (%)	**–**	2.7
Adjusted operating leverage (%)	**0.4**	2.7
Efficiency ratio (%)	**44.1**	44.1
PCL on impaired loans to average net loans and acceptances (%)	**0.25**	0.15
Net interest margin on average earning assets (%)	**2.73**	2.68
Average earning assets	**303,855**	278,022
Average gross loans and acceptances	**314,988**	290,324
Average net loans and acceptances	**313,486**	288,979
Average deposits	**272,575**	243,541
Full-time equivalent employees	**16,217**	15,471

(1) Adjusted results and ratios are on a non-GAAP basis and are discussed in the Non-GAAP and Other Financial Measures section.
(2) Pre-tax acquisition and integration costs related to AIR MILES of $13 million in fiscal 2023 were recorded in non-interest expense.
(3) Amortization of acquisition-related intangible assets pre-tax amounts of $8 million in fiscal 2023 and $1 million in fiscal 2022 were recorded in non-interest expense.
(4) Return on equity is based on allocated capital. Effective fiscal 2023, the capital allocation rate increased to 11.0% of risk-weighted assets, compared with 10.5% in fiscal 2022. For further information, refer to the Non-GAAP and Other Financial Measures section.

Revenue by Line of Business
($ millions)

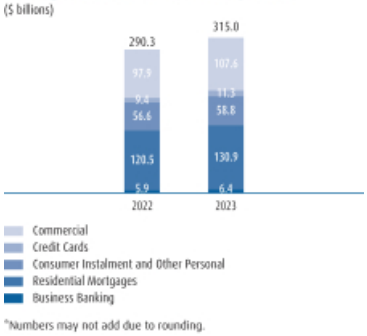


Average Deposits*
($ billions)



*Numbers may not add due to rounding.

Average Gross Loans and Acceptances*
($ billions)



*Numbers may not add due to rounding.

Financial Review

Canadian P&C reported net income was $3,718 million, a decrease of $108 million or 3% from the prior year, with strong revenue growth more than offset by higher provisions for credit losses and higher expenses.

Total revenue was $10,827 million, an increase of $959 million or 10% from the prior year. Net interest income increased $859 million or 12%, due to higher balances and net interest margins. Non-interest revenue increased $100 million or 4%, primarily due to the inclusion of AIR MILES and higher card-related revenue, partially offset by lower gains on investments in Commercial Banking and lower loan and mutual fund distribution fee revenue. Net interest margin of 2.73% increased 5 basis points from the prior year, with higher deposit margins and deposits growing faster than loans, partially offset by lower loan margins.

Personal and Business Banking revenue increased $872 million or 13%, due to higher net interest income and non-interest revenue. Commercial Banking revenue increased $87 million or 3%, due to higher net interest income, partially offset by lower non-interest revenue.

Total provision for credit losses was $930 million, an increase of $589 million from the prior year. The provision for credit losses on impaired loans was $784 million, an increase of $352 million from the prior year, reflecting higher Personal and Business Banking and Commercial Banking provisions. There was a $146 million provision for credit losses on performing loans in the current year, compared with a recovery of $91 million in the prior year.

Reported non-interest expense was $4,770 million, an increase of $421 million or 10% from the prior year, reflecting higher employee-related costs, including severance, the impact of AIR MILES and other business investment costs.

Average gross loans and acceptances increased $24.7 billion or 8% from the prior year to $315.0 billion, reflecting growth of 7% in Personal and Business Banking, 10% in Commercial Banking and 20% in credit card balances. Average deposits increased $29.0 billion or 12% to $272.6 billion, reflecting growth of 14% in Personal and Business Banking and 8% in Commercial Banking balances, primarily due to strong growth in term deposits.

For further information on non-GAAP amounts, measures and ratios in this 2023 Operating Groups Performance Review section, refer to the Non-GAAP and Other Financial Measures section.

Business Environment and Outlook

Canadian P&C's solid performance in fiscal 2023 demonstrated resilience and an ability to adapt quickly to economic uncertainty. While inflation has moderated from peak levels in fiscal 2022, it remains elevated and the Bank of Canada continued to raise interest rates by an additional 125 basis points in fiscal 2023 to 5.0%, which together with weaker global demand, has slowed GDP growth compared with the prior year. Higher interest rates helped drive strong growth in term deposits, partially offsetting a decline in chequing and savings deposits, reflecting both deposit migration and a drawdown of excess savings built during the pandemic. Mortgage growth remained healthy in the first half of 2023, supported by robust population growth and a rising demand for housing, but balance growth moderated in the second half of fiscal 2023, as housing sales slowed in response to rising mortgage rates. Growth in credit card balances was supported by successful customer acquisition, an increase in consumer spending compared with the prior year and revolving balances returning to more normalized levels. Business lending growth moderated in the second half of fiscal 2023, in response to the higher interest rate environment. Credit performance is normalizing from historically low levels, with insolvency and impairment rates trending higher. Expense growth has moderated from the first half of the year, reflecting the impact of prior-year investments in our sales force, technology and advertising, which have supported strong customer acquisition and expanded market share.

The Canadian economy is expected to slow further in fiscal 2024, which is projected to keep loan demand modest. The Bank of Canada is anticipated to hold interest rates steady before gradually reducing interest rates beginning in the second half of the year. Migration to term deposits is projected to taper, with mortgage growth forecast to decelerate further as housing sales are constrained by poor affordability, partially offset by the impact of continued immigration. Credit performance is expected to deteriorate modestly compared with fiscal 2023 but remain well-managed, as inflation and the higher cost of borrowing put more pressure on purchasing power and household and business budgets.

Our focus on helping customers make real financial progress by delivering exceptional customer solutions and advice, together with leading digital experiences, is key to successfully delivering on our strategy in any environment.

The Canadian economic environment in calendar 2023 and the outlook for calendar 2024 are discussed in more detail in the Economic Developments and Outlook section.

Caution

This Canadian Personal and Commercial Banking section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

U.S. Personal and Commercial Banking

U.S. Personal and Commercial Banking provides financial products and services to more than four million customers. Personal and Business Banking helps customers make real financial progress through an extensive network of more than 1,000 branches, with nationwide access to contact centres, digital banking platforms and more than 40,000 BMO and Allpoint® automated teller machines. Commercial Banking serves clients across the United States, offering valuable industry expertise, local presence and a comprehensive range of commercial products and services.

Lines of Business

Personal and Business Banking (P&BB) provides customers with a wide range of products and services, including deposits, home lending, consumer credit, small business lending, credit cards, cash management and other banking services, with an overall focus on providing customers with an exceptional experience in every interaction and helping them make real financial progress.

Commercial Banking provides clients with a comprehensive range of commercial products and services, including a variety of financing options and treasury and payment solutions, as well as risk management products. Our commercial bankers partner with clients to anticipate their financial needs, and share their unique expertise and industry knowledge to help them manage and grow their businesses.

Strategy and Key Priorities

2023 Priorities and Achievements

Key Priority: Build on our strong franchise to drive growth and customer loyalty by continuing to invest in differentiating capabilities and delivering enhanced One Client experiences

2023 Achievements

- Continued to strengthen customer loyalty in both Personal and Business Banking and Commercial Banking, as measured by Net Promoter Score (1)
- Expanded our market presence in the U.S. West and Southwest regions with the acquisition of Bank of the West, while reinforcing our third-place market share position for deposits across our Midwest footprint
- Named by *World Finance* magazine as Best Commercial Bank in the United States, in recognition of our efforts to provide a more comprehensive range of banking products and services
- Rated Outstanding by the Office of the Comptroller of the Currency on *Community Reinvestment Act* performance, in recognition of our commitment to help support communities with moderate or low income levels

2024 Areas of Focus

- Drive strong customer loyalty, leveraging our enhanced capabilities across customer channels
- Leverage our One Client strategy to provide a connected and integrated experience to our clients, with a holistic approach to address their needs across our businesses

Key Priority: Effectively integrate Bank of the West upon closing of the acquisition, with an emphasis on customer and employee experience

2023 Achievements

- Successfully transitioned nearly two million customers to BMO, along with their accounts, financial products and online banking relationships
- Integrated our Bank of the West colleagues into BMO's internal processes and systems, adapting our organizational structure to support our growth objectives
- Rebranded and integrated branches, automated teller machines and digital banking platforms across the United States to BMO
- Introduced a long-term commercial agreement with BNP Paribas (BNPP), to enhance coverage and global access for commercial banking clients of both institutions

Key Priority: In Personal and Business Banking, continue to drive customer acquisition, increase share of wallet, enhance digital engagement and in-person guidance conversations, and help customers make real financial progress

2023 Achievements

- Continued to build our digital sales and service capabilities, with our digital adoption rate increasing nearly 200 basis points year-over-year, approximately one third of our core banking products purchased and delivered digitally, and more than 80% of service transactions completed through self-serve channels, allowing our front-line employees to focus on delivering leading advisory services (2)
- Enhanced our credit card product suite, introducing a new BMO Boost Secured Credit Card and rebranding the BMO Flex Rewards loyalty program, which led to higher levels of customer engagement
- Engaged in personalized conversations through more than 400,000 Real Financial Progress™ checks, to help our customers identify their goals and make real financial progress
- Launched BMO Alto™, an online, high-yielding deposit account offering, successfully growing deposits nationally

(1) Net Promoter Score (NPS): The percentage of customers surveyed who would recommend BMO to a friend or colleague.
(2) Metrics exclude Bank of the West.

- Maintained our commitment to underserved customer groups by reducing fees and improving access to products and services, including our enhanced Credit Builder™ Loan Program, supporting home ownership by offering down-payment relief through the Welcome Home Grant™ Program and opening more than 50,000 Bank On™ certified Smart Money accounts since the launch of the product
- Launched multiple programs to support members of many different communities, including Asian, veteran and 2SLGBTQI+ special purpose credit programs that are intended to improve access to capital for historically underserved segments, and hosted educational webinars to support Black, Latinx, Native American and women-owned businesses
- Launched CreditView®, enabling our customers to view and improve their credit score, and BMO Digital Banking Security Hub, helping our customers protect their accounts with added security features

2024 Areas of Focus

- Drive customer acquisition through our differentiated value proposition, enabled by digital and marketing capabilities, leveraging our expanded footprint and realizing synergies
- Deliver differentiated products and services that meet customers' needs and help them make real financial progress

Key Priority: In Commercial Banking, maintain focus on key sectors and geographies, and enhance the client experience through innovative capabilities and products, including climate transition and Digital First solutions

2023 Achievements

- Achieved Top 10 Commercial Bank market share for total wholesale loans, maintained our leading position in key markets (Illinois and Wisconsin) and continued to grow through the Bank of the West acquisition, establishing a market presence in 21 of the top 50 U.S. metropolitan areas
- Completed a renewable natural gas/manure biodigester transaction, which has enabled an agriculture client to build a unique operating model that captures methane gas, reducing greenhouse gas emissions and generating renewable energy
- Expanded V-PAYO, an integrated payables solution that offers existing and new clients automation, process efficiency and digitization – with one easy payment file
- Partnered with *Latino Leaders Magazine* to create and launch the inaugural Index 200, an index that helps to celebrate the growing base of large Latinx-owned companies in the United States

2024 Areas of Focus

- Maintain focus on key sectors and geographies while leveraging our wider footprint to unlock synergies and cross-sell opportunities
- Deepen relationships through simplification and digital innovation to drive deposit growth
- Continue to develop solutions and capabilities to support our clients through their climate and carbon transition journey

Key Priority: Drive efficiencies by simplifying and streamlining operations, and investing in digital capabilities

2023 Achievements

- Recognized by *The Digital Banker* for an Outstanding Machine Learning Initiative – our cutting-edge artificial intelligence (AI) solution uses natural language processing to rapidly analyze and categorize linguistic patterns, enhancing the customer experience and improving front-line efficiency
- Invested in key digital capabilities to improve the customer experience, including digital card activation and automated increases in card limits, an enhanced account opening experience with e-sign capability in Business Banking, and a self-serve option for client onboarding in Commercial Banking
- Introduced greater convenience for customers completing the end-to-end mortgage and home equity application process digitally, with online scheduling of closings that simplifies the experience for both customers and employees
- Introduced digital chat capabilities in BMO Virtual Connect and addressed our customers' sales and service needs by scaling the chat functionality of BMO Assist, powered by AI
- Partnered with DailyPay to provide Commercial Banking client employees with real-time access to their pay by depositing funds into direct-deposit accounts for immediate access by employees

2024 Areas of Focus

- Continue to simplify and digitize processes to enhance efficiency
- Continue to strengthen digital capabilities, leveraging existing and new partnerships and delivering leading digital experiences to our customers

Key Priority: Foster an inclusive, winning culture, focused on alignment, empowerment and recognition, with a commitment to a diverse and inclusive workplace

2023 Achievements

- Improved on strong employee engagement index scores – on par with the global benchmark for leading companies – with ongoing improvements in all priority areas of our winning culture
- Named one of the Best Workplaces for Innovators by Fast Company, an annual list honouring organizations and teams that demonstrate a commitment to encourage and develop innovation, the only financial institution to be recognized among the top 30 companies
- Recognized by *Forbes* magazine as one of the Best Employers for Diversity for the fifth consecutive year in an independent survey of 60,000 U.S. employees, as well as one of the 2023 Best Employers for New Grads
- Expanded BMORE™, our inclusive hiring and employment program focused on improving access to careers, skills and advancement in the financial industry for under-represented groups

2024 Areas of Focus

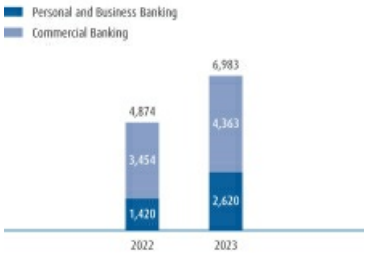
- Continue to attract and develop a diverse workforce while promoting an inclusive workplace
- Maintain a world-class, winning culture and continue to drive strong employee engagement

U.S. P&C [1]

(Canadian $ in millions, except as noted) As at or for the year ended October 31	2023	2022
Net interest income (teb) [2]	**7,853**	5,037
Non-interest revenue	**1,573**	1,265
Total revenue (teb) [2]	**9,426**	6,302
Provision for credit losses on impaired loans	**380**	107
Provision for (recovery of) credit losses on performing loans	**130**	(90)
Total provision for credit losses	**510**	17
Non-interest expense	**5,502**	3,043
Income before income taxes	**3,414**	3,242
Provision for income taxes (teb) [2]	**690**	745
Reported net income	**2,724**	2,497
Amortization of acquisition-related intangible assets [3]	**234**	5
Adjusted net income	**2,958**	2,502
Adjusted non-interest expense	**5,187**	3,037
Net income available to common shareholders	**2,672**	2,461
Adjusted net income available to common shareholders	**2,906**	2,466
Average earning assets	**202,155**	138,094
Average gross loans and acceptances	**196,459**	132,240
Average net loans and acceptances	**194,746**	131,394
Average deposits	**198,717**	145,633
(US$ equivalent in millions)		
Net interest income (teb) [2]	**5,818**	3,893
Non-interest revenue	**1,165**	981
Total revenue (teb) [2]	**6,983**	4,874
Provision for credit losses on impaired loans	**282**	82
Provision for (recovery of) credit losses on performing loans	**97**	(71)
Total provision for credit losses	**379**	11
Non-interest expense	**4,076**	2,353
Income before income taxes	**2,528**	2,510
Provision for income taxes (teb) [2]	**510**	577
Reported net income	**2,018**	1,933
Amortization of acquisition-related intangible assets [3]	**173**	4
Adjusted net income	**2,191**	1,937
Adjusted non-interest expense	**3,843**	2,348
Net income available to common shareholders	**1,979**	1,905
Adjusted net income available to common shareholders	**2,157**	1,909
Key Performance Metrics (US$ basis)		
Personal and Business Banking revenue	**2,620**	1,420
Commercial Banking revenue	**4,363**	3,454
Return on equity (%) [4]	**9.6**	17.8
Adjusted return on equity (%) [4]	**10.4**	17.8
Operating leverage (teb) (%)	**(29.9)**	6.0
Adjusted operating leverage (teb) (%)	**(20.3)**	5.0
Efficiency ratio (teb) (%)	**58.4**	48.3
Adjusted efficiency ratio (teb) (%)	**55.0**	48.2
Net interest margin on average earning assets (teb) (%)	**3.88**	3.64
PCL on impaired loans to average net loans and acceptances (%)	**0.20**	0.08
Average earning assets	**149,767**	106,829
Average gross loans and acceptances	**145,543**	102,290
Average net loans and acceptances	**144,274**	101,636
Average deposits	**147,220**	112,780
Full-time equivalent employees	**12,235**	6,822

(1) Adjusted results and ratios are on a non-GAAP basis and are discussed in the Non-GAAP and Other Financial Measures section.
(2) Taxable equivalent basis (teb) amounts of $33 million in fiscal 2023 and $25 million in fiscal 2022 were recorded in net interest income, revenue and provision for income taxes, and were reflected in the ratios. On a source currency basis, teb amounts were US$25 million in fiscal 2023 and US$20 million in fiscal 2022.
(3) Amortization of acquisition-related intangible assets pre-tax amounts of $315 million in fiscal 2023 and $6 million in fiscal 2022 were recorded in non-interest expense. On a source currency basis, pre-tax amounts were US$233 million in fiscal 2023 and US$5 million in fiscal 2022.
(4) Return on equity is based on allocated capital. Effective fiscal 2023, the capital allocation rate increased to 11.0% of risk-weighted assets, compared with 10.5% in fiscal 2022. For further information, refer to the Non-GAAP and Other Financial Measures section.

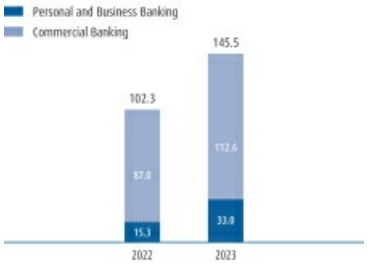
Revenue by Line of Business (teb) [2]
(US$ millions)



Average Deposits
(US$ billions)



Average Gross Loans and Acceptances
(US$ billions)



Financial Review

U.S. P&C reported net income was $2,724 million, an increase of $227 million or 9% from the prior year. The impact of the stronger U.S. dollar increased growth in net income by 5%, revenue by 6% and expenses by 8%. All amounts in the remainder of this section are presented on a U.S. dollar basis.

Reported net income was $2,018 million, an increase of $85 million or 4% from the prior year, primarily driven by the Bank of the West acquisition and underlying revenue growth due to higher net interest income, partially offset by higher provisions for credit losses and higher expenses, compared with the prior year.

Total revenue was $6,983 million, an increase of $2,109 million or 43% from the prior year. Net interest income increased $1,925 million or 49%, due to the inclusion of Bank of the West, and higher net interest margins and loan balances, partially offset by lower deposit balances. Non-interest revenue increased $184 million or 19%, due to the inclusion of Bank of the West, partially offset by lower operating lease revenue and deposit and lending fee revenue. Net interest margin of 3.88% increased 24 basis points from the prior year, primarily due to higher deposit margins reflecting the impact of the higher interest rate environment and the inclusion of Bank of the West, partially offset by lower loan margins.

Personal and Business Banking revenue increased $1,200 million or 85% and Commercial Banking revenue increased $909 million or 26%, both due to the inclusion of Bank of the West and higher underlying net interest income, partially offset by lower underlying non-interest revenue.

Total provision for credit losses was $379 million, compared with a provision of $11 million in the prior year. The provision for credit losses on impaired loans was $282 million, an increase of $200 million from the prior year, reflecting higher Personal and Business Banking and Commercial Banking provisions. There was a $97 million provision for credit losses on performing loans in the current year, compared with a recovery of $71 million in the prior year.

Reported non-interest expense was $4,076 million, an increase of $1,723 million or 73%, primarily reflecting the impact of Bank of the West, as well as higher employee-related and advertising costs.

Average gross loans and acceptances increased $43.3 billion or 42% from the prior year to $145.5 billion, reflecting the impact of Bank of the West and underlying growth in Commercial Banking balances, partially offset by a decrease in Personal and Business Banking balances. Average deposits increased $34.4 billion or 31% to $147.2 billion, reflecting the impact of Bank of the West, partially offset by a decrease in underlying Commercial Banking and Personal and Business Banking deposits.

For further information on non-GAAP amounts, measures and ratios in this 2023 Operating Groups Performance Review section, refer to the Non-GAAP and Other Financial Measures section.

Business Environment and Outlook

U.S. P&C recorded strong results in fiscal 2023, driven by the successful integration of the Bank of the West acquisition. While the U.S. economy grew at a modest rate, inflation remained high and in response, the Federal Reserve raised the federal funds target rate in the current fiscal year to reach 5.33%. In addition, quantitative tightening and the failure of several U.S. regional banks intensified competition for deposits across the financial services sector, including from money market funds, putting pressure on net interest margins. Demand for business lending moderated and residential mortgage balance growth softened in response to higher interest rates, slower economic growth and weaker housing activity. Deposit balances have been declining as customers deployed excess savings and sought higher yields. Credit performance is normalizing from historical lows with credit migration trending higher. Commercial Banking continued to drive growth by adding new clients across its expanded footprint, despite intense competition and shrinking market liquidity. Personal and Business Banking continued to attract new clients through a Digital First strategy aimed at optimizing sales and delivering an enhanced client experience across all channels, enabled by leading digital, data analytics and marketing capabilities.

The U.S. economy is expected to slow in fiscal 2024, reflecting weaker consumer demand in response to higher interest rates, tighter lending conditions and the resumption of student loan repayments. The Federal Reserve is expected to hold policy rates steady before beginning a return to a more neutral position late in fiscal 2024, supporting a modest pickup in growth. Residential mortgage activity is expected to moderate further due to the weaker housing market, and consumer and business credit growth is expected to decelerate amid elevated interest rates, higher unemployment and weaker consumer spending growth. Credit performance is expected to deteriorate modestly in the upcoming year.

The financial services landscape in the United States remains highly competitive and is facing more stringent capital and liquidity constraints. U.S. P&C has demonstrated its ability to perform well through economic cycles, supported by its diversified growth strategy and expanded scale as a leading North American bank, with a presence in 32 states and in 21 of the top 50 U.S. metropolitan areas. We are committed to helping our customers, employees and local communities make real financial progress by harnessing all of BMO's capabilities to drive efficient growth – and by tailoring our products and offerings to client needs.

The U.S. economic environment in calendar 2023 and the outlook for calendar 2024 are discussed in more detail in the Economic Developments and Outlook section.

Caution

This U.S. Personal and Commercial Banking section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

BMO Wealth Management

BMO Wealth Management serves a full range of clients, from individuals and families to business owners and institutions, offering a wide spectrum of wealth, asset management and insurance products and services aimed at helping clients make real financial progress through planning, growing, protecting and transitioning their wealth. Our asset management business is focused on making a positive impact and delivering innovative financial solutions and strategies for our clients.

Lines of Business

BMO Private Wealth provides full-service investing, banking and wealth advisory services to high net worth and ultra-high net worth clients, leveraging individualized financial planning and advice-based solutions such as investment management, business succession planning, trust and estate services and philanthropy.

BMO InvestorLine leads Wealth Management's digital investing services, offering three ways for Canadian clients to invest: a self-directed online trading platform for investors who want to be in control of their investments; adviceDirect® for investors who want to make their own investment decisions with personalized advice and support; and SmartFolio® for investors who want low-fee, professionally managed portfolios aligned with their investment objectives.

BMO Wealth Management U.S. offers financial solutions to mass affluent, high net worth and ultra-high net worth individuals, families and businesses.

BMO Global Asset Management provides investment management services to institutional, retail and high net worth investors, offering a wide range of innovative, client-focused solutions and strategies to help clients meet their investment objectives.

BMO Insurance is a diversified insurance and wealth solutions provider and a leader in pension de-risking solutions. It manufactures individual life, critical illness and annuity products, as well as segregated funds. In addition, group creditor and travel insurance is available to customers in Canada through BMO.

Strategy and Key Priorities

2023 Priorities and Achievements

Key Priority: Scale our leadership position in private wealth advisory services across North America to plan, grow, protect and transition our clients' wealth with confidence

2023 Achievements

- Achieved top-tier loyalty scores across several BMO Wealth Management businesses, with Private Wealth Canada and BMO InvestorLine achieving record results, as measured by Net Promoter Score (1)
- Recognized by *World Finance* magazine as Best Private Bank in Canada for the 13th consecutive year and for the first time, as Best Private Bank in the United States

2024 Areas of Focus

- Accelerate growth across our client base by strengthening product and service offerings, deepening client relationships and growing distribution in core markets, while maintaining top-tier client loyalty scores in North America

Key Priority: Extend our advantage as a solutions provider, expanding asset management and insurance offerings in key growth areas, including environmental, social and governance and climate-focused offerings

2023 Achievements

- Launched new capabilities in exchange-traded funds (ETFs), providing investors with more choice in portfolio construction, as well as solutions for investors seeking exposure to key sectors
- Maintained our leadership position in Canadian ETFs, ranking first in net sales for 12 consecutive years (2)
- Recognized at the 2022 Canada Refinitiv Lipper Fund Awards (3), which honour funds and fund management firms that have excelled in delivering consistently strong risk-adjusted performance relative to their peers. Seven BMO ETFs claimed top honours across seven categories
- Received 18 FundGrade A+ Awards from Fundata Canada Inc., one of the most widely recognized analytics firms in the financial services industry for its objectivity in selecting funds with a record of consistent risk-adjusted performance
- Announced a new strategic partnership with Sagard, a global multi-strategy alternative asset management firm, in line with our commitment to building a market-leading alternatives platform with access to demonstrated investment experience through partnerships with top-tier managers
- Launched ESG Insights, a comprehensive research tool for self-directed clients that can help them build a more sustainable portfolio by evaluating environmental, social and governance risks and opportunities related to their investments

2024 Areas of Focus

- Continue to provide innovative and competitive product solutions across our distribution channels to meet the evolving needs of our clients

(1) Net Promoter Score (NPS): The percentage of customers surveyed who would recommend BMO to a friend or colleague.
(2) National Bank ETF Report as at December 31, 2022.
(3) Announced in fiscal 2023: 2022 Canada Refinitiv Lipper Fund Awards.

Key Priority: Deliver a top-tier digital wealth management offering, building on our differentiated digital advisory capabilities to provide an enhanced client experience, including streamlined processes that deliver efficiencies and value

2023 Achievements

- Maintained a top-two market share for self-managed assets with digital advisory services – a category that represents more than one third of total market assets
- BMO InvestorLine ranked in the top three in the *Globe and Mail* 2023 Digital Broker Ranking for consistently driving digital innovation that focuses on client needs and delivering an exceptional client experience
- Successfully rolled out BMO Smart Portfolio®, a new digital investment solution for BMO U.S. retail customers, providing them with the convenience of online investing and personalized portfolio management
- Launched BMO Active Trader, a web-based platform that enables our clients to execute trading strategies with ease and precision, supported by market insights, advanced technical charts and a customizable workspace

2024 Areas of Focus

- Continue to invest in technology platforms to simplify, streamline and integrate client digital experiences, along with leading advisor-facing tools and practice support

Key Priority: Provide a One Client experience, with improved delivery of services and products to our clients across BMO

2023 Achievements

- Leveraged digital channels and data analytics to deliver investment solutions to Personal Banking customers through BMO InvestorLine
- Significantly expanded product and service offerings through greater collaboration and more efficient integration with Personal and Commercial Banking

2024 Areas of Focus

- Deepen client relationships by working in partnership with colleagues across BMO, supported by data and analytics and a client-centric operating model

Key Priority: Foster a winning culture, focused on alignment, empowerment and recognition, with a commitment to a diverse and inclusive workplace

2023 Achievements

- Maintained strong employee engagement index scores, with improvement across many key metrics
- Well-represented in the inaugural *Globe and Mail* Report on Business list of 100 Top Women Wealth Advisors, which included 19 Nesbitt Burns advisors who manage exceptional businesses and are raising the bar for the industry

2024 Areas of Focus

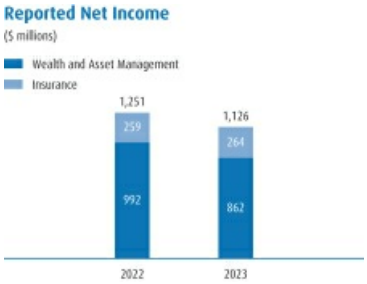
- Maintain an engaged and diverse workforce to promote innovation and enable strategic outperformance

BMO Wealth Management [1]

(Canadian $ in millions, except as noted)

As at or for the year ended October 31	2023	2022
Net interest income	**1,416**	1,188
Non-interest revenue	**5,978**	3,336
Total revenue	**7,394**	4,524
Insurance claims, commissions and changes in policy benefit liabilities (CCPB)	**1,939**	(683)
Revenue, net of CCPB	**5,455**	5,207
Provision for credit losses on impaired loans	**5**	2
Provision for (recovery of) credit losses on performing loans	**13**	(4)
Total provision for (recovery of) credit losses	**18**	(2)
Non-interest expense	**3,962**	3,564
Income before income taxes	**1,475**	1,645
Provision for income taxes	**349**	394
Reported net income	**1,126**	1,251
Amortization of acquisition-related intangible assets [2]	**4**	3
Adjusted net income	**1,130**	1,254
Adjusted non-interest expense	**3,955**	3,559
Net income available to common shareholders	**1,118**	1,243
Adjusted net income available to common shareholders	**1,122**	1,246
Key Performance Metrics		
Wealth and Asset Management reported net income	**862**	992
Wealth and Asset Management adjusted net income	**866**	995
Insurance net income	**264**	259
Return on equity (%) [3]	**17.6**	23.5
Adjusted return on equity (%) [3]	**17.7**	23.6
Operating leverage, net of CCPB (%)	**(6.4)**	(0.7)
Adjusted operating leverage, net of CCPB (%)	**(6.3)**	(1.3)
Efficiency ratio (%)	**53.6**	78.8
Adjusted efficiency ratio, net of CCPB (%)	**72.5**	68.4
Average assets	**58,661**	50,488
Average gross loans and acceptances	**40,851**	34,007
Average net loans and acceptances	**40,805**	33,974
Average deposits	**61,739**	55,919
Assets under administration (AUA) [4]	**416,352**	424,191
Assets under management (AUM)	**332,947**	305,462
Full-time equivalent employees	**6,417**	6,124
U.S. Business Select Financial Data (US$ in millions)		
Total revenue	**774**	576
Non-interest expense	**599**	458
Reported net income	**132**	91
Adjusted non-interest expense	**594**	454
Adjusted net income	**136**	94
Average gross loans and acceptances	**9,776**	5,937
Average deposits	**11,975**	7,528

(1) Revenue measures, net of CCPB, and adjusted results and ratios are on a non-GAAP basis and are discussed in the Non-GAAP and Other Financial Measures section.
(2) Amortization of acquisition-related intangible assets pre-tax amounts of $7 million in fiscal 2023 and $5 million in fiscal 2022 were recorded in non-interest expense.
(3) Return on equity is based on allocated capital. Effective fiscal 2023, the capital allocation rate increased to 11.0% of risk-weighted assets, compared with 10.5% in fiscal 2022. For further information, refer to the Non-GAAP and Other Financial Measures section.
(4) Certain assets under management that are also administered by BMO are included in assets under administration.







Financial Review

BMO Wealth Management reported net income was $1,126 million, compared with $1,251 million in the prior year. Wealth and Asset Management reported net income was $862 million, a decrease of $130 million or 13%, and Insurance net income was $264 million, an increase of $5 million or 2%.

We present revenue on a basis that is net of insurance claims, commissions and changes in policy benefit liabilities (CCPB), and we calculate our efficiency ratio and operating leverage on a similar basis.

Total revenue was $7,394 million, an increase of $2,870 million. Revenue, net of CCPB, was $5,455 million, an increase of $248 million or 5%. Wealth and Asset Management revenue was $4,971 million, an increase of $219 million or 5%, as the inclusion of Bank of the West, higher net new client assets and the impact of the stronger U.S. dollar were partially offset by the impact of weaker global markets, lower net interest income, primarily from lower deposit balances and the impact of lower revenue from online brokerage transactions. Insurance revenue, net of CCPB, was $484 million, an increase of $29 million or 6% from the prior year, primarily due to underlying business growth, partially offset by the impact of actuarial assumption changes in the current year.

Non-interest expense was $3,962 million, an increase of $398 million or 11% from the prior year, primarily reflecting the impact of Bank of the West, higher employee-related and technology costs, and the impact of the stronger U.S. dollar.

Assets under management increased $27.5 billion or 9% from the prior year to $332.9 billion, driven by higher net client assets, the impact of Bank of the West, stronger global markets and favourable foreign exchange movements. Assets under administration decreased $7.8 billion or 2% to $416.4 billion. Average gross loans increased 18% and average deposits increased 9%, primarily due to the inclusion of Bank of the West.

For further information on non-GAAP amounts, measures and ratios in this 2023 Operating Groups Performance Review section, refer to the Non-GAAP and Other Financial Measures section.

Business Environment and Outlook

In fiscal 2023, BMO Wealth Management results were impacted by challenging market conditions. We continued to support our clients with expert advice to help them navigate the impacts of market volatility, rising interest rates and macroeconomic uncertainty. As a result of higher interest rates, client preferences shifted toward fixed income products, and weaker global markets resulted in lower levels of assets under administration and assets under management, as well as a reduction in digital trading volumes. We continue to provide our clients with enhanced digital advisory capabilities and innovative solutions to meet their financial needs, leveraging BMO's comprehensive investment and banking products and services, leading to growth in net new assets, and positioning them to re-enter the market when markets stabilize. In addition, we completed the integration of Bank of the West, which is expected to provide new growth opportunities in our expanded markets.

The outlook for equity markets and the economy is shifting rapidly and continues to be impacted by elevated (though moderating) inflation, high interest rates and growing geopolitical tensions. Continued market volatility and near-term recessionary risks may impact our overall business performance, as we continue to focus on prudently managing expenses while strategically investing for growth.

The wealth management industry remains attractive, with good growth potential over the long term. Our expanded North American sales force, strong client loyalty and integrated business model position us well to meet our clients' evolving needs.

We continue to invest in technology to enhance the client experience and improve the productivity of our sales force. BMO InvestorLine continues to attract new clients through digital platform enhancements, while BMO Global Asset Management is building new capabilities to accelerate growth and diversify our product offerings for both retail and institutional clients.

The Canadian and U.S. economic environment in calendar 2023 and the outlook for calendar 2024 are discussed in more detail in the Economic Developments and Outlook section.

Caution
This BMO Wealth Management section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

BMO Capital Markets

BMO Capital Markets offers a comprehensive range of products and services to corporate, institutional and government clients. BMO Capital Markets has approximately 2,700 professionals in 33 locations around the world, supporting the growth aspirations of our clients across the enterprise.

Lines of Business

Investment and Corporate Banking offers debt and equity capital-raising services to clients, as well as loan origination and syndication, balance sheet management solutions and treasury management services. The division also provides clients with strategic advice on mergers and acquisitions, restructurings and recapitalizations, trade finance and risk mitigation services to support international business activities, along with a wide range of banking and other operating services tailored to North American and international financial institutions.

Global Markets offers research and access to financial markets for institutional, corporate and retail clients through an integrated suite of sales and trading solutions related to debt, foreign exchange, interest rates, credit, equities, securitization and commodities. New product development and origination services are also offered, as well as risk management and advisory services for hedging strategies, including in interest rates, foreign exchange rates and commodities prices. In addition, Global Markets provides funding and liquidity management services to clients.

Strategy and Key Priorities

2023 Priorities and Achievements

Key Priority: Drive client-focused growth and activate and scale a One Client approach, with improved connectivity and integrated offerings

2023 Achievements

- Maintained a leading position in global and North American mergers and acquisitions (M&A), advising on landmark transactions, including the largest investment to date by an automaker to produce battery raw materials, the largest industrial real estate investment trust (REIT) transaction in Canadian history and the third-largest public net lease REIT
- Partnered with Commercial Banking to deliver holistic, integrated coverage that resulted in successful convertible note offerings and middle-market M&A deals. This unified approach also delivered success with transitioning Bank of the West clients to the BMO platform, such as Wayfair and Granite Construction
- Maintained global leadership in metals and mining, and recognized as the world's best Metals & Mining Investment Bank by *Global Finance* magazine for the 14th consecutive year
- Delivered top-tier product performance across Global Markets – awarded Best Issuer Sales in Canadian retail structured notes, ranked first in Canadian equity block volumes and recognized as a top-five dealer in sovereign, supranational and agency (SSA) USD global issuances, U.S. treasuries, U.S. agency collateralized mortgage obligations (CMOs) and U.S. commercial mortgage-backed securities (CMBS) issuances

2024 Areas of Focus

- Accelerate a One Client approach, with improved connectivity and integrated offerings
- Build deep client relationships, deliver value-added solutions to meet their needs, and win through expertise, knowledge and insight

Key Priority: Be an industry leader in sustainable finance and our clients' lead partner in the transition to a net zero world

2023 Achievements

- Played a leadership role in sustainable finance and energy transition solutions – we ranked first in the sustainability-linked loan market, launched one of the first sustainability-linked deposit offerings in North America and acted as co-lead manager on the government of Canada's Ukraine sovereignty bond, which was recognized as Social Bond of the Year by *Environmental Finance*
- Advanced our Climate Ambition, adding carbon market expertise and capabilities with the integration of BMO Radicle
- Signed a memorandum of understanding with Banco do Brasil to provide sustainability-linked trade loans to Brazilian exporters, a first of its kind program that will accelerate lending to companies focused on sustainable and regenerative agriculture
- Sponsored and contributed thought leadership to industry-leading climate events such as the Bloomberg Sustainable Business Summit and New Energy Finance Forum, as well as our new Transition Think Summit

2024 Areas of Focus

- Maintain our leading position in sustainable finance and build on our strong foundation in climate leadership by adding capabilities to serve rapidly evolving markets

Key Priority: Deploy Digital First capabilities and solutions for speed, scale and simplification

2023 Achievements

- Scaled our digital capabilities to deliver new service models and enhance our offerings, including end-to-end digital platform capabilities to onboard new clients, provide advanced analytics and execute electronic trading
- Launched an agile testing and innovation environment for emerging technologies, including artificial intelligence and machine learning
- Implemented technology and workflow enhancements, as well as process automation to improve employee productivity
- Recognized with Breaking the Status Quo and Leading the Pack awards from Fintech Open Source Foundation for our progress on open source readiness

2024 Areas of Focus

- Leverage Digital First capabilities and data to improve operational efficiency and deliver innovative solutions
- Deliver client-centric, digitally-enabled service models with leading digital client portals and platforms

Key Priority: Foster a winning culture, focused on alignment, empowerment and recognition, with a commitment to a diverse and inclusive workplace

2023 Achievements

- Maintained strong employee engagement index scores, with ongoing improvement in all priority areas of our winning culture, including enablement and empowerment
- Continued to make progress on our Zero Barriers to Inclusion strategy, supporting communities through our hallmark programs, including *Equity Through Education* and *Trees from Trades*
- Advanced our diversity, equity and inclusion strategy and improved the representation of diversity in our talented and engaged workforce

2024 Areas of Focus

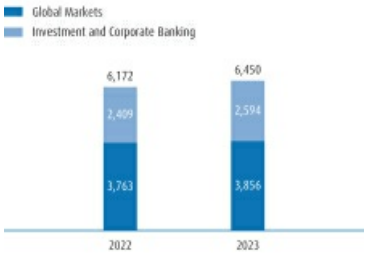
- Foster a winning culture focused on alignment, empowerment and recognition, while advancing progress on our Zero Barriers to Inclusion strategy

BMO Capital Markets [1]

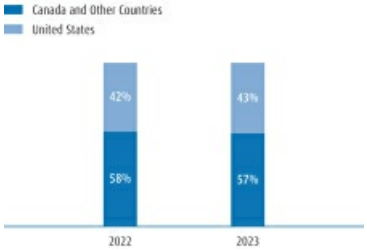
(Canadian $ in millions, except as noted) As at or for the year ended October 31	2023	2022
Net interest income (teb) (2)	**2,553**	3,197
Non-interest revenue	**3,897**	2,975
Total revenue (teb) (2)	**6,450**	6,172
Provision for (recovery of) credit losses on impaired loans	**9**	(32)
Provision for (recovery of) credit losses on performing loans	**9**	(11)
Total provision for (recovery of) credit losses	**18**	(43)
Non-interest expense	**4,279**	3,855
Income before income taxes	**2,153**	2,360
Provision for income taxes (teb) (2)	**471**	588
Reported net income	**1,682**	1,772
Acquisition and integration costs (3)	**4**	8
Amortization of acquisition-related intangible assets (4)	**20**	14
Adjusted net income	**1,706**	1,794
Adjusted non-interest expense	**4,247**	3,826
Net income available to common shareholders	**1,648**	1,732
Adjusted net income available to common shareholders	**1,672**	1,754
Key Performance Metrics		
Global Markets revenue	**3,856**	3,763
Investment and Corporate Banking revenue	**2,594**	2,409
Return on equity (%) (5)	**13.9**	15.0
Adjusted return on equity (%) (5)	**14.1**	15.2
Operating leverage (teb) (%)	**(6.5)**	(10.6)
Adjusted operating leverage (teb) (%)	**(6.5)**	(10.8)
Efficiency ratio (teb) (%)	**66.3**	62.5
Adjusted efficiency ratio (teb) (%)	**65.8**	62.0
PCL on impaired loans to average net loans and acceptances (%)	**0.01**	(0.05)
Average assets	**416,261**	390,306
Average gross loans and acceptances	**77,058**	63,254
Average net loans and acceptances	**76,751**	62,986
Full-time equivalent employees	**2,717**	2,815
U.S. Business Select Financial Data (US$ in millions)		
Total revenue (teb) (2)	**2,052**	2,010
Non-interest expense	**1,617**	1,471
Reported net income	**311**	415
Adjusted non-interest expense	**1,604**	1,450
Adjusted net income	**320**	431
Average assets	**138,475**	135,030
Average gross loans and acceptances	**29,003**	25,118

(1) Adjusted results and ratios are on a non-GAAP basis and are discussed in the Non-GAAP and Other Financial Measures section.
(2) Taxable equivalent basis (teb) amounts of $321 million in fiscal 2023 and $245 million in fiscal 2022 were recorded in net interest income, revenue and provision for income taxes, and were reflected in the ratios. For our U.S. businesses, teb amounts were US$nil in fiscal 2023 and US$11 million in fiscal 2022.
(3) Pre-tax acquisition and integration costs related to Clearpool and Radicle of $5 million in fiscal 2023 were recorded imon-interest expense. Pre-tax acquisition and integration costs related to KGS-Alpha and Clearpool of $10 million in fiscal 2022 were recorded in non-interest expense.
(4) Amortization of acquisition-related intangible assets pre-tax amounts of $27 million in fiscal 2023 and $19 million in fiscal 2022 were recorded in non-interest expense.
(5) Return on equity is based on allocated capital. Effective fiscal 2023, the capital allocation rate increased to 11.0% ofrisk-weighted assets, compared with 10.5% in fiscal 2022. For further information, refer to the Non-GAAP and Other Financial Measures section.

Revenue by Line of Business (teb) [2]
($ millions)



Revenue by Geography
(%)



Financial Review

BMO Capital Markets reported net income was $1,682 million, a decrease of $90 million or 5% from the prior year. Results were driven by higher revenue, more than offset by higher expenses and a higher provision for credit losses, compared with a recovery in the prior year.

Revenue was $6,450 million, an increase of $278 million or 5% from the prior year. Global Markets revenue increased $93 million or 2%, as lower trading revenue and equity and debt issuances were more than offset by higher revenue related to securitization activity and the impact of the stronger U.S. dollar. Investment and Corporate Banking revenue increased $185 million or 8%, primarily due to higher corporate banking-related revenue, the prior-year mark-down on loan underwriting commitments and the impact of the stronger U.S. dollar, partially offset by a decrease in underwriting and advisory revenue reflecting lower levels of client activity.

Total provision for credit losses was $18 million, compared with a recovery of $43 million in the prior year. The provision for credit losses on impaired loans was $9 million, compared with a recovery of $32 million in the prior year. There was a $9 million provision for credit losses on performing loans in the current year, compared with a recovery of $11 million in the prior year.

Non-interest expense was $4,279 million, an increase of $424 million or 11% from the prior year. The increase was driven by higher legal provisions and higher technology, employee-related and travel and business development costs, and the impact of the stronger U.S. dollar.

Average gross loans and acceptances increased $13.8 billion or 22% from the prior year to $77.1 billion, reflecting higher levels of lending activity across loan portfolios and the impact of the stronger U.S. dollar.

For further information on non-GAAP amounts, measures and ratios in this 2023 Operating Groups Performance Review section, refer to the Non-GAAP and Other Financial Measures section.

Business Environment and Outlook

BMO Capital Markets' performance in the current year reflected the strength of our diversified business in a volatile environment. Market conditions in fiscal 2023 reflected economic uncertainty, geopolitical tensions and a heightened risk of a recession, which lowered business confidence. While client trading activity has remained stable, client appetite for new M&A and issuance activity has been below historical levels. A number of disruptive forces, including rising interest rates, tightened money supply, a more assertive regulatory environment and a focus on climate change, are reshaping the banking and capital markets industry. BMO Capital Markets has responded by optimizing resources against the current environment to accelerate growth opportunities across its businesses and leveraging its digital-first capabilities and data to improve efficiency.

Looking forward, we expect a more constructive environment in the capital markets in fiscal 2024, reflecting more moderate inflation and an end to the current cycle of rising rates, although geopolitical risks may lead to further market disruption. Our robust and diversified platform positions us well to benefit from the normalization of market conditions and client activity across industry sectors.

Our strategy remains unchanged, with a client-centric approach to be a valued financial partner through the deployment of capital and our integrated offerings of digital-first solutions to help clients achieve their goals. We leverage our strong talent, sector expertise and thought leadership to support our clients in changing market environments. Our commitment to sustainability is integral to our strategy, with sustainable finance product offerings and advice to support clients in their transition to a net zero world. In addition, our disciplined and integrated approach to risk management, along with continued investments in technology infrastructure, should position the business well to adapt to evolving regulatory and compliance requirements. With a prominent presence in Canada and strong momentum in the United States, we are building a solid foundation for profitable growth and sustainable returns.

The Canadian and U.S. economic environment in calendar 2023 and the outlook for calendar 2024 are discussed in more detail in the Economic Developments and Outlook section.

Caution
This BMO Capital Markets section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Corporate Services, including Technology and Operations

Corporate Services consists of Corporate Units and Technology and Operations (T&O). Corporate Units provide enterprise-wide expertise, governance and support in a variety of areas, including strategic planning, risk management, treasury, finance, legal and regulatory compliance, sustainability, human resources, communications, marketing, real estate and procurement. T&O develops, monitors, manages and maintains governance of information technology, including data and analytics, and provides cyber security and operations services.

Corporate Services focuses on enterprise-wide priorities related to maintaining a sound internal control and risk management environment and regulatory compliance, including the management, assessment and monitoring of BMO's investment portfolios and funding, liquidity and capital activities, as well as any exposures to credit, foreign exchange and interest rate risks. In support of the operating segments, Corporate Services develops and implements enterprise-wide processes, systems and controls to maintain operating efficiency and enable our businesses to adapt and meet their customer experience objectives.

The costs of Corporate Units and T&O services are largely allocated to the four operating segments (Canadian P&C, U.S. P&C, BMO Wealth Management and BMO Capital Markets), with any remaining amounts retained in Corporate Services results. As such, Corporate Services results largely reflect the impact of residual unallocated expenses, residual treasury-related activities and the elimination of taxable equivalent adjustments. We review revenue and expense allocation methodologies on an annual basis.

Corporate Services, including Technology and Operations [1]

(Canadian $ in millions, except as noted) As at or for the year ended October 31	2023	2022
Net interest income before group teb offset	**(1,095)**	(716)
Group teb offset	**(354)**	(270)
Net interest income (teb)	**(1,449)**	(986)
Non-interest revenue	**(1,449)**	7,830
Total revenue (teb)	**(2,898)**	6,844
Provision for (recovery of) credit losses on impaired loans	**2**	(7)
Provision for (recovery of) credit losses on performing loans	**700**	7
Total provision for (recovery of) credit losses	**702**	–
Non-interest expense	**2,706**	1,383
Income (loss) before income taxes	**(6,306)**	5,461
Provision for (recovery of) income taxes (teb)	**(1,433)**	1,270
Reported net income (loss)	**(4,873)**	4,191
Initial provision for credit losses on purchased performing loans [2]	**517**	–
Acquisition and integration costs [3]	**1,520**	237
Impact of divestitures [4]	**–**	55
Management of fair value changes on the purchase of Bank of the West [5]	**1,461**	(5,667)
Legal provision (including related interest expense and legal fees) [6]	**21**	846
Impact of Canadian tax measures [7]	**502**	–
Adjusted net loss	**(852)**	(338)
Adjusted total revenue (teb)	**(719)**	(333)
Adjusted total recovery of credit losses	**(3)**	–
Adjusted non-interest expense	**660**	424
Net income (loss) available to common shareholders	**(5,081)**	4,087
Adjusted net loss available to common shareholders	**(1,060)**	(442)
Full-time equivalent employees	**18,181**	15,490
U.S. Business Select Financial Data (US$ in millions)		
Total revenue (teb) [8]	**(956)**	5,604
Total provision for (recovery of) credit losses	**518**	(4)
Non-interest expense	**1,688**	686
Provision for (recovery of) income taxes (teb) [8]	**(791)**	1,282
Reported net income (loss)	**(2,371)**	3,640
Adjusted total revenue	**571**	106
Adjusted total provision for (recovery of) credit losses	**1**	(4)
Adjusted non-interest expense	**190**	44
Adjusted net income (loss)	**240**	83

(1) Adjusted results are on a non-GAAP basis and are discussed in the Non-GAAP and Other Financial Measures section.
(2) Fiscal 2023 reported net income included a provision for credit losses of $517 million ($705 million pre-tax) on the purchased Bank of the West performing loan portfolio.
(3) Fiscal 2023 reported net income included acquisition and integration costs related to Bank of the West of $1,520 million ($2,027 million pre-tax), and fiscal 2022 included $237 million ($316 million pre-tax). These amounts were recorded in non-interest expense.
(4) Fiscal 2022 reported net income included the impact of divestitures related to the sale of our EMEA and U.S. Asset Management businesses, comprising a gain of $8 million related to the transfer of certain U.S. asset management clients and a $29 million loss related to foreign currency translation reclassified from accumulated other comprehensive income, both recorded in non-interest revenue, and expenses of $16 million, including taxes of $22 million on the closing of the sale, recorded in non-interest expense.
(5) Fiscal 2023 reported net income included a loss of $1,461 million ($2,011 million pre-tax) related to the acquisition of Bank of the West resulting from the management of the impact of interest rate changes between the announcement and closing of the acquisition on its fair value and goodwill, comprising $1,628 million of mark-to-market losses on certain interest rate swaps recorded in trading revenue and $383 million of losses on a portfolio of primarily U.S. treasuries and other balance sheet instruments recorded in net interest income. Fiscal 2022 included revenue of $5,667 million ($7,713 million pre-tax), comprising $7,665 million of mark-to-market gains and $48 million of non-trading interest income. For further information on this acquisition, refer to the Recent Acquisitions section.
(6) Fiscal 2023 reported net income included the impact of a lawsuit associated with a predecessor bank, M&I Marshall and Ilsley Bank, of $21 million ($27 million pre-tax), comprising interest expense of $30 million and a net non-interest expense recovery of $3 million. Fiscal 2022 included a provision of $846 million ($1,142 million pre-tax), comprising interest expense of $515 million and non-interest expense of $627 million. For further information, refer to the Provisions and Contingent Liabilities section in Note 24 of the audited annual consolidated financial statements.
(7) Fiscal 2023 reported net income included the impact of certain tax measures enacted by the Canadian government. These tax measures included a one-time tax expense of $371 million, comprising a Canada Recovery Dividend (CRD) of $312 million and $59 million related to the pro-rated fiscal 2022 impact of the 1.5% tax rate increase, net of a deferred tax asset remeasurement, and a charge of $131 million ($160 million pre-tax) related to the amended GST/HST definition for financial services, comprising $138 million recorded in non-interest revenue and $22 million recorded in non-interest expense.
(8) Fiscal 2023 reported net income included group teb offset amounts for our U.S. businesses of US$25 million and fiscal 2022 included US$31 million, recorded in revenue and provision for (recovery of) income taxes.

Financial Review

Corporate Services reported net loss was $4,873 million, compared with reported net income of $4,191 million in the prior year.

The reported net loss in the current year reflected a loss related to fair value management actions and the impact of certain Canadian tax measures, including the Canada Recovery Dividend and a charge related to the amended GST/HST definition for financial services, as well as higher acquisition and integration costs related to Bank of the West and an initial provision for credit losses on the purchased Bank of the West performing loan portfolio. Reported net income in the prior year reflected gains related to fair value management actions, partially offset by the impact of the lawsuit associated with M&I Marshall and Ilsley Bank.

Adjusted net loss was $852 million, compared with an adjusted net loss of $338 million in the prior year. Adjusted results were driven by higher expenses, primarily due to the inclusion of Bank of the West and lower revenue. Lower revenue was driven by treasury-related activities, partially offset by the impact of Bank of the West, which included the accretion of purchase accounting fair value marks on loans and deposits and the discount on securities, net of the amortization of the fair value hedge.

For further information on non-GAAP amounts, measures and ratios in this 2023 Operating Groups Performance Review section, refer to the Non-GAAP and Other Financial Measures section.

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Summary Quarterly Earnings Trends

Summarized Statement of Income and Quarterly Financial Measures (1)

(Canadian $ in millions, except as noted)	Q4-2023	Q3-2023	Q2-2023	Q1-2023	Q4-2022	Q3-2022	Q2-2022	Q1-2022
Net interest income	**4,941**	**4,905**	**4,814**	**4,021**	3,767	4,197	3,902	4,019
Non-interest revenue	**3,419**	**3,024**	**3,626**	**2,449**	6,803	1,902	5,416	3,704
Revenue (1)	**8,360**	**7,929**	**8,440**	**6,470**	10,570	6,099	9,318	7,723
Insurance claims, commissions and changes in policy benefit liabilities (CCPB)	**151**	**4**	**591**	**1,193**	(369)	413	(808)	81
Revenue, net of CCPB (1)	**8,209**	**7,925**	**7,849**	**5,277**	10,939	5,686	10,126	7,642
Provision for credit losses on impaired loans	**408**	**333**	**243**	**196**	192	104	120	86
Provision for (recovery of) credit losses on performing loans	**38**	**159**	**780**	**21**	34	32	(70)	(185)
Total provision for (recovery of) credit losses	**446**	**492**	**1,023**	**217**	226	136	50	(99)
Non-interest expense	**5,700**	**5,594**	**5,522**	**4,403**	4,776	3,859	3,713	3,846
Income before income taxes	**2,063**	**1,839**	**1,304**	**657**	5,937	1,691	6,363	3,895
Provision for income taxes	**446**	**385**	**245**	**410**	1,454	326	1,607	962
Reported net income (see below)	**1,617**	**1,454**	**1,059**	**247**	4,483	1,365	4,756	2,933
Initial provision for credit losses on purchased performing loans (2)	**–**	**–**	**517**	**–**	–	–	–	–
Acquisition and integration costs (3)	**433**	**370**	**549**	**181**	145	62	28	10
Amortization of acquisition-related intangible assets (4)	**88**	**85**	**85**	**6**	6	5	6	6
Impact of divestitures (5)	**–**	**–**	**–**	**–**	(8)	6	9	48
Management of fair value changes on the purchase of Bank of the West (6)	**–**	**–**	**–**	**1,461**	(3,336)	694	(2,612)	(413)
Legal provision (including related interest expense and legal fees) (7)	**12**	**(3)**	**6**	**6**	846	–	–	–
Impact of Canadian tax measures (8)	**–**	**131**	**–**	**371**	–	–	–	–
Adjusted net income	**2,150**	**2,037**	**2,216**	**2,272**	2,136	2,132	2,187	2,584
Operating Group Reported and Adjusted Net Income								
Canadian P&C reported net income	**962**	**915**	**861**	**980**	917	965	940	1,004
Acquisition and integration costs (3)	**1**	**6**	**2**	**–**	–	–	–	–
Amortization of acquisition-related intangible assets (4)	**3**	**2**	**1**	**–**	–	–	1	–
Canadian P&C adjusted net income	**966**	**923**	**864**	**980**	917	965	941	1,004
U.S. P&C reported net income	**661**	**576**	**789**	**698**	660	568	588	681
Amortization of acquisition-related intangible assets (4)	**79**	**77**	**77**	**1**	2	1	1	1
U.S. P&C adjusted net income	**740**	**653**	**866**	**699**	662	569	589	682
BMO Wealth Management reported net income	**262**	**303**	**284**	**277**	298	324	314	315
Amortization of acquisition-related intangible assets (4)	**1**	**1**	**1**	**1**	–	1	1	1
BMO Wealth Management adjusted net income	**263**	**304**	**285**	**278**	298	325	315	316
BMO Capital Markets reported net income	**489**	**310**	**380**	**503**	357	262	448	705
Acquisition and integration costs (3)	**(2)**	**1**	**2**	**3**	2	1	2	3
Amortization of acquisition-related intangible assets (4)	**5**	**5**	**6**	**4**	4	3	3	4
BMO Capital Markets adjusted net income	**492**	**316**	**388**	**510**	363	266	453	712
Corporate Services reported net income (loss)	**(757)**	**(650)**	**(1,255)**	**(2,211)**	2,251	(754)	2,466	228
Initial provision for credit losses on purchased performing loans (2)	**–**	**–**	**517**	**–**	–	–	–	–
Acquisition and integration costs (3)	**434**	**363**	**545**	**178**	143	61	26	7
Impact of divestitures (5)	**–**	**–**	**–**	**–**	(8)	6	9	48
Management of fair value changes on the purchase of Bank of the West (6)	**–**	**–**	**–**	**1,461**	(3,336)	694	(2,612)	(413)
Legal provision (including related interest expense and legal fees) (7)	**12**	**(3)**	**6**	**6**	846	–	–	–
Impact of Canadian tax measures (8)	**–**	**131**	**–**	**371**	–	–	–	–
Corporate Services adjusted net income (loss)	**(311)**	**(159)**	**(187)**	**(195)**	(104)	7	(111)	(130)
Key Performance Metrics								
Basic earnings per share ($) (9)	**2.07**	**1.97**	**1.31**	**0.30**	6.52	1.96	7.15	4.44
Diluted earnings per share ($) (9)	**2.06**	**1.97**	**1.30**	**0.30**	6.51	1.95	7.13	4.43
Adjusted diluted earnings per share ($)	**2.81**	**2.78**	**2.93**	**3.22**	3.04	3.09	3.23	3.89
Net interest margin on average earning assets (%)	**1.66**	**1.68**	**1.69**	**1.48**	1.46	1.71	1.69	1.64
PCL-to-average net loans and acceptances (annualized) (%)	**0.27**	**0.30**	**0.65**	**0.15**	0.16	0.10	0.04	(0.08)
PCL on impaired loans-to-average net loans and acceptances (annualized) (%)	**0.25**	**0.21**	**0.16**	**0.14**	0.14	0.08	0.10	0.07
Effective tax rate (%)	**21.6**	**20.9**	**18.8**	**62.5**	24.5	19.3	25.2	24.7
Adjusted effective tax rate (%)	**22.7**	**21.8**	**22.5**	**22.3**	21.8	22.0	23.6	23.5
Canadian/U.S. dollar average exchange rate ($)	**1.3648**	**1.3331**	**1.3564**	**1.3426**	1.3516	1.2774	1.2665	1.2710

(1) Adjusted results exclude certain items from reported results and are used to calculate our adjusted measures as presented in the above table. Management assesses performance on a reported basis and an adjusted basis, and considers both to be useful. Revenue, net of CCPB, as well as reported ratios calculated net of CCPB, and adjusted results, measures and ratios in this table are non-GAAP amounts. For further information, refer to the Non-GAAP and Other Financial Measures section; and for details on the composition of non-GAAP amounts, measures and ratios, as well as supplementary financial measures, refer to the Glossary of Financial Terms.

(2) Reported net income included a provision for credit losses of $517 million ($705 million pre-tax) on the acquired Bank of the West performing loan portfolio in Q2-2023, recorded in Corporate Services.

(3) Reported net income included acquisition and integration costs recorded in non-interest expense. Costs related to the acquisition of Bank of the West were recorded in Corporate Services. Q4-2023 included $434 million ($583 million pre-tax), Q3-2023 included $363 million ($487 million pre-tax), Q2-2023 included $545 million ($722 million pre-tax), Q1-2023 included $178 million ($235 million pre-tax), Q4-2022 included $143 million ($191 million pre-tax), Q3-2022 included $61 million ($82 million pre-tax), Q2-2022 included $26 million ($35 million pre-tax) and Q1-2022 included $7 million ($8 million pre-tax). Costs related to Radicle and Clearpool were recorded in BMO Capital Markets: Q3-2023 included $1 million ($2 million pre-tax), Q2-2023 included $2 million ($2 million pre-tax), Q1-2023 included $3 million ($4 million pre-tax), Q4-2022 included $2 million ($2 million pre-tax), Q3-2022 included $1 million ($2 million pre-tax), Q2-2022 included $2 million ($2 million pre-tax) and Q1-2022 included $3 million ($4 million pre-tax). Q4-2023 included a recovery of $2 million ($3 million pre-tax). Costs related to the acquisition of AIR MILES were recorded in Canadian P&C: Q4-2023 included $1 million ($2 million pre-tax), Q3-2023 included $6 million ($8 million pre-tax) and Q2-2023 included $2 million ($3 million pre-tax).

(4) Reported net income included amortization of acquisition-related intangible assets recorded in non-interest expense in the related operating group: Q4-2023 included $88 million ($119 million pre-tax), Q3-2023 and Q2-2023 both included $85 million ($115 million pre-tax), Q1-2023 and Q4-2022 both included $6 million ($8 million pre-tax), Q3-2022 included $5 million ($7 million pre-tax), and Q2-2022 and Q1-2022 both included $6 million ($8 million pre-tax).

(5) Reported net income in fiscal 2022 included the impact of divestitures related to the sale of our EMEA and U.S. Asset Management businesses: Q4-2022 included an $8 million ($6 million pre-tax) recovery of non-interest expense; Q3-2022 included non-interest expense of $6 million ($7 million pre-tax); Q2-2022 included a loss of $9 million ($10 million pre-tax), comprising a gain of $8 million related to the transfer of certain U.S. asset management clients recorded in non-interest revenue and non-interest expense of $18 million; and Q1-2022 included a loss of $48 million ($26 million pre-tax), comprising a $29 million loss related to foreign currency translation reclassified from accumulated other comprehensive income to non-interest revenue, and a $3 million net recovery of non-interest expense, including taxes of $22 million on closing of the sale of our EMEA Asset Management businesses. These amounts were recorded in Corporate Services.

(6) Reported net income included revenue (losses) related to the acquisition of Bank of the West resulting from the management of the impact of interest rate changes between the announcement and closing of the acquisition on its fair value and goodwill: Q1-2023 included a loss of $1,461 million ($2,011 million pre-tax), comprising $1,628 million of mark-to-market losses on certain interest rate swaps recorded in non-interest trading revenue and $383 million of losses on a portfolio of primarily U.S. treasuries and other balance sheet instruments recorded in net interest income; Q4-2022 included revenue of $3,336 million ($4,541 million pre-tax), comprising $4,698 million of mark-to-market gains and $157 million of net interest losses; Q3-2022 included a loss of $694 million ($945 million pre-tax), comprising $983 million of mark-to-market losses and $38 million of net interest income; Q2-2022 included revenue of $2,612 million ($3,555 million pre-tax), comprising $3,433 million of mark-to-market gains and $122 million of net interest income; and Q1-2022 included revenue of $413 million ($562 million pre-tax), comprising $517 million of mark-to-market gains and $45 million of net interest income. These amounts were recorded in Corporate Services. For further information on this acquisition, refer to the Recent Acquisitions section.

(7) Reported net income included the impact of a lawsuit associated with a predecessor bank, M&I Marshall and Ilsley Bank Q4-2023 included $12 million ($16 million pre-tax), comprising interest expense of $14 million and non-interest expense of $2 million; Q3-2023 included a net recovery of $3 million ($4 million pre-tax), comprising interest expense of $3 million and a non-interest expense recovery of $7 million; Q2-2023 included interest expense of $6 million ($7 million pre-tax); Q1-2023 included $6 million ($8 million pre-tax), comprising interest expense of $6 million and non-interest expense of $2 million; and Q4-2022 included a legal provision of $846 million ($1,142 million pre-tax), comprising interest expense of $515 million and non-interest expense of $627 million. These amounts were recorded in Corporate Services. For further information, refer to the Provisions and Contingent Liabilities section in Note 24 of the audited annual consolidated financial statements.

(8) Reported net income included the impact of certain tax measures enacted by the Canadian government: Q3-2023 included a charge of $131 million ($160 million pre-tax) related to the amended GST/HST definition for financial services, comprising $138 million recorded in non-interest revenue and $22 million recorded in non-interest expense; and Q1-2023 included a one-time tax expense of $371 million, comprising a Canada Recovery Dividend (CRD) of $312 million and $59 million related to the pro-rated fiscal 2022 impact of the 1.5% tax rate increase, net of a deferred tax asset remeasurement. These amounts were recorded in Corporate Services.

(9) Net income and earnings from our business operations are attributable to shareholders by way of EPS and diluted EPS. Adjusted EPS and adjusted diluted EPS are non-GAAP measures. For further information, refer to the Non-GAAP and Other Financial Measures section.

Earnings in certain quarters are impacted by modest seasonal factors, such as higher employee expenses related to higher employee benefits and stock-based compensation for employees eligible to retire that are recorded in the first quarter of each year, as well as the impact of fewer days in the second quarter relative to other quarters. Quarterly earnings are also impacted by foreign currency translation. The table above outlines summary results for the first quarter of 2022 through the fourth quarter of 2023.

On February 1, 2023, we completed the acquisition of Bank of the West, which contributed to the increase in revenue, expenses and provision for credit losses beginning in the second quarter of 2023, with operating results primarily allocated to our U.S. P&C and BMO Wealth Management businesses. In addition, we completed the acquisition of AIR MILES Reward Program (AIR MILES) on June 1, 2023, which contributed to the increase in revenue and expenses in our Canadian P&C business beginning in the third quarter of 2023.

Financial performance has demonstrated good operating momentum and benefitted from the strength and diversification of our businesses. Results were impacted by a higher interest rate environment resulting in an increase in net interest income, while uncertain economic conditions resulted in lower levels of client activity in our market-sensitive businesses, as well as higher provisions for credit losses from historically low levels.

A number of items impacted reported results in certain quarters. The third quarter and first quarter of 2023 included the impact of certain tax measures enacted by the Canadian government, reducing revenue and increasing expenses and provision for income taxes. The second quarter of 2023 included an initial provision for credit losses on the purchased Bank of the West performing loan portfolio. The first quarter of 2023 and fiscal 2022 included revenue (losses) resulting from fair value management actions related to the impact of interest rate changes between the announcement and closing of the Bank of the West acquisition on its fair value and goodwill. The fourth quarter of 2022 included a legal provision related to a lawsuit associated with a predecessor bank, M&I Marshall and Ilsley Bank. Results in 2022 included the impact of divestitures related to the sale of our EMEA and U.S. Asset Management businesses. All periods included acquisition and integration costs, as well as the amortization of acquisition-related intangible assets, which increased in recent quarters due to the acquisition of Bank of the West.

Revenue in our P&C businesses benefitted from customer acquisition, higher loan and deposit volumes and margin expansion, reflective of higher rate environments in both Canada and the United States, as well as the inclusion of Bank of the West revenue. Revenue in BMO Wealth Management benefitted from steady growth in client assets and higher net interest income, while the impact of weaker global markets in fiscal 2023 negatively impacted non-interest revenue, relative to fiscal 2022. Insurance revenue, net of CCPB, is subject to variability, resulting from changes in interest rates and equity markets. BMO Capital Markets' performance in recent quarters reflects modest improvements in market conditions, particularly in M&A and underwriting activities.

Early in 2022, as the economy recovered from the economic downturn brought on by the pandemic, we recovered provisions on performing loans, reflecting favourable credit conditions and positive credit migration. Later in 2022, we saw signs of normalization in credit conditions with gradually increasing provisions on impaired loans and modest provisions on performing loans reflecting balance growth and deterioration in the economic outlook. In 2023, the macroeconomic outlook improved, but this was more than offset by downward credit migration, resulting in higher provisions for performing loans and an increase in losses on impaired loans during the year.

Non-interest expense growth has reflected investments to drive revenue growth and efficiency improvement, as well as the impact of inflation, resulting in higher employee-related costs, including sales force expansion, higher salaries and performance-based compensation, as well as higher technology and advertising costs. The third quarter of fiscal 2023 included severance costs to accelerate efficiency initiatives across the enterprise, as well as the impact of legal provisions recorded in BMO Capital Markets.

The effective tax rate has varied with legislative changes; changes in tax policy, including their interpretation by tax authorities and the courts; earnings mix, including the relative proportion of earnings attributable to the different jurisdictions in which we operate, the level of pre-tax income, and the level of investments or securities which generate tax credits, or tax-exempt income from securities. The reported effective tax rate was impacted by certain tax measures enacted by the Canadian government as noted above, fair value management actions relating to the acquisition of Bank of the West in the first quarter of 2023 and in fiscal 2022, and the sale of our EMEA and U.S. Asset Management businesses in 2022.

For further information on non-GAAP amounts, measures and ratios in this Summary Quarterly Earnings Trends section, refer to the Non-GAAP and Other Financial Measures section.

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Review of Fourth Quarter 2023 Performance

Q4 2023 vs. Q4 2022

Net Income

Reported net income was $1,617 million, a decrease of $2,866 million or 64% from the prior year, and adjusted net income was $2,150 million, an increase of $14 million or 1% from the prior year. Adjusted results in both the current quarter and the prior year excluded acquisition and integration costs, amortization of acquisition-related intangible assets and the impact of a lawsuit associated with a predecessor bank, M&I Marshall and Ilsley Bank. Adjusted results in the prior year also excluded the impact of fair value management actions related to the acquisition of Bank of the West. Reported EPS was $2.06, a decrease of $4.45 from the prior year, and adjusted EPS was $2.81, a decrease of $0.23, including the impact of common share issuances in the first quarter of 2023.

The decrease in reported results reflected the impact of fair value management actions in the prior year and higher acquisition-related costs in the current quarter, partially offset by lower legal provisions related to the lawsuit noted above. Adjusted net income increased due to the inclusion of Bank of the West, as well as higher underlying revenue, largely offset by higher expenses and a higher provision for credit losses.

Revenue

Reported revenue was $8,360 million, a decrease of $2,210 million or 21% from the prior year. Revenue, net of insurance claims, commissions and changes in policy benefit liabilities (CCPB), was $8,209 million, a decrease of $2,730 million or 25% from the prior year, and adjusted revenue, net of CCPB, was $8,223 million, an increase of $1,310 million or 19%. The decrease in reported results primarily reflected the impact of fair value management actions in the prior year, partially offset by lower interest expense related to the lawsuit associated with M&I Marshall and Ilsley Bank. On an adjusted basis, revenue, net of CCPB, increased across all operating groups, including the addition of Bank of the West and AIR MILES, reflecting higher net interest income and non-interest revenue. Revenue in Corporate Services decreased on a reported and an adjusted basis.

Insurance Claims, Commissions and Changes in Policy Benefit Liabilities

Insurance claims, commissions and changes in policy benefit liabilities (CCPB) were $151 million, an increase of $520 million from the prior year, largely driven by higher annuity premiums. These changes were largely offset in insurance revenue.

Provision for Credit Losses

Total provision for credit losses was $446 million, compared with $226 million in the prior year. The total provision for credit losses as a percentage of average net loans and acceptances ratio was 27 basis points, compared with 16 basis points in the prior year. The provision for credit losses on impaired loans was $408 million, an increase of $216 million from the prior year. The provision for credit losses on impaired loans as a percentage of average net loans and acceptances ratio was 25 basis points, compared with 14 basis points in the prior year. The provision for credit losses on performing loans was $38 million, compared with a $34 million provision in the prior year.

Non-Interest Expense

Reported non-interest expense was $5,700 million, an increase of $924 million or 19% from the prior year, and adjusted non-interest expense was $4,997 million, an increase of $1,043 million or 26%. Reported results reflected higher acquisition and integration costs and amortization of acquisition-related intangible assets compared with the prior year, partially offset by lower expenses related to the lawsuit associated with M&I Marshall and Ilsley Bank. Reported and adjusted non-interest expense increased due to the impact of Bank of the West and AIR MILES, as well as higher employee-related costs, higher premises costs, including a charge related to the consolidation of BMO real estate in the current quarter, and higher advertising costs.

Provision for Income Taxes

The reported provision for income taxes was $446 million, a decrease of $1,008 million from the fourth quarter of 2022, and the adjusted provision for income taxes was $630 million, an increase of $33 million. The effective tax rate for the current quarter was 21.6%, compared with 24.5% in the fourth quarter of 2022, and the adjusted effective tax rate was 22.7% in the current quarter, compared with 21.8%. The change in the reported effective tax rate in the current quarter relative to the fourth quarter of 2022 was primarily due to the impact of higher pre-tax earnings in the prior year, and the change in the adjusted effective tax rate was primarily due to earnings mix.

Q4 2023 vs. Q3 2023

Reported net income increased $163 million or 11% from the prior quarter, and adjusted net income increased $113 million or 6%. The increase in reported net income was primarily due to the impact of certain tax measures in the prior quarter, partially offset by higher acquisition-related costs in the current quarter. The increase in adjusted net income primarily reflected higher revenue. Reported net income increased in BMO Capital Markets, Canadian P&C and U.S. P&C, and decreased in BMO Wealth Management. Corporate Services recorded a higher net loss on both a reported and an adjusted basis, compared with the prior quarter.

Reported revenue increased $431 million or 5% from the prior quarter. Reported revenue, net of CCPB, increased $284 million or 4%, including the impact of certain tax measures in the prior quarter, and adjusted revenue, net of CCPB, increased $157 million or 2% from the prior quarter, reflecting higher net interest income and higher non-interest revenue. CCPB increased $147 million from the prior quarter, reflecting higher annuity premiums and lower claims associated with a change in our longevity portfolios in the prior quarter, partially offset by changes in the fair value of investments. These changes were largely offset in insurance revenue. Reported non-interest expense increased $106 million or 2% from the prior quarter, and adjusted non-interest expense increased $30 million or 1%, primarily due to the impact of the stronger U.S. dollar. Total provision for credit losses decreased $46 million from the prior quarter, with a higher provision on impaired loans more than offset by a lower provision on performing loans.

For further information on non-GAAP amounts, measures and ratios in this Review of Fourth Quarter 2023 Performance section, refer to the Non-GAAP and Other Financial Measures section.

2022 Financial Performance Review

The preceding discussions in the MD&A focused on BMO's performance in fiscal 2023. This section summarizes BMO's performance in fiscal 2022 relative to fiscal 2021. Periodically, certain lines of business and units within our organizational structure are realigned to support our strategic priorities, and comparative figures in prior periods have been reclassified to conform with the current period's presentation. Further information on these reclassifications is provided in the How BMO Reports Operating Group Results section.

(Canadian $ in millions)	Canadian P&C	U.S. P&C	Total P&C	BMO Wealth Management	BMO Capital Markets	Corporate Services	Total Bank
2022							
Net interest income (loss) (1)	7,449	5,037	12,486	1,188	3,197	(986)	15,885
Non-interest revenue	2,419	1,265	3,684	3,336	2,975	7,830	17,825
Revenue (1)	9,868	6,302	16,170	4,524	6,172	6,844	33,710
Insurance claims, commissions and changes in policy benefit liabilities (CCPB)	–	–	–	(683)	–	–	(683)
Revenue, net of CCPB	9,868	6,302	16,170	5,207	6,172	6,844	34,393
Provision for (recovery of) credit losses	341	17	358	(2)	(43)	–	313
Non-interest expense	4,349	3,043	7,392	3,564	3,855	1,383	16,194
Income before income taxes	5,178	3,242	8,420	1,645	2,360	5,461	17,886
Provision for income taxes (1)	1,352	745	2,097	394	588	1,270	4,349
Net income (loss)	3,826	2,497	6,323	1,251	1,772	4,191	13,537
Acquisition and integration costs	–	–	–	–	8	237	245
Amortization of acquisition-related intangible assets	1	5	6	3	14	–	23
Impact of divestitures	–	–	–	–	–	55	55
Restructuring costs (reversals)	–	–	–	–	–	–	–
Legal provision (including related interest expense and legal fees)	–	–	–	–	–	846	846
Management of fair value changes on the purchase of Bank of the West	–	–	–	–	–	(5,667)	(5,667)
Adjusted net income (loss)	3,827	2,502	6,329	1,254	1,794	(338)	9,039
2021							
Net interest income (loss) (1)	6,561	4,268	10,829	982	3,115	(616)	14,310
Non-interest revenue	2,225	1,243	3,468	6,071	3,011	326	12,876
Revenue (1)	8,786	5,511	14,297	7,053	6,126	(290)	27,186
Insurance claims, commissions and changes in policy benefit liabilities (CCPB)	–	–	–	1,399	–	–	1,399
Revenue, net of CCPB	8,786	5,511	14,297	5,654	6,126	(290)	25,787
Provision for (recovery of) credit losses	377	(144)	233	(12)	(194)	(7)	20
Non-interest expense	3,968	2,813	6,781	3,843	3,462	1,423	15,509
Income (loss) before income taxes	4,441	2,842	7,283	1,823	2,858	(1,706)	10,258
Provision for (recovery of) income taxes (1)	1,153	666	1,819	441	738	(494)	2,504
Net income (loss)	3,288	2,176	5,464	1,382	2,120	(1,212)	7,754
Acquisition and integration costs	–	–	–	–	7	–	7
Amortization of acquisition-related intangible assets	1	24	25	24	17	–	66
Impact of divestitures	–	–	–	–	–	842	842
Restructuring costs (reversals)	–	–	–	–	–	(18)	(18)
Adjusted net income (loss)	3,289	2,200	5,489	1,406	2,144	(388)	8,651

(1) Operating group revenue, net interest income and provision for income taxes are presented on a taxable equivalent basis (teb). The offset to the groups' teb adjustments is reflected in Corporate Services. For further information, refer to the How BMO Reports Operating Group Results section.

Revenue measures, net of CCPB, and adjusted results and ratios are on a non-GAAP basis and are discussed in the Non-GAAP and Other Financial Measures section.

Refer to footnotes (1) to (8) in the Non-GAAP and Other Financial Measures table for further information on adjusting items.

Net Income

Reported net income in 2022 was $13,537 million, an increase of $5,783 million or 75% from 2021, and adjusted net income was $9,039 million, an increase of $388 million or 4%. Reported results in 2022 included revenue of $5,667 million ($7,713 million pre-tax) related to management of the impact of interest rate changes between the announcement and closing of the Bank of the West acquisition on its fair value and goodwill, and related acquisition and integration costs of $237 million ($316 million pre-tax). In addition, 2022 included the impact of a lawsuit associated with a predecessor bank, M&I Marshall and Ilsley Bank, of $846 million ($1,142 million pre-tax), and the impact of divestitures related to the sale of our EMEA Asset Management businesses and the transfer of certain U.S. asset management clients of $55 million. Reported results in 2021 included a $779 million (pre-tax and after-tax) write-down of goodwill related to the sale of our EMEA Asset Management businesses, a $22 million ($29 million pre-tax) net gain on the sale of our Private Banking business in Hong Kong and Singapore, and $85 million ($107 million pre-tax) of divestiture-related costs for both transactions, partially offset by the partial reversal of $18 million ($24 million pre-tax) of restructuring charges recorded in 2019 related to severance. In addition, reported net income in both years included the amortization of acquisition-related intangible assets and acquisition and integration costs. The increase in reported net income was driven by the impact of fair value management actions in 2022. Adjusted results increased, primarily due to higher net revenue, partially offset by higher expenses and a higher provision for credit losses. Net income increased in our P&C businesses, and decreased in BMO Capital Markets and BMO Wealth Management. On a reported basis, Corporate Services recorded net income of $4,191 million, compared with a net loss of $1,212 million in the prior year, and on an adjusted basis recorded a lower net loss compared with the prior year.

Return on Equity

Reported return on equity (ROE) was 22.9% in 2022 and adjusted ROE was 15.2%, compared with 14.9% and 16.7%, respectively, in 2021. Reported ROE increased due to higher net income, including the impact of fair value management actions related to the acquisition of Bank of the West. Adjusted ROE decreased, as higher net income was offset by an increase in common equity. Average common shareholders' equity increased $7.6 billion or 15% from 2021, primarily due to growth in retained earnings and the issuance of common shares related to the acquisition of Bank of the West, partially offset by a decrease in accumulated other comprehensive income. The reported return on tangible common equity (ROTCE) was 25.1% in 2022, compared with 17.0% in 2021, and adjusted ROTCE was 16.6%, compared with 18.9%. Book value per share increased 19% from 2021 to $95.60 in 2022, reflecting the increase in shareholders' equity.

Revenue

Reported revenue in 2022 was $33,710 million, an increase of $6,524 million from 2021, and adjusted revenue was $26,533 million, a decrease of $624 million or 2%. On a basis that nets insurance claims, commissions and changes in policy benefit liabilities (CCPB) against insurance revenue (net revenue), reported net revenue in 2022 was $34,393 million, an increase of $8,606 million or 33% from 2021, and adjusted net revenue was $27,216 million, an increase of $1,458 million or 6%. Reported revenue in 2022 included $7,713 million related to fair value management actions, comprising $7,665 million of pre-tax mark-to-market gains on certain interest rate swaps recorded in non-interest trading revenue and $48 million of non-trading interest income on a portfolio of primarily U.S. treasury securities. In addition, reported revenue included interest expense of $515 million related to the lawsuit noted above. Both years included the impact of divestitures.

Canadian P&C

Total revenue in 2022 increased $1,082 million or 12% from 2021. Net interest income increased $888 million or 14%, due to higher loan and deposit balances and higher net interest margins. Non-interest revenue increased $194 million or 9%, with higher revenue across most categories, including card-related revenue and deposit fee revenue, partially offset by lower gains on investments in our commercial business. Personal and Business Banking revenue increased $736 million or 12%, and Commercial Banking revenue increased $346 million or 13%.

U.S. P&C

Total revenue in 2022 increased $791 million or 14% from 2021 on a Canadian dollar basis. On a U.S. dollar basis, revenue increased $484 million or 11%, primarily due to an increase in net interest income of $493 million or 14%, reflecting higher loan and deposit balances and higher net interest margins, partially offset by lower Paycheck Protection Program (PPP) [(1)] revenue. Non-interest revenue was relatively unchanged. Commercial Banking revenue increased $377 million or 12%, and Personal and Business Banking revenue increased $107 million or 8%.

BMO Wealth Management

Total revenue in 2022 was $4,524 million, compared with $7,053 million in 2021. Revenue, net of CCPB, in 2022 decreased $447 million or 8%. Revenue in Wealth and Asset Management decreased $426 million or 8%, due to divestitures, partially offset by underlying revenue growth of 5%, reflecting higher net interest income due to strong deposit and loan growth and higher net interest margins, as well as the benefit from growth in net new client assets, partially offset by lower online brokerage transaction revenue and the impact of weaker global markets. Insurance revenue, net of CCPB, decreased $21 million or 5% from 2021, primarily due to the impact of less favourable market movements in 2022 relative to 2021.

BMO Capital Markets

Revenue in 2022 increased $46 million or 1% from 2021. Global Markets revenue increased $158 million or 4%, primarily due to higher foreign exchange, equities and commodities trading revenue and the impact of the stronger U.S. dollar, partially offset by lower interest rate trading revenue and lower levels of new equity and debt issuances. Investment and Corporate Banking revenue decreased $112 million or 4%, primarily due to lower net securities gains, lower underwriting and advisory revenue reflecting lower levels of client activity given market conditions, and mark-downs on loan underwriting commitments, partially offset by higher corporate banking-related revenue and the impact of the stronger U.S. dollar.

(1) The U.S. Small Business Administration Paycheck Protection Program (PPP) is a government relief program implemented in fiscal 2020 to support businesses that faced financial hardship caused by the COVID-19 pandemic.

Corporate Services
Reported revenue in 2022 increased $7,134 million from 2021, and adjusted revenue decreased $14 million. Reported revenue in 2022 included the impact of fair value management actions related to the acquisition of Bank of the West and a legal provision related to a lawsuit noted above. In addition, both years included the impact of divestitures.

Insurance Claims, Commissions and Changes in Policy Benefit Liabilities

Insurance claims, commissions and changes in policy benefit liabilities (CCPB) were negative $683 million in 2022, compared with $1,399 million in 2021. CCPB decreased, primarily due to changes in the fair value of policy benefit liabilities and the impact of lower annuity sales. The changes were largely offset in revenue.

Provision for Credit Losses

The total provision for credit losses (PCL) in 2022 was $313 million, compared with $20 million in 2021. PCL on impaired loans was $502 million in 2022, a decrease of $23 million from 2021, largely due to lower provisions in Canadian P&C and BMO Capital Markets, partially offset by higher provisions in U.S. P&C. There was a $189 million recovery of the provision for credit losses on performing loans in 2022, compared with a $505 million recovery in 2021. The year-over-year change largely reflected the impact of a deteriorating economic outlook, a lower benefit from improvement in credit quality and stronger balance growth, partially offset by reduced uncertainty as a result of the improving pandemic environment and a smaller impact from changes in scenario weight.

Non-Interest Expense

Reported non-interest expense in 2022 was $16,194 million, an increase of $685 million or 4% from 2021, and adjusted non-interest expense was $15,194 million, an increase of $664 million or 4% from 2021. Reported non-interest expense in 2022 included $627 million related to the lawsuit noted above and in 2021, included a $24 million partial reversal of a restructuring charge. Reported non-interest expense in both years included the impact of divestiture costs, acquisition and integration costs, and the amortization of acquisition-related intangible assets. Reported and adjusted non-interest expense increased, due to higher employee-related costs, computer and equipment costs, advertising and business development costs and professional fees, partially offset by lower premises costs and divestitures.

Provision for Income Taxes

The provision for income taxes in 2022 was $4,349 million, compared with $2,504 million in 2021. The reported effective tax rate was 24.3%, compared with 24.4% in 2021. The adjusted provision for income taxes was $2,670 million, compared with $2,537 million in 2021. The adjusted effective tax rate was 22.8%, compared with 22.7% in 2021.

For further information on non-GAAP amounts, measures and ratios in this 2022 Financial Performance Review section, refer to the Non-GAAP and Other Financial Measures section.

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Financial Condition Review

Summary Balance Sheet

(Canadian $ in millions) As at October 31	2023	2022
Assets		
Cash and cash equivalents and interest bearing deposits with banks	**82,059**	93,200
Securities	**322,379**	273,262
Securities borrowed or purchased under resale agreements	**115,662**	113,194
Net loans	**656,478**	551,339
Derivative instruments	**39,976**	48,160
Other assets	**76,722**	60,044
Total assets	**1,293,276**	1,139,199
Liabilities and Equity		
Deposits	**909,676**	769,478
Derivative instruments	**50,193**	59,956
Securities lent or sold under repurchase agreements	**106,108**	103,963
Other liabilities	**142,034**	126,614
Subordinated debt	**8,228**	8,150
Equity	**77,009**	71,038
Non-controlling interest in subsidiaries	**28**	–
Total liabilities and equity	**1,293,276**	1,139,199

Overview

Total assets of $1,293.3 billion increased $154.1 billion from October 31, 2022. The stronger U.S. dollar increased assets by $9.2 billion, excluding the impact on derivative assets. Total liabilities of $1,216.2 billion increased $148.1 billion from the prior year. The stronger U.S. dollar increased liabilities by $8.8 billion, excluding the impact of derivative liabilities. Total equity of $77.0 billion increased $6.0 billion from October 31, 2022, including share issuances during the first quarter of 2023.

Cash and Interest Bearing Deposits with Banks

Cash and interest bearing deposits with banks decreased $11.1 billion, primarily reflecting the use of cash accumulated in the prior year for the completion of the Bank of the West acquisition on February 1, 2023.

Securities

(Canadian $ in millions) As at October 31	2023	2022
Trading	**124,556**	108,177
Fair value through profit or loss (FVTPL) (1)	**16,720**	13,641
Fair value through other comprehensive income – Debt and equity (2)	**62,828**	43,561
Amortized cost (3)	**116,814**	106,590
Investments in associates and joint ventures	**1,461**	1,293
Total securities	**322,379**	273,262

(1) Included securities mandatorily measured at FVTPL of $6,729 million ($4,410 million as at October 31, 2022) and securities designated at fair value of $9,991 million ($9,231 million as at October 31, 2022).
(2) Included allowances for credit losses on debt securities recorded at fair value through other comprehensive income of $3 million as at October 31, 2023 ($3 million as at October 31, 2022).
(3) Net of allowances for credit losses of $3 million ($3 million as at October 31, 2022).

Securities increased $49.1 billion, primarily due to the inclusion of Bank of the West, higher levels of client activity in BMO Capital Markets and the impact of the stronger U.S. dollar.

Securities Borrowed or Purchased Under Resale Agreements

Securities borrowed or purchased under resale agreements increased $2.5 billion, due to higher levels of client activity in BMO Capital Markets and the impact of the stronger U.S. dollar.

Net Loans

(Canadian $ in millions) As at October 31	2023	2022
Residential mortgages	**177,250**	148,880
Consumer instalment and other personal	**104,040**	86,103
Credit cards	**12,294**	9,663
Businesses and governments	**366,701**	309,310
Gross loans	**660,285**	553,956
Allowance for credit losses	**(3,807)**	(2,617)
Total net loans	**656,478**	551,339

Net loans increased $105.1 billion from October 31, 2022, due to the inclusion of Bank of the West, growth in residential mortgages and credit card balances in Canadian P&C, growth in business and government loans in Canadian P&C and BMO Capital Markets and the impact of the stronger U.S. dollar, partially offset by lower source currency balances in U.S. P&C.

Table 4 in the Supplemental Information provides a comparative summary of loans by geographic location and product. Table 6 in the Supplemental Information provides a comparative summary of net loans in Canada by province and industry. Loan quality is discussed in the Credit Quality Information section, and further details on loans are provided in Notes 4, 6 and 24 of the audited annual consolidated financial statements.

Derivative Financial Assets

Derivative financial assets decreased $8.2 billion, primarily reflecting a decrease in the fair value of client-driven trading derivatives in BMO Capital Markets, with decreases in the fair value of commodities, foreign exchange and equity contracts, partially offset by an increase in the fair value of interest rate contracts. Further details on derivative financial assets are provided in Note 8 of the audited annual consolidated financial statements.

Other Assets

Other assets primarily include goodwill and intangible assets, customers' liability under acceptances, cash collateral, insurance-related assets, premises and equipment, precious metals, current and deferred tax assets, accounts receivable and prepaid expenses. Other assets increased $16.7 billion, primarily due to goodwill and intangible assets related to Bank of the West, higher deferred tax assets and higher precious metals balances, partially offset by lower customers' liability under acceptances due to lower levels of acceptances issued into the market. Further details on other assets are provided in Notes 9, 11, 12 and 22 of the audited annual consolidated financial statements.

Deposits

(Canadian $ in millions)

As at October 31	**2023**	2022
Banks	**29,587**	30,901
Businesses and governments	**574,670**	495,831
Individuals	**305,419**	242,746
Total deposits	**909,676**	769,478

Deposits increased $140.2 billion. Business and government deposits increased $78.8 billion, reflecting the inclusion of Bank of the West, higher wholesale funding balances primarily to fund Global Markets client activity, growth in customer deposits in Canadian P&C and the impact of the stronger U.S. dollar, partially offset by lower source currency customer deposits in U.S. P&C. Deposits by individuals increased $62.7 billion, primarily reflecting the inclusion of Bank of the West and growth in customer deposits in the P&C businesses, partially offset by lower customer deposits in BMO Wealth Management.

Deposits by banks were relatively unchanged from the prior year. Further details on the composition of deposits are provided in Note 13 of the audited annual consolidated financial statements and in the Liquidity and Funding Risk section.

Derivative Financial Liabilities

Derivative financial liabilities decreased $9.8 billion, primarily due to a decrease in the fair value of client-driven trading derivatives in BMO Capital Markets, with decreases in the fair value of foreign exchange, equity and commodities contracts, partially offset by an increase in the fair value of interest rate contracts.

Securities Lent or Sold Under Repurchase Agreements

Securities lent or sold under repurchase agreements increased $2.1 billion, primarily due to the impact of the stronger U.S. dollar and Treasury activities.

Other Liabilities

Other liabilities primarily include securities sold but not yet purchased, securitization and structured entities liabilities, acceptances, insurance-related liabilities and accounts payable. Other liabilities increased $15.4 billion, driven by higher Federal Home Loan Bank borrowings, higher accrued interest payable, an increase in securities sold but not yet purchased due to higher levels of client activity in BMO Capital Markets and higher insurance-related liabilities, partially offset by lower acceptances as a result of lower levels of acceptances issued into the market.

Further details on the composition of other liabilities are provided in Note 14 of the audited annual consolidated financial statements.

Subordinated Debt

Subordinated debt was relatively unchanged from the prior year, reflecting a new issuance, net of a redemption. Further details on the composition of subordinated debt are provided in Note 15 of the audited annual consolidated financial statements.

Equity

(Canadian $ in millions)

As at October 31	**2023**	2022
Share capital		
Preferred shares and other equity instruments	**6,958**	6,308
Common shares	**22,941**	17,744
Contributed surplus	**328**	317
Retained earnings	**44,920**	45,117
Accumulated other comprehensive income	**1,862**	1,552
Total equity	**77,009**	71,038

Total equity increased $6.0 billion from October 31, 2022, primarily due to common and preferred share issuances. Common shares increased $5.2 billion, reflecting share issuances during the first quarter of 2023, as well as shares issued under the dividend reinvestment and share purchase plan. Preferred shares and other equity instruments increased $0.7 billion, as a result of an issuance in the first quarter of 2023. Accumulated other comprehensive income increased $0.3 billion, primarily due to the impact of the stronger U.S. dollar on the translation of net foreign operations, partially offset by losses on remeasurement of own credit risk on financial liabilities designated at fair value and the impact of higher interest rates on cash flow hedges. Retained earnings decreased $0.2 billion, as a result of dividends and distributions on other equity instruments, partially offset by net income earned in the current year.

The Consolidated Statement of Changes in Equity in the audited annual consolidated financial statements provides a summary of items that increase or reduce total equity, while Note 16 of the audited annual consolidated financial statements provides details on the components of, and changes in, share capital. Details on our enterprise-wide capital management practices and strategies can be found below.

Enterprise-Wide Capital Management

Capital Management

Objective

BMO is committed to a disciplined approach to capital management that balances the interests and requirements of our shareholders, regulators, depositors, fixed income investors and rating agencies. We recognize the emerging global trend of rising regulatory capital requirements, and manage our capital position accordingly. Our objective is to maintain a strong capital position in a cost-effective structure that:

- Is appropriate given BMO's target regulatory capital ratios and internal assessment of economic capital requirements
- Underpins BMO's operating groups' business strategies and considers the market environment
- Supports depositor, investor and regulator confidence, while building long-term shareholder value
- Is consistent with BMO's target credit ratings.

Framework



The principles and key elements of our capital management framework are outlined in our Capital Management Corporate Policy and in the annual capital plan, which includes the results of the comprehensive Internal Capital Adequacy Assessment Process (ICAAP).

ICAAP is an integrated process that involves the application of stress testing and other tools to assess capital adequacy on both a regulatory and an economic capital basis. The results of this process inform and support the establishment of capital targets and the implementation of capital strategies that take into consideration the strategic direction and risk appetite of the enterprise. The annual capital plan is developed considering the results of ICAAP and in conjunction with the annual business plan, promoting alignment between business and risk strategies, regulatory and economic capital requirements and the availability of capital. Enterprise-wide stress testing and scenario analysis are conducted in order to assess the impact of various stress conditions on our risk profile and capital requirements. Our capital management framework seeks to ensure that the bank is adequately capitalized given the risks we assume in the normal course of business, as well as under stress, and supports the determination of limits, targets and performance measures that are applied in managing balance sheet positions, risk levels and capital requirements at both the consolidated entity and operating group levels. We seek to optimize our capital through efficient use of our balance sheet and the related risks we undertake, and may employ levers such as risk transfer transactions and the sale of assets. We evaluate assessments of actual and forecast capital adequacy against our capital plan throughout the year, including consideration of changes in our business activities and risk profile, as well as the operating environment or regulatory requirements or expectations.

We allocate capital to operating groups in order to evaluate business performance, and we view capital implications in our strategic, tactical and transactional decision-making. By allocating capital to operating groups, setting and monitoring capital limits and metrics, and measuring the groups' performance against these limits and metrics, we seek to optimize risk-adjusted return to our shareholders, while maintaining a well-capitalized position. This approach is intended to protect our stakeholders from the risks inherent in our various businesses, while still providing the flexibility to deploy resources in support of strategic growth activities.

Refer to the Enterprise-Wide Risk Management section for further discussion of the risks underlying our business.

Governance

The Board of Directors, either directly or in conjunction with its Risk Review Committee, provides ultimate oversight and approval of capital management, including the bank's Capital Management Corporate Policy, capital plan and capital adequacy assessments. The Board of Directors regularly reviews the bank's capital position and key capital management activities. In addition, the capital adequacy assessment results determined by ICAAP are reviewed by the Board of Directors and the Risk Review Committee. The Enterprise Capital Management Committee provides senior management oversight, including the review of significant capital management policies, issues and activities, and along with the Risk Management Committee, the capital required to support the execution of our enterprise-wide strategy. Finance and Risk Management are responsible for the design and implementation of our corporate policies and frameworks related to capital and risk management, as well as ICAAP. The Corporate Audit Division, as the third line of defence, verifies adherence to controls and identifies opportunities to strengthen our processes. Refer to the Enterprise-Wide Risk Management Framework section for further discussion.

Regulatory Capital Requirements

Regulatory capital requirements for BMO are determined in accordance with guidelines issued by the Office of the Superintendent of Financial Institutions (OSFI), which are based on the Basel III framework developed by the Basel Committee on Banking Supervision (BCBS). The current minimum risk-based capital ratios set out in OSFI's Capital Adequacy Requirements (CAR) Guideline are a Common Equity Tier 1 (CET1) Ratio of 4.5%, a Tier 1 Capital Ratio of 6.0% and a Total Capital Ratio of 8.0%. In addition to these minimum capital requirements, OSFI also requires domestic systemically important banks (D-SIBs), including BMO, to hold Pillar 1 and Pillar 2 buffers, which are meant to be used as a normal first response in periods of stress. Pillar 1 buffers include a capital conservation buffer of 2.5%, a D-SIB Common Equity Tier 1 surcharge of 1.0%, and a countercyclical buffer (which can range from 0% to 2.5%, depending on a bank's exposure to jurisdictions that have activated the buffer). Pillar 2 buffers include the domestic stability buffer (DSB), which can range from 0% to 4.0% of risk-weighted assets (RWA) and was set at 3.0% as at October 31, 2023. The buffer level is set twice a year by OSFI, in June and December, but OSFI can make a change any time when needed. Effective November 1, 2023, the DSB increased to 3.5%.

The current minimum Total Loss Absorbing Capacity (TLAC) requirements set by OSFI are a TLAC Ratio of 21.5% of RWA and a TLAC Leverage Ratio of 6.75% as at October 31, 2023.

The current minimum Leverage Ratio set out in OSFI's Leverage Requirements (LR) Guideline is 3.0%. Effective February 1, 2023, D-SIBs were required to meet a 0.5% buffer requirement for the Leverage and TLAC Leverage Ratios, in addition to the minimum requirements.

OSFI's requirements as at October 31, 2023, are summarized in the following table.

(% of risk-weighted assets or leverage exposures)	Minimum capital, leverage and TLAC requirements	Total Pillar 1 Capital buffers (1)	Tier 1 Capital buffer	Domestic stability buffer (2)	Minimum capital, leverage and TLAC requirements including capital buffers	BMO capital, leverage and TLAC ratios as at October 31, 2023
Common Equity Tier 1 Ratio	4.5%	3.5%	na	3.0%	11.0%	12.5%
Tier 1 Capital Ratio	6.0%	3.5%	na	3.0%	12.5%	14.1%
Total Capital Ratio	8.0%	3.5%	na	3.0%	14.5%	16.2%
TLAC Ratio	21.5%	na	na	3.0%	24.5%	27.0%
Leverage Ratio	3.0%	na	0.5%	na	3.5%	4.2%
TLAC Leverage Ratio	6.75%	na	0.5%	na	7.25%	8.1%

(1) The minimum CET1 Ratio requirement of 4.5% is augmented by a total of 3.5% in Pillar 1 Capital buffers, which can absorb losses during periods of stress. Pillar 1 Capital buffers include a capital conservation buffer of 2.5%, a Common Equity Tier 1 surcharge for D-SIBs of 1.0% and a countercyclical buffer, as prescribed by OSFI (immaterial for the fourth quarter of 2023). If a bank's capital ratios fall within the range of this combined buffer, restrictions on discretionary distributions of earnings (such as dividends, share repurchases and discretionary compensation) would ensue, with the degree of such restrictions varying according to the position of the bank's ratios within the buffer range.

(2) Breaches of the DSB will not result in a bank being subject to automatic constraints on capital distributions. In the event of a breach, OSFI would require a remediation plan, and would expect for the plan to be executed in a timely manner. Banks may be required to hold additional regulatory capital buffers that are applicable to Capital, Leverage and TLAC Ratios.

na – not applicable

Regulatory Capital and Total Loss Absorbing Capacity Ratios

The **Common Equity Tier 1 (CET1) Ratio** is calculated as CET1 Capital, which comprises common shareholders' equity, net of deductions for goodwill, intangible assets, pension assets, certain deferred tax assets and other items, which may include a portion of expected credit loss provisions, divided by risk-weighted assets. The CET1 Ratio is calculated in accordance with OSFI's Capital Adequacy Requirements (CAR) Guideline.

The **Tier 1 Capital Ratio** reflects **Tier 1 Capital** divided by risk-weighted assets.

The **Total Capital Ratio** reflects **Total Capital** divided by risk-weighted assets.

The **Leverage Ratio** reflects **Tier 1 Capital** divided by Leverage Exposures (LE), which consist of on-balance sheet items and specified off-balance sheet items, net of specified adjustments.

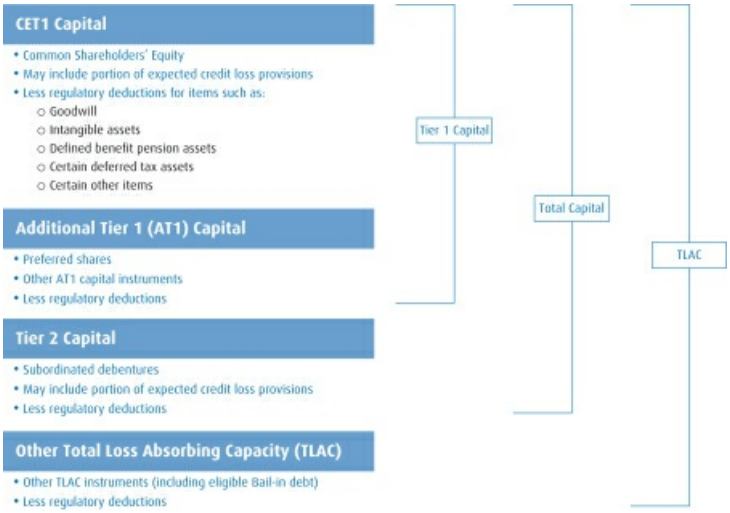
The **Total Loss Absorbing Capacity (TLAC) Ratio** reflects TLAC divided by risk-weighted assets.

The **TLAC Leverage Ratio** reflects TLAC divided by leverage exposures.

Refer to the Glossary of Financial Terms for definitions of ratios and their components.

Regulatory Capital and Total Loss Absorbing Capacity Elements

BMO maintains a capital structure that is diversified across instruments and tiers in order to provide an appropriate mix of loss absorbency. The major components of regulatory capital and total loss absorbing capacity are summarized as follows:



OSFI's CAR Guideline includes non-viability contingent capital (NVCC) provisions, which require the conversion of Additional Tier 1 and Tier 2 capital instruments into common shares if OSFI announces that a bank is, or is about to become, non-viable, or if the federal or a provincial government in Canada publicly announces that the bank has accepted, or has agreed to accept, a capital injection or equivalent support to avoid non-viability. Pursuant to the principles set out in the CAR Guideline, a conversion to common shares would respect the hierarchy of claims in liquidation, ensuring that holders of Additional Tier 1 and Tier 2 instruments are entitled to a more favourable economic outcome than existing common shareholders.

Under Canada's Bank Recapitalization (Bail-In) Regime, eligible senior debt issued on or after September 23, 2018 is subject to statutory conversion requirements. Canada Deposit Insurance Corporation has the power to trigger the conversion of bail-in debt into common shares. This statutory conversion supplements NVCC securities, which must be converted in full prior to the conversion of bail-in debt.

Risk-Weighted Assets

Risk-weighted assets (RWA) measure a bank's exposures, weighted for their relative risk and calculated in accordance with the regulatory capital rules prescribed by OSFI, which include standardized and internal ratings or internal model approaches for credit risk and market risk.

We primarily use the Internal Ratings Based (IRB) Approach to determine credit RWA in our portfolio. Effective with the implementation of the Basel III Reforms as at February 1, 2023, the IRB approaches include the Foundation (FIRB) Approach for exposures to financial institutions and large corporate portfolios, and the Advanced (AIRB) Approach for all other exposures. The AIRB Approach applies sophisticated techniques to measure RWA at the exposure level based on sound risk management principles, including estimates of the probability of default (PD), loss given default (LGD) and exposure at default (EAD) risk parameters, as well as term to maturity and asset class type, as prescribed by the OSFI rules. These risk parameters are determined using internal models that leverage historical portfolio data supplemented by benchmarking, as appropriate, and are updated periodically. Validation procedures related to these models are in place in order to quantify and differentiate risks appropriately. The FIRB Approach employs the same internal PD estimates as the AIRB Approach, but LGD and EAD parameters are prescribed by OSFI. Credit risk RWA related to certain Canadian and U.S. portfolios, including the acquired Bank of the West portfolio, are determined under the Standardized Approach using prescribed risk weights based on external ratings, counterparty type or product type. These portfolios reflect current waivers and exemptions to the IRB Approach approved by OSFI. For further discussion of the respective approaches noted above, refer to the Credit and Counterparty Risk – Credit and Counterparty Risk Measurement section.

In fiscal 2023, our market risk RWA was primarily determined using the Internal Models Approach, and the Standardized Approach was used for some exposures. With the implementation of the Basel III Reforms for market risk, effective November 1, 2023, we transitioned to a fully Standardized Approach.

We use the new Standardized Measurement Approach for determining operational risk regulatory capital requirements, which was effective February 1, 2023, as part of the Basel III Reforms implementation.

BMO is subject to a capital floor as prescribed in OSFI's CAR Guideline. In calculating regulatory capital ratios, total RWA must be increased when the capital floor amount calculated under the standardized approaches, multiplied by a capital floor adjustment factor, is higher than a similar calculation using the more risk-sensitive internal modelled approaches, where applicable. Other than during the first quarter of 2023, the capital floor was not operative for BMO in fiscal 2023, following the acquisition of Bank of the West.

Regulatory Capital Developments

Effective November 1, 2023, the DSB has been raised from 3.0% to 3.5% of total RWA. On December 8, 2022, OSFI raised the DSB range of 0% to 2.5% to 0% to 4.0%.

On October 20, 2023, OSFI published the revised CAR Guideline, which will be effective in the first quarter of fiscal 2024. The key revisions reflect heightened regulatory capital requirements for mortgages with growing balances where payments are insufficient to cover the interest component, as well as other changes that provide further clarification on the application of the guideline.

On September 12, 2023, OSFI published the final Parental Stand-Alone (Solo) TLAC Framework for D-SIBs, which will be effective in the first quarter of fiscal 2024. The purpose of the Solo framework is to ensure a non-viable D-SIB has sufficient loss absorbing capacity on a stand-alone legal entity basis to support its resolution, which would, in turn, facilitate an orderly resolution of the D-SIB while minimizing adverse impacts on the stability of the financial sector, ensuring the continuity of critical functions and minimizing taxpayers' exposure to loss. We are well-positioned to meet the new Solo TLAC requirement.

The domestic implementation of Basel III Reforms related to capital, leverage, liquidity and disclosure requirements was effective as of the second quarter of fiscal 2023. Regulatory capital changes in the year under these reforms included revised rules for credit risk and operational risk. The capital floor adjustment factor was set at 65% effective February 1, 2023, rising 2.5% on November 1 of each year to 72.5% in fiscal 2026. Effective February 1, 2023, D-SIBs were required to hold a 0.5% buffer for the Leverage and TLAC Leverage Ratios, in addition to the minimum requirements. Basel III Reforms for market risk and credit valuation adjustment (CVA) risk come into effect in the first quarter of fiscal 2024. With this transition, the determination of market risk capital will shift from a primarily Internal Models Approach to a fully Standardized Approach and capital for CVA risk will also reflect OSFI's standardized rules.

International Financial Reporting Standard 17, *Insurance Contracts* (IFRS 17) becomes effective for our fiscal year beginning November 1, 2023, and we will apply the full retrospective approach where we restate prior periods as if we had always applied IFRS 17. On transition to IFRS 17, we will also change our accounting policy for the measurement of investment properties, recorded in insurance-related assets, under IAS 40, *Investment Property*. For more information, refer to the Future Changes in Accounting Policies section.

These regulatory and accounting changes are expected to have a modest impact on our regulatory capital ratios upon adoption.

Regulatory Capital and Total Loss Absorbing Capacity Review

BMO is well-capitalized, with capital ratios that exceed OSFI's published requirements for large Canadian banks, including a DSB of 3.0%. Our CET1 Ratio was 12.5% as at October 31, 2023, compared with 16.7% as at October 31, 2022. Our CET1 Ratio was elevated at the end of fiscal 2022, primarily driven by fair value management actions related to the acquisition of Bank of the West. The CET1 Ratio decreased from the prior year, primarily as a result of the acquisition and integration of Bank of the West.

Our Tier 1 Capital and Total Capital Ratios were 14.1% and 16.2%, respectively, as at October 31, 2023, compared with 18.4% and 20.7%, respectively, as at October 31, 2022. The Tier 1 Capital and Total Capital Ratios were lower due to the factors impacting the CET1 Ratio, partially offset by a $650 million issuance of institutional preferred shares.

The impact of foreign exchange rate movements on BMO's capital ratios was largely offset. Our investments in foreign operations are primarily denominated in U.S. dollars, and the foreign exchange impact of U.S.-dollar-denominated RWA and capital deductions may result in variability in the bank's capital ratios. We may manage the impact of foreign exchange rate movements on BMO's capital ratios, and did so during fiscal 2023. Any such activities could also impact BMO's book value and return on equity.

Our Leverage Ratio was 4.2% as at October 31, 2023, a decrease from 5.6% as at October 31, 2022, primarily as a result of our acquisition of Bank of the West.

As at October 31, 2023, our TLAC Ratio was 27.0% and our TLAC Leverage Ratio was 8.1%, compared with 33.1% and 10.1%, respectively, as at October 31, 2022.

While the ratios discussed above reflect our consolidated capital base, we conduct business through a variety of corporate structures, including subsidiaries. A framework is in place such that capital and funding are managed appropriately at the subsidiary level.

Following our acquisition of Bank of the West, our subsidiary, BMO Financial Corp. (BFC), as a U.S. bank intermediate holding company, has transitioned from a Category IV to a Category III institution under the Enhanced Prudential Standards issued by the Federal Reserve Board (FRB). This change will require BFC to meet certain heightened regulatory standards related to capital, liquidity and risk management, including complying with single counterparty credit limits. These heightened regulatory standards include a requirement that BFC will now be subject to the Comprehensive Capital Analysis and Review (CCAR) and *Dodd-Frank Act* Stress Test (DFAST) requirements of the FRB on an annual (from biennial) basis, along with other requirements, including biennial company-run stress testing, countercyclical capital buffer and supplementary leverage ratio requirements. We are well-positioned to meet these incremental requirements and do not expect them to have a material impact on our business, financial condition, results of operations or capital position.

BFC was also required to participate in the FRB's 2023 CCAR exercise as a result of our acquisition of Bank of the West. On June 28, 2023, the FRB released its 2023 CCAR and DFAST results, and on July 27, 2023, announced individual large bank capital requirements, which were effective October 1, 2023. For BFC, the FRB determined a CET1 Ratio requirement of 7.8%, including the 4.5% minimum CET1 Ratio and a 3.3% stress capital buffer (SCB). BFC is well-capitalized, with a strong CET1 Ratio of 10.3% as at September 30, 2023.

Regulatory Capital and TLAC [1]

(Canadian $ in millions, except as noted)

As at October 31	2023	2022
Common Equity Tier 1 Capital: Instruments and Reserves		
Directly issued qualifying common share capital plus related stock surplus	**23,269**	18,061
Retained earnings	**44,920**	45,117
Accumulated other comprehensive income (and other reserves)	**1,862**	1,552
Goodwill and other intangibles (net of related tax liability)	**(20,899)**	(6,901)
Other common equity Tier 1 capital deductions	**3,762**	3,062
Common Equity Tier 1 Capital (CET1)	**52,914**	60,891
Additional Tier 1 Capital: Instruments		
Directly issued qualifying Additional Tier 1 instruments plus related stock surplus	**6,958**	6,308
Total regulatory adjustments applied to Additional Tier 1 Capital	**(87)**	(78)
Additional Tier 1 Capital (AT1)	**6,871**	6,230
Tier 1 Capital (T1 = CET1 + AT1)	**59,785**	67,121
Tier 2 Capital: Instruments and Provisions		
Directly issued qualifying Tier 2 instruments plus related stock surplus	**8,082**	8,003
General allowance	**902**	235
Total regulatory adjustments to Tier 2 Capital	**(51)**	(50)
Tier 2 Capital (T2)	**8,933**	8,188
Total Capital (TC = T1 + T2)	**68,718**	75,309
Non-Regulatory Capital Elements of TLAC		
Directly issued qualifying Other TLAC instruments	**45,773**	45,554
Total regulatory adjustments applied to Other TLAC	**(89)**	(200)
Other TLAC	**45,684**	45,354
TLAC (TLAC = TC + Other TLAC)	**114,402**	120,663
Risk-Weighted Assets and Leverage Ratio Exposures		
Risk-Weighted Assets	**424,197**	363,997
Leverage Ratio Exposures	**1,413,036**	1,189,990
Capital Ratios (%)		
Common Equity Tier 1 Ratio	**12.5**	16.7
Tier 1 Capital Ratio	**14.1**	18.4
Total Capital Ratio	**16.2**	20.7
TLAC Ratio	**27.0**	33.1
Leverage Ratio	**4.2**	5.6
TLAC Leverage Ratio	**8.1**	10.1

(1) Calculated in accordance with OSFI's CAR Guideline and LR Guideline, as applicableNon-qualifying Additional Tier 1 and Tier 2 Capital instruments were phased out at a rate of 10% per year from January 1, 2013 to January 1, 2022.

Our CET1 Capital was $52.9 billion as at October 31, 2023, compared with $60.9 billion as at October 31, 2022. CET1 Capital decreased, as internal capital generation, common shares issuances through a public offering and private placements, and under the Shareholder Dividend Reinvestment and Share Purchase Plan (DRIP) were more than offset by an increase in the capital deductions for goodwill and intangible assets, and acquisition and integration costs related to Bank of the West.

Tier 1 Capital and Total Capital were $59.8 billion and $68.7 billion, respectively, as at October 31, 2023, compared with $67.1 billion and $75.3 billion, respectively, as at October 31, 2022. The decrease in Tier 1 Capital was primarily due to the factors impacting CET1 Capital, partially offset by an issuance of institutional preferred shares. Total Capital was lower, primarily due to the factors impacting Tier 1 Capital.

Risk-Weighted Assets

RWA were $424.2 billion as at October 31, 2023, an increase from $364.0 billion as at October 31, 2022. Credit Risk RWA were $349.9 billion as at October 31, 2023, an increase from $295.5 billion as at October 31, 2022, primarily due to the inclusion of the assets of Bank of the West, partially offset by the impact of the implementation of the Basel III Reforms and risk transfer transactions. As noted above, the impact of foreign exchange rate movements is largely offset in the CET1 Ratio. Market Risk RWA were $17.0 billion as at October 31, 2023, an increase from $13.5 billion as at October 31, 2022, primarily attributable to portfolio changes, including business growth, and market volatility during the year. Operational Risk RWA were $57.4 billion as at October 31, 2023, an increase from $42.4 billion as at October 31, 2022, primarily due to the acquisition of Bank of the West and the impact of legal provisions. The capital floor was not operative at October 31, 2023, compared with a floor adjustment of $12.6 billion reflected in our RWA as at October 31, 2022.

(Canadian $ in millions) As at October 31	2023 Total Exposure (1) (2)	Average risk weight	RWA (1) Standardized	RWA (1) IRB FIRB	RWA (1) IRB AIRB	2023 Total	2022 Total RWA (5)
Credit Risk							
Wholesale							
Corporate, including specialized lending	**406,703**	**44.4%**	**36,787**	**71,214**	**72,522**	**180,523**	137,272
Corporate small and medium-sized enterprises	**33,830**	**61.7%**	**4,830**	**52**	**15,987**	**20,869**	31,671
Sovereign	**261,799**	**1.6%**	**180**	**–**	**3,901**	**4,081**	4,818
Bank	**23,111**	**20.9%**	**214**	**4,623**	**–**	**4,837**	4,113
Retail							
Residential mortgages, excluding home equity line of credit	**175,473**	**10.8%**	**4,559**	**–**	**14,308**	**18,867**	11,076
Home equity line of credit	**74,487**	**10.6%**	**982**	**–**	**6,895**	**7,877**	5,915
Qualifying revolving retail	**49,006**	**21.9%**	**690**	**–**	**10,048**	**10,738**	7,408
Other retail, excluding small and medium-sized enterprises	**46,276**	**57.6%**	**17,765**	**–**	**8,892**	**26,657**	16,099
Retail small and medium-sized enterprises	**19,459**	**62.4%**	**3,407**	**–**	**8,733**	**12,140**	11,860
Equity	**11,101**	**131.3%**	**14,574**	**–**	**–**	**14,574**	11,956
Trading book	**50,763**	**24.5%**	**5,055**	**6,478**	**888**	**12,421**	11,036
Securitization	**81,947**	**15.4%**	**1,467**	**–**	**11,160**	**12,627**	9,530
Other credit risk assets – non-counterparty managed assets	**21,091**	**112.1%**	**23,641**	**–**	**–**	**23,641**	18,580
Scaling factor for credit risk assets under AIRB Approach (3)	**na**	**na**	**na**	**na**	**na**	**na**	14,189
Total Credit Risk	**1,255,046**	**–**	**114,151**	**82,367**	**153,334**	**349,852**	295,524
Market Risk	**–**	**–**	**2,131**	**–**	**14,850**	**16,981**	13,522
Operational Risk	**–**	**–**	**57,364**	**–**	**–**	**57,364**	42,353
Risk-Weighted Assets before floor	**1,255,046**	**–**	**173,646**	**82,367**	**168,184**	**424,197**	351,399
Floor adjustment (4)	**–**	**–**	**–**	**–**	**–**	**–**	12,598
Total Risk-Weighted Assets	**1,255,046**	**–**	**173,646**	**82,367**	**168,184**	**424,197**	363,997

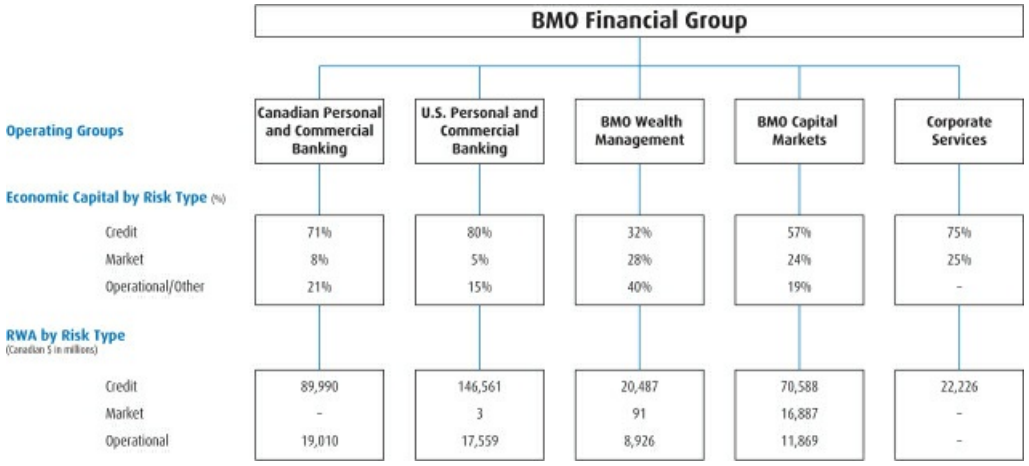
(1) Exposure and RWA are grouped by the obligor's asset class.
(2) Exposure represents exposure at default (EAD) after the application of credit risk mitigation and the credit conversion factor for undrawn exposures.
(3) In fiscal 2022, RWA amounts for credit risk under the Advanced Internal Ratings Based (AIRB) Approach were subject to a 6% scaling factor. This scaling factor is no longer effective as of the second quarter of fiscal 2023, following the implementation of Basel III Reforms.
(4) The bank is subject to capital floor requirements as prescribed in OSFI's CAR Guideline. Total RWA is increased by a floor adjustment amount, which is calculated based on the standardized methodology. The capital floor was not operative at October 31, 2023.
(5) Prior periods have been reclassified to conform with the current period's presentation.
na – not applicable

Economic Capital

Economic capital is an expression of the enterprise's capital demand requirement relative to its view of the economic risks in its underlying business activities. It represents management's estimation of the likely magnitude of economic losses that could occur should severely adverse situations arise. Economic loss is the loss in economic or market value incurred over a specified time horizon at a defined confidence level, relative to the expected loss over the same time horizon. Economic capital is calculated for various types of risk, including credit, market (trading and non-trading), operational, business and insurance, based on a one-year time horizon using a defined confidence level.

Economic Capital and RWA by Operating Group and Risk Type

(As at October 31, 2023)



Capital Management Activities

During fiscal 2023, we issued approximately 28.3 million common shares through a public offering and private placements to align our capital position with increased regulatory requirements and for general corporate purposes. We also issued approximately 14.2 million common shares through the Shareholder Dividend Reinvestment and Share Purchase Plan (DRIP) and the exercise of stock options. In addition, we issued 1.2 million common shares for the acquisition of Radicle Group Inc.

During fiscal 2023, we completed the issuances and redemptions of Tier 1 and Tier 2 Capital instruments, outlined in the table below.

Capital Instrument Issuances and Redemptions

As at October 31, 2023	Issuance or redemption date	Number of shares (in millions)	Balance (Canadian $ in millions, except as noted)
Common shares issued		43.8	$ 5,197
Tier 1 Capital			
Issuance of Non-Cumulative 5-Year Fixed Rate Reset Class B Preferred Shares, Series 52	January 31, 2023	0.65	$ 650
Tier 2 Capital			
Issuance of Medium-Term Notes, Series M, First Tranche	September 7, 2023		$ 1,150
Redemption of U.S. 4.338% Subordinated Notes	October 5, 2023		USD 850

Outstanding Shares and NVCC Instruments

As at October 31	Number of shares or dollar amount (in millions)	Dividends declared per share 2023	Dividends declared per share 2022
Common shares	721	**$ 5.80**	$ 5.44
Class B Preferred shares			
Series 27*	$ 500	**$ 0.96**	$ 0.96
Series 29*	$ 400	**$ 0.91**	$ 0.91
Series 31*	$ 300	**$ 0.96**	$ 0.96
Series 33*	$ 200	**$ 0.76**	$ 0.76
Series 44*	$ 400	**$ 1.21**	$ 1.21
Series 46*	$ 350	**$ 1.28**	$ 1.28
Series 50*	$ 500	**$ 73.73**	$ 24.64
Series 52*	$ 650	**$ 57.52**	–
Additional Tier 1 Capital Notes*			
4.800% Additional Tier 1 Capital Notes	US$ 500	**na**	na
4.300% Limited Recourse Capital Notes, Series 1 (1)	$ 1,250	**na**	na
5.625% Limited Recourse Capital Notes, Series 2 (1)	$ 750	**na**	na
7.325% Limited Recourse Capital Notes, Series 3 (1)	$ 1,000	**na**	na
Medium-Term Notes* (2)			
3.803% Subordinated Notes	US$ 1,250	**na**	na
Series J – First Tranche	$ 1,000	**na**	na
Series J – Second Tranche	$ 1,250	**na**	na
Series K – First Tranche	$ 1,000	**na**	na
3.088% Subordinated Notes	US$ 1,250	**na**	na
Series L – First Tranche	$ 750	**na**	na
Series M – First Tranche	$ 1,150	**na**	na
Stock options			
Vested	2.8		
Non-vested	3.6		

* Convertible into common shares.

(1) Convertible into common shares by virtue of recourse to the Preferred Shares Series 48, Preferred Shares Series 49 and Preferred Shares Series 51, respectively. Refer to Note 16 of the audited annual consolidated financial statements for conversion details.

(2) Note 15 of the audited annual consolidated financial statements includes details on the NVCC Medium-Term Notes.

na – not applicable

Note 16 of the audited annual consolidated financial statements includes details on share capital and other equity instruments.

If an NVCC trigger event were to occur, NVCC instruments would be converted into BMO common shares pursuant to automatic conversion formulas, with the conversion price based on the greater of: (i) a floor price of $5.00; and (ii) the current market price of BMO common shares at the time of the trigger event (calculated using a 10-day weighted average). Based on a floor price of $5.00, these NVCC instruments would be converted into approximately 4.0 billion BMO common shares, assuming no accrued interest and no declared and unpaid dividends.

Further details on subordinated debt and share capital are provided in Notes 15 and 16 of the audited annual consolidated financial statements.

Dividends

Dividends per common share declared in fiscal 2023 totalled $5.80, an increase of 7% from the prior year. Annual dividends declared represented 103% of reported net income available to common shareholders on a last twelve-month basis, primarily reflecting the impact of Bank of the West. On an adjusted basis, annual dividends declared represented 49% of adjusted net income available to common shareholders.

Our target dividend payout range (common share dividends as a percentage of net income available to shareholders, less preferred share dividends and distributions on other equity instruments, based on earnings over the last twelve months) is 40% to 50%, providing shareholders with a competitive dividend yield. Our target dividend payout range seeks to provide shareholders with stable income, while retaining sufficient earnings to support anticipated business growth, fund strategic investments and support capital adequacy.

At year-end, our common shares provided an annualized dividend yield of 6% based on the year-end closing share price. On December 1, 2023, we announced that the Board of Directors had declared a quarterly dividend on common shares of $1.51 per share, an increase of $0.04 per share or 6% from the prior year. The dividend is payable on February 27, 2024 to shareholders of record on January 30, 2024.

Shareholder Dividend Reinvestment and Share Purchase Plan

Common shareholders may elect to have their cash dividends reinvested in common shares of BMO, in accordance with the DRIP.

During fiscal 2023, common shares to supply the DRIP were issued from treasury at a 2% discount from the then-current market price. Such shares will continue to be issued from treasury at a 2% discount until further notice. During fiscal 2022, common shares to supply the DRIP were issued from treasury at a 2% discount from the then-current market price except in the first quarter, when common shares to supply the DRIP were purchased on the open market.

Eligible Dividends Designation

For the purposes of the *Income Tax Act (Canada)* or any similar provincial and territorial legislation, BMO designates all dividends paid or deemed to be paid on both its common and preferred shares as "eligible dividends", unless indicated otherwise.

Caution

This Enterprise-Wide Capital Management section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Off-Balance Sheet Arrangements

We enter into a number of off-balance sheet arrangements in the normal course of operations, and these include structured entities (SEs), credit instruments and guarantees.

Structured Entities and Securitization

We carry out certain business activities through arrangements involving SEs, using them to obtain sources of liquidity by securitizing certain of our financial assets, to secure customer transactions, or to pass our credit risk exposure to holders of the vehicles' securities. For example, we enter into transactions with SEs in which we transfer assets, including mortgage loans, mortgage-backed securities, credit card loans, real estate lines of credit, auto loans and equipment loans, in order to obtain alternate sources of funding or as part of our trading activities. Note 6 of the audited annual consolidated financial statements describes the loan securitization activities carried out through third-party programs such as the Canada Mortgage Bond Program. Note 7 of the audited annual consolidated financial statements provides further details of our interests in both consolidated and unconsolidated SEs. Under IFRS, we consolidate a SE if we control the entity. We consolidate our own securitization vehicles, certain capital and funding vehicles, and other structured entities created to meet our customers' needs, as well as our own. We do not consolidate our customer securitization vehicles, certain capital vehicles, various BMO-managed funds or various other SEs where investments are held. The acquisition of Bank of the West had a nominal impact on our SEs and securitization profile. Further details on our customer securitization vehicles are provided below.

BMO-Sponsored Securitization Vehicles

We sponsor various vehicles that fund assets originated either by us (which are then securitized through a bank securitization vehicle) or by our customers (which are then securitized through three Canadian customer securitization vehicles and one U.S. customer securitization vehicle). We earn fees for providing services related to these customer securitization vehicles, including liquidity, distribution and financial arrangement fees for supporting the ongoing operations of the vehicles. These fees totalled approximately $149 million in fiscal 2023 ($140 million in fiscal 2022).

Customer Securitization Vehicles

Our customer securitization vehicles provide customers with access to financing either from us or from the asset-backed commercial paper (ABCP) markets. Customers sell either their assets or an interest in their assets into these vehicles, which then issue ABCP either to investors or to us, in order to fund the purchases. The sellers remain responsible for servicing the transferred assets and are first to absorb any losses realized on those assets. We are not responsible for servicing or absorbing the first loss and none of the sellers are affiliated with BMO.

Our exposure to potential losses arises from the purchase of ABCP issued by the vehicles, any related derivative contracts entered into with the vehicles, and the liquidity support provided to the market-funded vehicles. We use the credit adjudication process in deciding whether to enter into these arrangements, just as we do when extending credit in the form of a loan.

Three of these customer securitization vehicles are market-funded, while the fourth is funded directly by the bank. We do not control these entities and therefore they are not consolidated. Further information on the consolidation of customer securitization vehicles is provided in Note 7 of the audited annual consolidated financial statements.

The market-funded vehicles had a total of $12.2 billion of ABCP outstanding as at October 31, 2023 ($11.0 billion in 2022). The ABCP issued by the Canadian market-funded vehicles is rated R-1 (high) by DBRS and P1 by Moody's, and the ABCP issued by the U.S. market-funded vehicle is rated A1 by S&P and P1 by Moody's. Our holdings of ABCP, as distributing agent of ABCP issued by the market-funded vehicles, totalled $518 million as at October 31, 2023 ($573 million in 2022).

We provide liquidity facilities to the market-funded vehicles, which may require that we provide additional financing to the vehicles should certain events occur. The total committed and undrawn amount under these liquidity facilities and undrawn amounts of the BMO funded vehicles as at October 31, 2023 totalled $19.8 billion ($18.4 billion as at October 31, 2022). This amount comprises part of the commitments outlined in Note 24 of the audited annual consolidated financial statements.

The assets of each of these market-funded vehicles consist primarily of exposures to diversified pools of automobile-related receivables and conventional residential mortgages in Canada, and automobile-related receivables and equipment loans in the United States. These two asset classes represent 63% (66% in 2022) in Canada, and 86% (88% in 2022) in the United States, of the aggregate assets of their respective vehicles as at October 31, 2023.

Credit Instruments

To meet the financial needs of our clients, we use a variety of off-balance sheet credit instruments. These include guarantees and standby letters of credit, which represent our obligation to make payments to third parties on behalf of a customer if the customer is unable to make the required payments or meet other contractual requirements. We also write documentary and commercial letters of credit, which represent agreements to honour drafts presented by a third party upon completion of specified activities. Credit commitments are off-balance sheet arrangements that represent our commitment to customers to grant them credit in the form of loans or other financings for specific amounts and maturities, subject to certain conditions.

There are a large number of credit instruments outstanding at any time. Our customers are broadly diversified, and we do not anticipate events or conditions that would cause a significant number of customers to fail to perform in accordance with the terms of their contracts. We use the credit adjudication process in deciding whether to enter into these arrangements, just as we do when extending credit in the form of a loan. We monitor off-balance sheet credit instruments in order to avoid undue concentrations in any geographic region or industry.

The maximum amount payable by BMO in relation to these credit instruments was $250 billion as at October 31, 2023 ($228 billion as at October 31, 2022). However, this amount is not representative of our likely credit exposure or the liquidity requirements for these instruments, as it does not take into account customer behaviour, which suggests that only a portion of our customers would utilize the facilities related to these instruments, nor does it take into account any amounts that could be recovered under recourse and collateral provisions.

For the credit commitments outlined in the preceding paragraphs, in the absence of an event that triggers a default, early termination by BMO may result in a breach of contract.

Further information on these instruments can be found in Note 24 of the audited annual consolidated financial statements.

Guarantees

Guarantees include contracts under which we may be required to make payments to a counterparty based on changes in the value of an asset, liability or equity security that the counterparty holds. Contracts under which we may be required to make payments if a third party does not perform according to the terms of a contract, and contracts under which we provide indirect guarantees of indebtedness, are also considered guarantees. In the normal course of business, we enter into a variety of guarantees, including standby letters of credit, backstop and other liquidity facilities, and derivatives contracts or instruments (including, but not limited to, credit default swaps), as well as indemnification agreements.

The maximum amount payable by BMO in relation to these guarantees was $58 billion as at October 31, 2023 ($54 billion as at October 31, 2022). However, this amount is not representative of our likely exposure, as it does not take into account customer behaviour, which suggests that only a portion of the guarantees would require us to make any payments, nor does it take into account any amounts that could be recovered under recourse and collateral provisions.

For a more detailed discussion of these arrangements, refer to Note 24 of the audited annual consolidated financial statements.

Caution

This Off-Balance Sheet Arrangements section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Enterprise-Wide Risk Management

As a diversified financial services company providing banking, wealth management, capital markets and insurance services, BMO is exposed to a variety of risks that are inherent in each of these business activities. A disciplined and integrated approach to managing risk is fundamental to the success of our operations. Our risk management framework provides independent risk oversight across the enterprise and is integral to building competitive advantage.

Enterprise-Wide Risk Management outlines BMO's approach to managing the key financial risks and other related risks that are inherent in these business activities, as discussed in the following sections:

78 Risks That May Affect Future Results
82 Enterprise-Wide Risk Management Framework
87 Credit and Counterparty Risk
95 Market Risk
100 Insurance Risk
100 Liquidity and Funding Risk
109 Operational Non-Financial Risk
113 Legal and Regulatory Risk
115 Strategic Risk
116 Environmental and Social Risk
118 Reputation Risk

Text and tables presented in a blue-tinted font in the Enterprise-Wide Risk Management section of the MD&A form an integral part of the 2023 audited annual consolidated financial statements. They present required disclosures as set out by the International Accounting Standards Board in IFRS 7, *Financial Instruments – Disclosures,* which permits cross-referencing between the notes to the consolidated financial statements and the MD&A. Refer to Notes 1 and 5 of the audited annual consolidated financial statements.

Risks That May Affect Future Results

Top and Emerging Risks That May Affect Future Results

Evolving internal and external events may have an impact on BMO's overall risk profile. These events have the potential to affect our business, the results of our operations and our financial condition. Our risk management process involves proactively identifying, assessing, managing, monitoring and reporting on risks arising from these events. Risks that are identified are brought forth to several forums for discussion with the Board of Directors, senior management and business leaders, incorporating both bottom-up and top-down approaches. Risks are examined and assessed by scenario analysis. Action plans that address our exposure to certain events are developed based on these risk assessments.

The following risks are considered to have the potential to materially impact BMO's financial results, operational efficiency, strategic direction or reputation.

General Economic Conditions

The general economic conditions prevailing in Canada, the United States and other jurisdictions in which we conduct business affect our earnings. The Canadian and U.S. economies slowed in the past year in response to higher interest rates, but have shown some resilience as a result of high levels of household savings, pent-up demand, expansionary fiscal policies and, in Canada, robust population growth. The labour market remains healthy, with some recent signs of softening. Inflation has moderated, although underlying price pressures persist. The economy faces headwinds from high interest rates and high levels of household indebtedness in Canada, as well as the conflicts in Ukraine and the Middle East, trade disputes with China, diplomatic tensions between Canada and India, and other global geopolitical risks. The possibility that policy rates could rise further and remain high for an extended period has driven longer-term borrowing costs to multi-decade highs, which could lead to higher loan provisions, lower levels of loan demand and stronger deposit pricing competition, with potential impacts on net interest income. These factors represent potential risks for market stability and economic growth. Refer to the Geopolitical Risk and Escalating Trade Disputes section and the Inflation section for further discussion of these risks.

Management regularly monitors the economic environment in which we operate, in order to identify significant changes in key economic indicators, so that we can assess BMO's portfolio and business strategies, and develop contingency plans to address any adverse developments.

Cyber and Cloud Security Risk

Our exposure to cyber security risk arises from the ever-increasing reliance of our business operations on internet and cloud technologies, coupled with a hybrid work environment and extensive dependence on advanced digital technologies to process data. Heightened geopolitical tensions are also contributing to increasing global exposures to cyber security risks. These risks include the threat of data loss, which could lead to exposure of customer or employee information, as well as identity theft and fraud. Ransomware or denial of service attacks could result in system failure and disruption of services. Threat campaigns are becoming better organized and more sophisticated, including an increase in reported data breaches, often occurring through third-party suppliers, that can negatively impact a company's brand and reputation, as well as customer retention and acquisition. At BMO, our response includes investing in our Financial Crimes Unit and technological infrastructure, equipping our team to detect and address cyber security threats across North America, Europe and Asia in order to help keep our customers' and employees' data secure.

Technology Resiliency Risk

Heightened exposure to technology resiliency risk is leading to new and more expansive regulatory requirements related to operational resilience, challenging banks to extend their programs beyond disaster recovery and business continuity activities. New regulatory expectations include the need to be predictive and respond proactively to internal and external threats of disruption.

Technology resiliency is critical to providing our customers with a smooth online experience across our digital channels. Given the extent to which our customers, employees and suppliers are increasingly reliant on technology platforms and the Internet of Things to manage and support their personal, business and investment banking activities, it is important that we maintain platforms that can function at high levels of operational reliability and resilience, particularly with respect to business-critical systems.

Third-Party Risk

Our use of third-party arrangements continues to expand, helping us to deliver innovative solutions across the bank and for our clients. Failure to effectively manage these third-party arrangements exposes BMO to the risk that data may be compromised or the delivery of critical products and services may be disrupted. In addition, third-party service providers may use sub-contractors, introducing an additional layer of complexity for oversight. Any concentration of third parties will also heighten exposures to existing risks of disruption arising from other events, such as natural disasters or geopolitical events.

Effective risk management and oversight are important for third-party arrangements. This includes determining the inherent risk and criticality of third-party arrangements, conducting appropriate due diligence, as well as ongoing monitoring and oversight of the third-party service provider. At BMO, we continue to enhance our third-party risk management practices, aligning them with regulatory expectations and strengthening operational resilience across the supply chain.

Geopolitical Risk and Escalating Trade Disputes

The Russia-Ukraine conflict has had a significant global impact, including high energy prices and the erosion of business confidence. The financial, energy and technology sanctions imposed on Russia by Ukraine's allies have also aggravated shortages, particularly the supply of energy, across the global economy. This could result in a long-term political, economic and military standoff between Western countries and Russia.

Canadian and U.S. relations with China remain fragile. Taiwan continues to be a volatile issue between the United States and China, as China is committed to unification. A U.S. commitment to expanding trade ties with Taiwan may further increase the tension. In addition, the strategic competition between the two countries is driving greater global fragmentation, as both seek to reinforce their autonomy, limit any vulnerabilities and insulate their technology sectors. This could adversely affect business investment, and could prove especially problematic for commodity-producing countries such as Canada that rely on a large export market. Recent Canada-China disputes over political interference are further evidence of this antagonism. More recently, diplomatic relations between Canada and India have frayed, threatening to disrupt trade flows and tourism between the two countries and limit the number of international students applying to study in Canada. The Middle East crisis has raised tensions significantly in the region, and the risk of potential for escalation could drive up energy prices, unsettle financial markets and slow global growth even further, which would have a direct impact on our customers.

We actively monitor global and North American trends and continually assess our businesses in the context of these trends. Our lending portfolio has limited direct exposure outside North America; however, our customers rely on global trade and sustained economic growth. To mitigate exposure to geopolitical risk, we maintain a diversified portfolio that we monitor continually, in addition to contingency plans that are intended to prepare BMO for any possible adverse developments. Our portfolios, business plans and capital adequacy are stress tested against severely adverse scenarios arising from trade-related shocks, and we build contingency plans and mitigation strategies to address and offset the consequences of possible adverse political and economic developments.

BMO's credit exposure by geographic region is set out in Tables 4, 5 and 8 to 10 in the Supplemental Information and in Note 4 of the audited annual consolidated financial statements.

Climate Change

BMO is exposed to risks related to environmental conditions and extreme weather events that could potentially disrupt our operations, impact our customers and counterparties, and result in lower earnings and higher losses. Factors contributing to heightened environmental risks include the impacts of climate change and the continued intensification of development in areas of greater environmental sensitivity. Business continuity management plans provide us with the roadmap and tools that support the restoration, maintenance and management of critical operations and processes in the event of a business disruption.

BMO is also exposed to risks related to borrowers that may experience financial losses or rising operating costs as a result of climate-related litigation or policies, such as carbon emissions pricing, or that may experience a decline in revenue as new and emerging technologies disrupt or displace demand for certain commodities, products and services. As a global bank, our strategic priority is to be our clients' lead partner in the transition to a net zero world, delivering on our commitments to sustainable financing and responsible investing, supported by the BMO Climate Institute and our dedicated Energy Transition Group.

Legal and regulatory, business or reputation 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 give rise to new business or reputation risks. Globally, climate-related litigation or enforcement measures could arise from new and more stringent obligations to manage and report climate-related risks.

Refer to the Environmental and Social Risk section for further discussion of these risks.

Canadian Housing Market and Consumer Leverage
The level of household debt in Canada is high, making the economy vulnerable to economic shocks. The housing market rebounded after the Bank of Canada paused interest rate hikes in early 2023, which together with elevated inflation and a pickup in economic activity, prompted the Canadian central bank to raise rates twice over the summer. While the Bank of Canada may refrain from raising rates further, the housing market recovery will likely be held back by the persistent lack of affordability, notably in Ontario and British Columbia. However, high rates of immigration should provide underlying support to housing market activity and prices.

Housing affordability remains challenging, especially in the Greater Toronto Area (GTA) and Greater Vancouver Area (GVA) and their surrounding regions, and represents an ongoing barrier to entry for potential first-time homebuyers. Inflation and higher interest rates are putting a strain on household budgets despite historically low unemployment rates, which is reducing overall household purchasing power. Further increases in interest rates could add more stress to the financial situation of some households as their fixed payment variable-rate mortgage or fixed-rate mortgage is renewed. To address this risk, BMO has proactively reached out to customers, directly and through our website, to inform them of the potential impact of higher interest rates and provide options for increasing their scheduled payments before renewal.

A decline in home sales activity, particularly in the GTA and GVA, would impact mortgage origination volumes, while lower property values could result in higher provisions for credit losses. BMO's prudent lending practices, which include the application of additional underwriting scrutiny and regulatory stress testing at origination on higher-value and higher loan-to-value transactions, and the setting and close monitoring of regional, property type and customer segment concentration limits, support the soundness of BMO's Canadian real estate lending portfolio. Further, stress test analysis suggests that even significant price declines and extremely challenging economic conditions would result in manageable losses, primarily due to insurance coverage and the significant level of equity held by owners with seasoned loans. Credit losses may be mitigated by relatively low unemployment and rising wages, which are expected to support consumer spending capacity in the face of high inflation.

Inflation
The inflation rate has begun to moderate after reaching four-decade highs in 2022, amid lower commodity prices and improved global supply chains. However, it is not expected to return to the 2% target of central banks until 2025. Elevated inflation is having an impact on the operations of our clients, and could have a negative effect on our earnings through higher provisions for credit losses and higher operating costs. We monitor inflationary pressures in North America closely and assess potential effects on our portfolios, interest margins and operating costs. Refer to the Canadian Housing Market and Consumer Leverage section and the General Economic Conditions section for further discussion of these risks.

Technological Innovation and Competition
Emerging technologies continue to evolve rapidly, creating opportunities to drive revenue growth and operating efficiencies in the financial sector. We are committed to the prudent and responsible adoption of emerging new technologies in order to have a competitive advantage and meet our customers' expectations, as we deliver personalized on-demand banking and new digital products and services. In alignment with BMO's Digital First strategy, we are continuing to invest in risk management technology that can also enhance the customer experience, streamline processes and reduce complexity. We continue to monitor the evolving external environment to identify emerging technologies, practices and regulations in the financial services industry. Our emerging technologies risk management framework is now a component of Technology Risk Management, supporting prudent and responsible innovation and adoption. We are also developing and deploying new talent strategies to attract and retain employees with the skills essential to maintaining BMO's global competitive position.

Other Factors That May Affect Future Results

Fiscal and Monetary Policies and Other Economic Conditions in the Countries in which BMO Conducts Business
Fiscal and monetary policies and other economic conditions prevailing in Canada, the United States and other jurisdictions in which we do business may impact profitability and heighten economic uncertainty in specific businesses and markets, which may in turn affect our customers and counterparties, reduce profitability and contribute to a greater risk of default. Higher levels of business debt following the pandemic may give rise to future vulnerabilities that could impact our markets and our operating results. Interest rate fluctuations could have an impact on our earnings, the value of our investments, the credit quality of our loans to customers and counterparty exposure, as well as the capital markets that we access.

Fluctuations in the value of the Canadian dollar relative to other currencies have affected, and could continue to affect, the business operations and results of clients with significant earnings or input costs denominated in foreign currencies. Our investments in operations outside of Canada are primarily denominated in U.S. dollars, and the foreign exchange impact on our U.S.-dollar-denominated risk-weighted assets and capital deductions may result in variability in our capital ratios. Refer to the Enterprise-Wide Capital Management section for further discussion of these risks. The value of the Canadian dollar relative to the U.S. dollar will also affect the contribution of U.S. operations to Canadian-dollar profitability.

Hedging positions may be taken to manage interest rate exposures and foreign exchange impacts, and to partially offset the effects of Canadian dollar/U.S. dollar exchange rate fluctuations on the bank's financial results. Refer to the Foreign Exchange section and the Market Risk section for a more complete discussion of our exposure to foreign exchange and interest rate risk.

Regulatory Requirements
The financial services industry is highly regulated, and BMO has experienced increasing complexity in regulatory requirements and expectations, as governments and regulators around the world continue to pursue major reforms intended to strengthen the stability of the financial system and protect key markets and participants. These may lead to further increases in regulatory capital or liquidity requirements and additional compliance costs, which could lower returns and affect growth. These reforms could also affect the cost and availability of funding and the level of the bank's market-making activities. Regulatory reforms may also impact fees and other revenues for certain operating groups. In addition, differences in the laws and regulations enacted by a range of national regulatory authorities may offer advantages to our international competitors, which could affect our ability to compete. We monitor such developments, and other potential changes, so that we are well-positioned to respond and implement any necessary changes.

Following our acquisition of Bank of the West, our subsidiary, BMO Financial Corp. (BFC), as a U.S. bank intermediate holding company, has transitioned from a Category IV to a Category III institution under the Enhanced Prudential Standards issued by the Federal Reserve Board. This change will require BFC to meet certain heightened regulatory standards. Additional information regarding regulatory requirements that now apply to BFC is set out in the Enterprise-Wide Capital Management section.

Failure to comply with applicable legal and regulatory requirements and expectations could result in legal proceedings, financial losses, regulatory sanctions and fines, enforcement actions, criminal convictions and penalties, restrictions on or an inability to execute certain business strategies, a decline in investor and customer confidence, and damage to our reputation. Refer to the Legal and Regulatory Risk section for a more complete discussion of BMO's management of legal and regulatory risk.

Tax Legislation and Interpretations

Legislative changes and changes in tax policy, including their interpretation by tax authorities and the courts, may impact earnings. Tax laws, as well as interpretations of tax laws and policy by tax authorities, may change as a result of efforts by the Canadian and U.S. federal governments, other G20 governments and the Organisation for Economic Co-operation and Development (OECD) to increase taxes, broaden the tax base globally and improve tax-related reporting. For example, the Canadian government has released proposed legislation to adopt the OECD/G20 Inclusive Framework on Base Erosion and Profit Shifting two-pillar plan (Pillar 2) for international tax reform, which will levy a 15% minimum tax on operations globally. For further discussion, refer to the Regulatory Developments – New Canadian Tax Measures section.

Changes to Business Portfolio

On occasion, BMO may acquire companies, businesses and assets as part of its overall business strategy. We conduct thorough due diligence before completing these acquisitions. However, some acquisitions, including Bank of the West, may not perform in accordance with our financial or strategic objectives or expectations. We may be subject to regulatory and shareholder approvals to successfully complete an acquisition, and it may not be possible to establish when, if or on what terms the necessary approvals will be granted. Changes in the competitive and economic environment, as well as other factors, may result in reductions in revenue or profitability, while higher than anticipated integration costs and failure to realize anticipated cost savings after an acquisition could also adversely affect earnings. Integration costs may increase because of regulatory costs related to an acquisition, operational loss events, other unanticipated expenses that were not identified in the due diligence process, or demands on management time that are more significant than anticipated, as well as unexpected delays in implementing certain plans that may in turn lead to delays in attaining full integration. Successful post-acquisition performance depends on retaining the clients and key employees of acquired companies and businesses and on integrating key systems and processes without disruption.

BMO also evaluates potential dispositions of assets and businesses that may no longer meet strategic objectives. When we sell assets or withdraw from a business, we may experience difficulty in finding buyers or devising alternative exit strategies on acceptable terms or in a timely manner, which could delay the achievement of strategic objectives. We may also dispose of assets or a business on terms that are less favourable than anticipated or lead to adverse operational or financial impacts, or greater disruption than expected, and the impact of the divestiture on revenue growth may be greater than projected. Dispositions may be subject to the satisfaction of conditions and the granting of governmental or regulatory approvals on acceptable terms that, if not satisfied or obtained, may prevent the completion of a disposition as intended, or at all.

Critical Accounting Estimates, Judgments and Accounting Standards

BMO prepares its consolidated financial statements in accordance with International Financial Reporting Standards (IFRS). Changes that the International Accounting Standards Board makes from time to time may materially affect the way we record and report financial results. Future changes in accounting policies are discussed in the Future Changes in Accounting Policies section, as well as in Note 1 of the audited annual consolidated financial statements.

The application of IFRS requires management to make significant judgments and estimates that affect the carrying amounts of certain assets and liabilities, certain amounts reported in net income and other related disclosures. In making these judgments and estimates, we rely on the best information available at the time. However, it is possible that circumstances may change, new information may become available or models may prove to be imprecise.

BMO's financial results could be affected for the period during which any such new information or change in circumstances becomes apparent, and the extent of the impact could be significant. More information is included in the Critical Accounting Estimates and Judgments section.

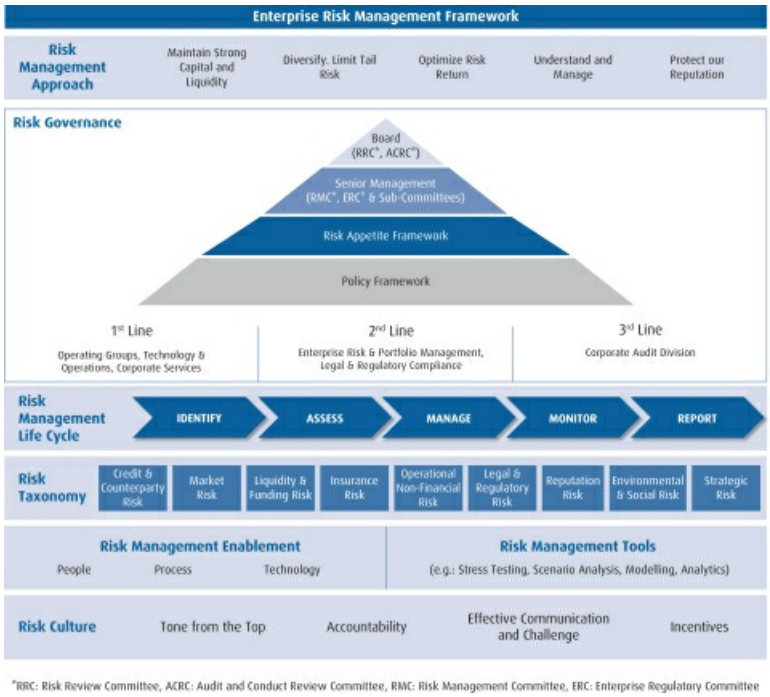
Caution

The Risks That May Affect Future Results section and the remainder of this Enterprise-Wide Risk Management section contain forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements. Other factors beyond BMO's control that may affect its future results are noted in the Caution Regarding Forward-Looking Statements. BMO cautions that the preceding discussion of risks that may affect future results is not exhaustive.

Enterprise-Wide Risk Management Framework

BMO's integrated and disciplined approach to risk management is fundamental to the success of our business. Our Enterprise Risk and Portfolio Management (ERPM) group oversees the implementation and operation of the Enterprise-Wide Risk Management Framework (ERMF), and provides independent review and oversight across the enterprise on risk-related issues, in order to enable prudent and measured risk-taking that is integrated with business strategy. All elements of the ERMF function together to support informed and effective risk management, while striking an appropriate balance between risk and return.

The ERMF guides our risk-taking activities in order to align them with customer needs, shareholder expectations and regulatory requirements. The ERMF also sets out our approach to risk management: maintain strong capital and liquidity positions, diversify and limit tail risk, optimize risk return, understand and manage the risks we face, and protect our reputation. Our approach to risk governance is outlined in the ERMF, which incorporates our Risk Management Life Cycle, and informs our efforts to identify, assess, manage (which includes mitigation), monitor and report on our exposure to material risks. The ERMF is driven by our people, processes and technology, along with a range of risk management tools, including modelling and analytics, stress testing and scenario analysis, and our Risk Taxonomy. All elements of the ERMF are supported by our risk culture and provide for the direct management of each individual risk type, as well as the management of risk on an integrated basis.



*RRC: Risk Review Committee, ACRC: Audit and Conduct Review Committee, RMC: Risk Management Committee, ERC: Enterprise Regulatory Committee

Risk Governance

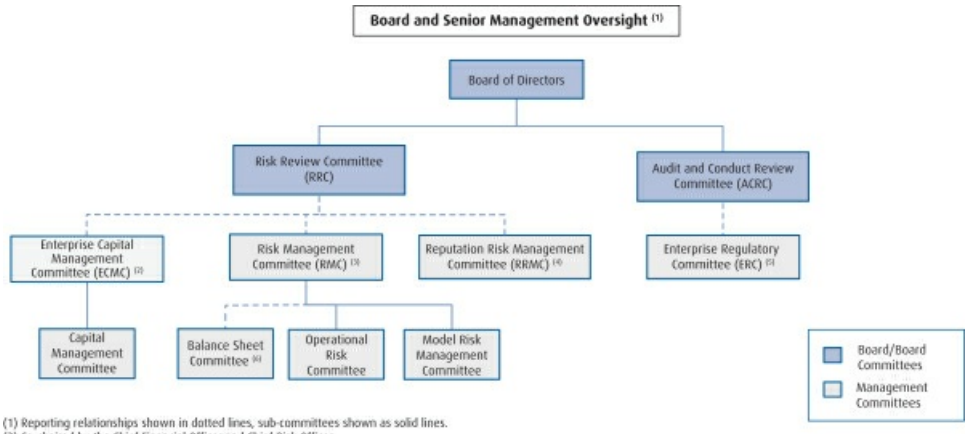
The ERMF outlines a governance approach that includes robust Board of Directors and senior management oversight, a Risk Appetite Framework, the Enterprise Policy Framework and the corresponding roles in the three-lines-of-defence operating model.

Board of Directors and Senior Management Oversight

Specific policies approved by our Board of Directors govern our approach to the management of material risks, and oversight is exercised at every level of the enterprise through a hierarchy of committees and individual responsibilities, as outlined in the following diagram. The Board of Directors seeks to ensure that corporate objectives are supported by a sound risk strategy and an effective ERMF that is appropriate to the nature, scale, complexity and risk profile of our lines of business and other operations. The Board also has overall responsibility for oversight of the bank's governance framework and corporate culture. Senior management reviews and discusses significant risk issues and action plans as they arise in the implementation of the enterprise-wide strategy, exercising oversight and governance of the risks taken across the enterprise and the processes through which exposures to such risks are identified, assessed, managed, monitored and reported on, in accordance with policies, and held within approved limits and risk tolerances.

The ERMF is reviewed on a regular basis by the Risk Review Committee (RRC) of the Board of Directors, in order to exercise oversight and guide risk-taking activities.

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In addition to the oversight exercised by the Board of Directors and senior management, effective governance of the bank's risks is overseen by management committees and supported by the three-lines-of-defence operating model, which addresses risks across the operating groups and Corporate Services.

Board of Directors is responsible for supervising the management of the business and affairs of BMO. The Board, either directly or through its committees, is responsible for oversight of the following areas: strategic planning; defining risk appetite; identifying and managing risk; managing capital; fostering a culture of integrity; internal controls; succession planning and evaluation of senior management; communication; public disclosure; and corporate governance.

Risk Review Committee (RRC) of the Board of Directors assists the Board in fulfilling its risk management oversight responsibilities. This includes overseeing a strong risk culture; overseeing the identification and management of BMO's risks; monitoring adherence to risk management corporate policies and compliance with risk-related regulatory requirements; and evaluating the effectiveness of the Chief Risk Officer (CRO), in conjunction with the Human Resources Committee, including input into succession planning for the CRO. The ERMF is reviewed on a regular basis by the RRC and guides risk-taking activities and sets out the bank's approach to risk management.

Audit and Conduct Review Committee (ACRC) of the Board of Directors assists the Board in fulfilling its oversight responsibilities for the integrity of BMO's financial reporting and sustainability reporting on environmental, social and governance (ESG) matters; the effectiveness of BMO's internal controls; the internal audit function; the qualifications, independence and performance of the independent auditors; BMO's compliance with laws and regulations; transactions involving related parties; conflicts of interest and confidential information; standards of business conduct and ethics; cyber security; and consumer protection measures and complaints.

Chief Executive Officer (CEO) is directly accountable to the Board for all of BMO's risk-taking activities. The CEO is supported by the CRO and the ERPM group.

Chief Risk Officer (CRO) reports directly to the CEO and is head of ERPM and chair of RMC. The CRO is responsible for providing independent review and oversight of enterprise-wide risks and leadership on risk issues, developing and maintaining the ERMF and fostering a strong risk culture across the enterprise.

Risk Management Committee (RMC) brings together senior executive members of BMO management to oversee risk management across the enterprise. RMC reviews and discusses significant risk issues and action plans as they arise in the implementation of the enterprise-wide strategy. RMC exercises risk oversight and governance at the highest levels of management. This committee is chaired by the CRO, and its members include the heads of the operating groups, the CEO, the Chief Financial Officer (CFO) and the General Counsel.

RMC Sub-Committees have oversight responsibility for the risk exposures and balance sheet impacts that may arise from management strategies, governance practices, risk measurement, model risk management and contingency planning. RMC and its sub-committees exercise oversight of the risks taken across the enterprise and the processes through which such risks are identified, assessed, managed, monitored and reported on, in accordance with policies, and held within limits and risk tolerances.

Enterprise Risk and Portfolio Management (ERPM), as the second line of defence, provides risk management oversight, effective challenge and independent assessment of risk and risk-taking activities. ERPM supports a disciplined approach to risk-taking by exercising its responsibility for independent transactional approval and portfolio management, policy formulation, risk reporting, stress testing, modelling and risk education. This approach promotes consistency in risk management practices and standards across the enterprise, and verifies that any risks accepted are consistent with BMO's risk appetite.

Operating Groups and Corporate Services, including Technology and Operations, are responsible for effectively managing risks by identifying, assessing, managing, monitoring, mitigating and reporting on exposures to risk within their respective operations and lines of business in accordance with their established risk appetite. They exercise business judgment and maintain effective policies, processes and internal controls, so that significant risk issues are escalated and reviewed by ERPM. Individual governance committees and ERPM establish and monitor risk limits that are consistent with, and subordinate to, the Board-approved limits.

Risk Appetite Framework

BMO's Risk Appetite Framework consists of a Risk Appetite Statement and the responsibilities of senior management and the Board of Directors, and is supported by corporate policies, standards and guidelines, including the related risk limits, concentration levels and controls defined therein. Risk appetite defines the level and type of risk that the bank is willing to assume given its guiding principles, thereby supporting the pursuit of sound business initiatives, appropriate returns and targeted growth. Risk appetite is integrated with strategic and capital planning and performance management. The Risk Appetite Statement consists of both qualitative and quantitative specifications of our appetite for the assumption of material risks. Key risk metrics are outlined for material risks, with specific thresholds that allow senior management and the Board of Directors to monitor actual performance relative to risk appetite. On an annual basis, the RMC submits the Risk Appetite Statement and key risk metrics to the RRC, which in turn reviews and recommends them to the Board of Directors for approval. The Risk Appetite Statement is articulated and applied consistently across the enterprise, with operating groups, Corporate Services, key businesses and entities developing their own respective risk appetite statements within this framework.

We believe that risk management is every employee's responsibility. This is guided by five key principles that define our approach to managing risk across the enterprise and comprise our Risk Appetite Statement.

- **Understand and Manage** by only taking risks that are transparent and understood.
- **Protect BMO's Reputation** by adhering to principles of honesty, integrity, respect and high ethical standards, in line with our Code of Conduct.
- **Diversify. Limit Tail Risk** by targeting a business mix that minimizes earnings volatility and exposure to low-probability, high-impact events.
- **Maintain Strong Capital and Liquidity** positions that meet, or exceed, regulatory requirements and market expectations.
- **Optimize Risk Return** by managing risk-adjusted exposures and making decisions that create value for shareholders.

Risk Limits

Risk limits are set so that risk-taking activities remain within BMO's risk appetite, balancing risk diversification, exposure to loss and risk-adjusted returns. These limits inform business strategies and decisions, and are reviewed and approved by the Board of Directors or management committees, as appropriate, based on the level and granularity of the limits. They include:

- **Credit and Counterparty Risk** – limits on group and single-name exposures and material country, industry and portfolio/product segments.
- **Market Risk** – limits on economic value and earnings exposures to stress scenarios and significant market movements, as well as limits on value at risk and stress related to trading and underwriting activities.
- **Insurance Risk** – limits on policy exposures and reinsurance arrangements.
- **Liquidity and Funding Risk** – minimum limits governing the internal liquidity stress testing scenario, minimum regulatory liquidity ratio requirements, and maximum levels of asset pledging and wholesale funding, as well as limits related to liability diversification and exposure to credit and liquidity facilities.
- **Operational Non-Financial Risk** – key metrics for measuring operational and other non-financial risks that may have financial consequences.

The Board of Directors, after considering recommendations from the RRC and RMC, annually reviews and approves key risk limits and then delegates overall authority for these limits to the CEO. The CEO in turn delegates more specific authorities to the senior executives of the operating groups (first line of defence), who are responsible for the management of risk in their respective operations, and to the CRO. These delegated authorities allow risk officers to set risk tolerances, approve geographic and industry sector exposure limits within defined parameters, and establish underwriting and inventory limits for trading and investment banking activities. The criteria under which more specific authorities may be delegated across the organization, as well as the requirements relating to documentation, communication and monitoring of those specific delegated authorities, are set out in corporate policies and standards.

Enterprise Policy Framework

The Enterprise Policy Framework includes a comprehensive set of risk-related corporate policies, each of which is approved by the RRC, as well as corporate standards issued pursuant to those corporate policies that have been reviewed by the RMC and approved by senior management. Corporate policies and standards collectively outline the principles, expectations, and roles and responsibilities of senior management for ensuring that exposures to key risks are identified, assessed, managed, monitored and reported. Corporate policies and standards are reviewed and updated at a minimum every two years.

The Enterprise Policy Framework also includes supporting directives and procedures that apply across the first and second lines of defence to operationalize the requirements, roles and responsibilities, and frameworks outlined in those corporate policies and standards.

Three-Lines-of-Defence Operating Model

Our ERMF is operationalized through the three-lines-of-defence approach to managing risk, as described below:

- Operating groups and Corporate Services, which includes Technology and Operations, serve as our first line of defence. They are accountable for the risks arising from their businesses, operations and exposures. They are expected to pursue business opportunities within their established risk appetite and to identify, assess, manage (which includes mitigation), monitor and report on all risks in, or arising from, their businesses, operations and exposures. The first line fulfils its responsibilities by applying risk management and reporting methodologies, by establishing appropriate internal controls in accordance with the ERMF, and by monitoring the effectiveness of such controls. These processes and controls serve as the framework for our lines of business to act within their delegated risk-taking authority and risk limits, as set out in corporate policies and the Risk Appetite Framework. Corporate Services, while part of our first line of defence, may also serve in a governance capacity when specific roles and responsibilities are assigned to individuals or groups under the Enterprise Policy Framework.
- The second line of defence comprises ERPM and Legal & Regulatory Compliance. The second line exercises independent oversight, performs effective challenge and provides independent assessment of risks and risk management practices, including transaction, product and portfolio risk

management decisions, processes and controls applied in the first line of defence. The second line establishes enterprise-wide risk management policies, infrastructure, processes, methodologies and practices that the first and second lines use to identify, assess, manage (which includes mitigation), monitor and report on risks across the enterprise.
- Corporate Audit Division is the third line of defence. It provides an independent assessment of the effectiveness of internal controls across the enterprise, including controls that support the risk management and governance processes.

Risk Taxonomy

Our Risk Taxonomy categorizes the key risks to which BMO is exposed and provides an analytical framework for the risk management life cycle in relation to each of the key risks. Our Risk Taxonomy incorporates exposures to financial risks (Credit and Counterparty Risk, Market Risk, Insurance Risk and Liquidity and Funding Risk), non-financial risks (Operational Non-Financial Risk and Legal and Regulatory Risk) and transverse risks, which intersect with both financial andnon-financial risks (Strategic Risk, Environmental and Social Risk and Reputation Risk). We maintain sub-categories under each Tier 1 risk to support effective risk management practices as part of the overall ERMF. Failure in managing these risks, or in controlling our exposures to them, could have material financial consequences for BMO.

Risk Management Life Cycle

Risk Identification, Assessment and Management

Risk identification is an integral step in recognizing the key inherent risks that BMO faces, assessing the potential for loss and then acting to mitigate this potential. Our Risk Taxonomy documents the key risks, supporting the implementation of our Risk Appetite Framework and assisting in identifying the primary risk categories for which stress capital consumption is estimated. Risk review and approval processes are established based on the nature, size and complexity of the risks involved. Generally, these involve a formal review and approval by either an individual or a committee that is independent of the originator. Delegated authorities and approvals by category are outlined below.
- **Portfolio transactions** – transactions are approved through risk assessment processes for all types of transactions at all levels of the enterprise, which include operating group recommendations and ERPM approval of credit risk, and transactional and position limits for market risk.
- **Structured transactions** – new structured products and transactions with significant legal and regulatory, accounting or tax implications are reviewed by the Global Markets Risk Committee, as appropriate, and are also assessed under the operational risk management process if they involve structural or operational complexity that may give rise to significant operational risk. Transactions that may give rise to significant or heightened reputation risk are reviewed by the Reputation Risk Management Committee.
- **Investment initiatives** – documentation of risk assessments is formalized through the investment assessment and approval process, and is reviewed and approved by Corporate Services based on the size of an initiative's investment spending and its inherent risk.
- **New products and services** – policies and procedures for the approval of new or modified products and services offered to customers are the responsibility of the first line of defence, including appropriate senior business leaders, and are reviewed and approved by subject matter experts and senior management in Corporate Services, as well as by other senior management committees.

Risk Monitoring and Reporting

Risk-Based Capital Assessment

Two measures of risk-based capital are used by BMO: economic capital and regulatory capital. Both are aggregate measures of the risk that the bank assumes in pursuit of its financial objectives, and enable the evaluation of returns on a risk-adjusted basis. Our operating model provides for the direct management of each type of risk, as well as the management of material risks on an integrated basis. Measuring the economic profitability of transactions or portfolios involves a combination of both expected and unexpected losses to assess the extent and correlation of risk before authorizing new exposures. Both expected and unexpected loss measures for a current transaction or portfolio reflect current and future market conditions, the inherent risk in the position and, as appropriate, its credit quality. Risk-based capital methods and material models are reviewed at least annually and updated as appropriate. The risk-based capital models provide a forward-looking estimate of the difference between the maximum potential loss in economic (or market) value and expected loss, measured over a specified time interval and using a defined confidence level.

Stress Testing

Stress testing is a key element of our risk management and capital management frameworks. It is integrated into our enterprise and group risk appetite statements and embedded in our management processes. To evaluate risks, we regularly test a range of scenarios, which vary in frequency, severity and complexity, in portfolios and businesses across the enterprise. In addition, we participate in regulatory stress tests in multiple jurisdictions. Governance of the stress testing framework resides with senior management, including the Enterprise Stress Testing Committee. This committee comprises business, risk and finance executives, and is accountable for reviewing and challenging enterprise-wide scenarios and stress test results. Stress testing and enterprise-wide scenarios associated with the Internal Capital Adequacy Assessment Process (ICAAP), including recommendations for actions that the enterprise could take in order to manage the impact of a stress event, are established by senior management and presented to the Board of Directors. Oversight and governance of the stress testing associated with the Horizontal Capital Review (HCR), which is a U.S. regulatory requirement for BMO Financial Corp. (BFC), are exercised at the BFC level by its Board of Directors.

Quantitative models and tools, along with qualitative evaluations, are utilized to assess the impact of changes in the macroeconomic environment on the income statement and balance sheet and the resilience of the bank's capital position over a forecast horizon. Models utilized for stress testing are approved and governed under the Model Risk Management Framework, and are used to establish a better understanding of our risks and to test our capital adequacy.

BMO's stress testing framework integrates stress testing at the line of business, portfolio, industry, geographic and product level, and embeds the test results in strategy, business planning and decision-making. Targeted portfolio, industry and geographic analysis is conducted by ERPM and the lines of business to test risk appetite, limits, concentration and strategy. Ad hoc stress testing is conducted in response to changing economic or market conditions and in order to assess business strategies.

Refer to the Environmental and Social Risk section for a discussion of our climate scenario analysis program.

Enterprise Stress Testing

Enterprise stress testing supports BMO's ICAAP and target-setting through analysis of the potential effects of low-frequency, high-severity events on our earnings, our balance sheet, and our liquidity and capital positions. Scenario selection is a multi-step process that considers material and idiosyncratic risks and the potential impact of new or emerging trends on risk profiles, as well as the macroeconomic environment. Scenarios may be defined by senior management or regulators. The economic impacts are determined by the Economics group, which distills the scenarios into macroeconomic and market variables that include, but are not limited to, GDP growth, yield curve estimates, unemployment rates, real estate prices, stock index growth and changes in corporate profits. These macroeconomic variables drive stress loss models, tools and qualitative assessments that are applied to determine estimated stress impacts. The scenarios are used by operating, risk and finance groups to assess a broad range of financial impacts that BMO could experience as a result of a specific stress, as well as the ordinary course of business and extraordinary actions anticipated in response to that stress.

Stress test results, including mitigating actions, are benchmarked and challenged by the relevant business units and senior management, including the Enterprise Stress Testing Committee.

Risk Culture

The Enterprise Culture and Conduct Framework sets out BMO's approach to managing and mitigating potential misconduct. Misconduct is behaviour that falls short of legal, professional, internal conduct and ethical standards. Similar to BMO's approach to managing other non-financial risks, this framework is supported by the ERMF and our focus on maintaining a strong risk culture. BMO reports on various metrics related to culture and conduct, and engages with other control frameworks across the enterprise and in all of the jurisdictions in which it operates.

Risk culture at BMO is the set of shared norms, attitudes and behaviours related to risk awareness, risk-taking and risk management. Sound risk culture consistently supports appropriate behaviours and judgments about risk-taking, and promotes effective risk management and the alignment of risk-taking activities with BMO's Risk Appetite. Our risk culture informs and supports our overall organizational culture. We are committed to high ethical standards, grounded in our values of integrity, empathy, diversity and responsibility. Our Purpose – to Boldly Grow the Good *in business and life* – defines BMO as an organization and is the foundation of our operations. ERPM is responsible for the development and promotion of a healthy, strong risk culture across the enterprise. In pursuing this mandate, ERPM works closely with Legal & Regulatory Compliance and its Ethics & Conduct Office, as well as People & Culture. BMO's risk culture is founded on four guiding principles that together reinforce its effectiveness across the bank: Tone from the Top, Accountability, Effective Communication and Challenge, and Incentives.

- **Tone from the Top:** Our risk culture is grounded in an approach to risk management that encourages openness, constructive challenge and personal accountability. Each member of senior management plays a critical role in fostering this strong risk culture among all employees by effectively communicating this responsibility and by the example of their actions. The Board of Directors oversees BMO's corporate objectives, and affirms that they are supported by a sound risk strategy and an effective ERMF that is appropriate to the nature, scale, complexity and risk profile of our operations.
- **Accountability:** BMO's ERMF is anchored in the three-lines-of-defence approach to managing risk. Our risk culture also encourages the escalation of concerns associated with potential or emerging risks to senior management, so that those concerns can be appropriately evaluated and addressed. BMO encourages and supports an environment in which concerns can be raised without retaliation.
- **Effective Communication and Challenge:** Timely and transparent sharing of information is integral to engaging stakeholders in key decisions and strategy discussions, which brings added rigour and discipline to BMO's decision-making. This not only leads to the timely identification, escalation and resolution of issues, but also encourages open communication, independent challenge and an understanding of the key risks faced by the organization, so that employees are equipped and empowered to make decisions and take action in a coordinated and consistent manner, supported by a strong and effective monitoring and control framework.
- **Incentives:** Compensation and other incentives are aligned with prudent risk-taking. These are designed to reward the appropriate use of capital and respect for the rules and principles of the ERMF, and to discourage excessive risk-taking. Risk managers have input into the design of incentive programs that may have an effect on risk-taking. We also maintain training programs that are designed to foster a deep understanding of BMO's capital management and risk management frameworks across the enterprise, providing employees and management with the tools and insights they need to fulfill their responsibilities for independent oversight, regardless of their role in the organization.

Credit and Counterparty Risk

Credit and Counterparty Risk is the potential for financial loss due to the failure of an obligor (i.e., a borrower, endorser, guarantor or counterparty) to repay a loan or honour another predetermined financial obligation.

Credit and counterparty risk underlies every lending activity that we enter into, and also arises in the holding of investment securities, transactions related to trading and other capital markets products, and activities related to securitization. Credit risk and counterparty risk represent the most significant measurable risks we face. Effective management of credit and counterparty risk is integral to our success, since failure to do so could have an immediate and significant impact on our earnings, financial condition and reputation.

Credit and Counterparty Risk Governance

The Credit Risk Management Framework seeks to ensure that all material credit risks to which the enterprise is exposed are identified, assessed, managed, monitored and reported on regularly. The Risk Review Committee (RRC) has oversight of the management of all material risks that BMO faces, including the Credit Risk Management Framework. The framework incorporates governing principles that are defined in a series of corporate policies and standards and are given effect through specific operating procedures. These policies and standards are reviewed on a regular basis and modified as necessary, so that they are current and consistent with our risk appetite. The structure, limits (both notional and capital-based), collateral requirements, monitoring, reporting and ongoing management of credit and counterparty exposures are all governed by these credit risk management principles.

Lending officers in the operating groups are responsible for recommending credit decisions based on the completion of appropriate due diligence, and they assume accountability for the related risks. In some instances, relatively small transactions may be assessed by an automated decision-making process, or they may be approved by first-line underwriters with appropriate training, independence and oversight. Credit officers in Enterprise Risk and Portfolio Management (ERPM) approve larger transactions or transactions involving greater risk and are accountable for providing an objective independent assessment of the relevant lending recommendations and risks assumed by the lending officers. All of these individuals in the first and second lines of defence are subject to a lending qualification process and operate in a disciplined environment with clear delegation of decision-making authority, including individually delegated lending limits where appropriate, which are reviewed annually or more frequently, as needed. The Board of Directors annually delegates to the CEO discretionary lending limits for further specific delegation to senior officers. Credit decision-making is conducted at the management level appropriate to the size and risk of each transaction, in accordance with a range of corporate policies, standards and procedures governing the conduct of activities in which credit risk arises. Corporate Audit Division reviews and tests management processes and controls and samples credit transactions in order to assess adherence to acceptable lending standards as set out in BMO's Risk Appetite Statement, as well as compliance with all applicable corporate policies, standards and procedures.

For corporate and commercial borrowers presenting a higher than normal risk of default, we have formal policies in place that outline the framework for managing such accounts, as well as specialized groups that manage them. We strive to identify borrowers facing financial difficulty early, and every effort is made to return such accounts to an acceptable level of risk through the application of good business judgment and the implementation of sound and constructive workout solutions.

All credit risk exposures are subject to regular monitoring. Performing corporate and commercial accounts are reviewed on a regular basis, generally no less frequently than annually, with most subject to internal monitoring of triggers that, if breached, result in an interim review. The frequency of review rises in accordance with the likelihood and size of potential credit losses, and deteriorating higher-risk situations are referred to specialized account management groups for closer attention, as appropriate. In addition, regular portfolio and sector reviews are conducted, including stress testing and scenario analysis based on current, emerging or prospective risks. Reporting is provided at least quarterly, and more frequently where appropriate, to the Board of Directors and senior management committees in order to keep them informed of credit risk developments in our portfolios, including changes in credit risk concentrations, watchlist accounts, impaired loans, provisions for credit losses, negative credit migration and significant emerging credit risk issues. This supports the RRC and senior management committees in any related decisions they may make.

Counterparty credit risk (CCR) involves a bilateral risk of loss because the market value of a transaction can be positive or negative for either counterparty. CCR exposures are subject to the credit oversight, limits, risk management framework and approval process outlined above. However, given the nature of the risk, CCR exposures are also monitored under the market risk framework. In order to reduce our exposure to CCR, transactions are often collateralized and trades may be cleared through a regulated central counterparty (CCP), which reduces overall systemic risk by standing between counterparties, maximizing netting across trades and insulating counterparties from each other's defaults. CCPs mitigate the risk of default by any member through margin requirements (both initial and variation) and a default management process, including a default fund and other provisions. Our exposures to CCPs are subject to the same credit risk governance, monitoring and rating framework we apply to all other corporate accounts.

Material presented in a blue-tinted font above is an integral part of Note 5 of the 2023 audited annual consolidated financial statements.

Credit and Counterparty Risk Management

Collateral Management

Collateral is used for credit risk mitigation purposes in order to minimize losses that would otherwise be incurred in the event of a default. Depending on the type of borrower or counterparty, the assets available and the structure and term of the credit obligations, collateral can take various forms. For corporate and commercial borrowers, collateral can take the form of pledges of the assets of a business, such as accounts receivable, inventory, machinery or real estate, or personal assets pledged in support of guarantees. For trading counterparties, BMO may enter into legally enforceable netting agreements for on-balance sheet credit exposures, when possible. In the securities financing business (including repurchase agreements and securities lending), we obtain eligible financial collateral that we control and can readily liquidate.

Collateral for BMO's derivatives trading counterparty exposures primarily comprises cash and eligible liquid securities that are monitored and revalued on a daily basis. Collateral is obtained under the contractual terms of standardized industry documentation.

With limited exceptions, we utilize the Master Agreement provided by International Swaps and Derivatives Association Inc., frequently with a Credit Support Annex, to document our collateralized trading relationships with counterparties for over-the-counter (OTC) derivatives that are not centrally cleared.

A Credit Support Annex entitles a party to demand a transfer of collateral (or other credit support) when its exposure to OTC derivatives of the other party exceeds an agreed threshold. Collateral to be transferred can include variation margin or initial and variation margin. Credit Support Annexes contain, among other measures, certain thresholds and provisions setting out acceptable types of collateral, a method for their valuation (discounts are often applied to market values), the availability of the collateral for re-pledging by the recipient and the manner in which interest is to be calculated.

To document our contractual securities financing relationships with counterparties, we utilize master repurchase agreements for repurchase transactions, and master securities lending agreements for securities lending transactions.

On a periodic basis, collateral is subject to revaluation based on the specific asset type. For loans, the value of collateral is initially established at the time of origination, and the frequency of revaluation is dependent on the type of collateral. For commercial real estate collateral, a full external appraisal of the property is typically obtained at the time of loan origination, unless the exposure is below a specified threshold amount, in which case an internal evaluation and a site inspection are conducted. Internal evaluations may consider property tax assessments, purchase prices, real estate listings or realtor opinions. The case for an updated appraisal is reviewed annually, with consideration given to the borrower risk rating, existing tenants and lease contracts, as well as current market conditions.

In the event a loan is classified as impaired, and depending on its size, a current external appraisal, valuation or restricted use appraisal is obtained and updated every 12 months, as long as the loan remains classified as impaired. In Canada, for residential real estate that has an original loan-to-value (LTV) ratio of less than 80%, an independent property valuation is routinely obtained at the time of loan origination. For U.S. residential loans secured by real estate, an independent property valuation is obtained for all loans that will be retained in BMO's loan portfolio. For certain real estate loans originated for sale to government-sponsored agencies, the requirement may be waived based on an existing valuation already on file with that agency.

We may use an external service provided by Canada Mortgage and Housing Corporation or an automated valuation model from a third-party appraisal management provider to assist in determining either the current value of a property or the need for a full property appraisal.

For insured residential mortgages in Canada with an original LTV ratio greater than 80%, the default insurer is responsible for confirming the current value of the property.

Portfolio Management and Concentrations of Credit and Counterparty Risk

Our credit risk governance policies require an acceptable level of diversification to help ensure we avoid undue concentrations of credit risk. Concentrations of credit risk may exist when a relatively large number of clients are engaged in similar activities, are located in the same geographic region or have similar economic characteristics such that their ability to meet contractual obligations could be similarly affected by changes in economic, political or other conditions. Limits may be specified for several portfolio dimensions, including industry, specialty segments, country, product and single-name concentrations. We use a range of tools to reduce the credit risk exposures in our loan portfolio. These include asset sales, traditional securitizations, or the purchase of credit protection in the form of credit default swaps or credit insurance and risk transfer transactions. Credit risk is mitigated by obtaining protection from better-rated counterparties or high-quality collateral. Credit risk mitigation activities support our management of capital, and individual and portfolio credit concentration.

Our credit assets consist of a well-diversified portfolio representing millions of clients, the majority of them individual consumers and small to medium-sized businesses. On a drawn loans and commitments basis, our most significant credit exposure at default as at October 31, 2023 was to individual consumers, comprising $344,912 million ($290,896 million as at October 31, 2022).

Wrong-Way Risk

Wrong-way risk occurs when our exposure to a counterparty or the magnitude of our potential loss is highly correlated with the counterparty's probability of default. Specific wrong-way risk arises when the credit quality of the counterparty and the market risk factors affecting collateral or other risk mitigants display a high correlation, and general wrong-way risk arises when the credit quality of the counterparty, for non-specific reasons, is highly correlated with macroeconomic or other factors that affect the value of the risk mitigant. Our procedures require that specific wrong-way risk be identified in transactions and accounted for in the assessment of risk, including any heightened level of exposure.

Material presented in a blue-tinted font above is an integral part of Note 5 of the 2023 audited annual consolidated financial statements.

Credit and Counterparty Risk Measurement

BMO quantifies credit risk at both the individual borrower or counterparty level and the portfolio level. In order to limit earnings volatility, manage expected credit losses and minimize unexpected losses, credit risk is assessed and measured using the following risk-based parameters:

- **Exposure at Default (EAD)** represents an estimate of the outstanding amount of a credit exposure at the time a default may occur.
- **Loss Given Default (LGD)** is a measure of BMO's economic loss, such as the amount that may not be recovered in the event of a default, presented as a proportion of the exposure at default.
- **Probability of Default (PD)** represents the likelihood that a borrower or counterparty will go into default over a one-year time horizon.
- **Expected Loss (EL)** is a measure of the loss that BMO is expected to incur in the normal course of business in a given period of time. EL is calculated as a function of EAD, LGD and PD.

Under Basel III, the Office of the Superintendent of Financial Institutions (OSFI) permits three approaches for the measurement of credit risk: Standardized, Foundation Internal Ratings Based (FIRB) and Advanced Internal Ratings Based (AIRB). BMO primarily uses the Internal Ratings Based (IRB) Approach, which includes both AIRB and FIRB, to determine credit risk-weighted assets (RWA) in its portfolios, including portfolios of the bank's subsidiary BMO Financial Corp. Under the Basel III Reform requirement, it is mandatory to apply FIRB to a subset of IRB exposures where LGD and EAD are based on regulatory prescribed values. Refer to the Supplementary Regulatory Capital Information disclosure for details regarding the total exposure (measured as EAD) of Retail and Wholesale portfolios under the IRB Approach to determining regulatory capital. The remaining exposures reflect waivers and exemptions to the IRB Approach and are measured under the Standardized Approach, subject to OSFI's approval. We continue to transition all material exposures in this category to the AIRB Approach. For securitization exposures, we apply the Basel hierarchy of approaches, including the Securitization Internal Ratings Based Approach and the External Ratings Based Approach, as well as the Standardized Approach.

BMO's regulatory capital and economic capital frameworks both use EAD to assess credit and counterparty risk. Capital is calculated based on exposures that, where applicable, have been redistributed to a more favourable PD band or LGD measure, or a different Basel asset class, as a result of the application of credit risk mitigation and a consideration of credit risk mitigants, including collateral and netting.

Total credit exposures at default by type and industry sector, as at October 31, 2023 and 2022, based on the Basel III classifications, are as follows:

(Canadian $ in millions)	Drawn (3) (7)		Commitments (undrawn) (3) (8)		Other off-balance sheet items (3) (9)		OTC derivatives (4) (10)		Repo-style transactions (4) (5) (11)		Total (1)	
	2023	2022	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022
Individual	**281,087**	233,450	**63,812**	57,446	**13**	–	**–**	–	**–**	–	**344,912**	290,896
Financial institutions	**95,433**	112,185	**18,690**	34,216	**7,201**	8,036	**19,307**	16,467	**16,177**	18,197	**156,808**	189,101
Governments	**219,809**	186,542	**2,551**	1,869	**1,575**	434	**8,193**	8,063	**5,870**	9,287	**237,998**	206,195
Manufacturing	**33,141**	32,515	**16,059**	17,522	**1,915**	2,050	**807**	1,643	**–**	–	**51,922**	53,730
Real estate	**61,766**	49,639	**11,843**	12,911	**971**	1,238	**224**	459	**–**	–	**74,804**	64,247
Retail trade	**27,858**	23,890	**4,621**	4,890	**441**	549	**129**	248	**–**	–	**33,049**	29,577
Service industries	**56,649**	52,437	**13,552**	17,113	**3,172**	3,169	**696**	695	**–**	–	**74,069**	73,414
Wholesale trade	**20,117**	18,037	**7,618**	7,206	**611**	775	**167**	336	**–**	–	**28,513**	26,354
Oil and gas	**3,364**	3,823	**2,889**	4,440	**788**	1,341	**1,444**	6,066	**–**	–	**8,485**	15,670
Utilities	**11,224**	8,781	**8,767**	12,885	**4,547**	4,323	**1,850**	2,087	**–**	–	**26,388**	28,076
Others (2)	**62,636**	50,936	**18,132**	18,111	**4,009**	5,287	**1,634**	1,649	**–**	–	**86,411**	75,983
Total exposure at default (6)	**873,084**	772,235	**168,534**	188,609	**25,243**	27,202	**34,451**	37,713	**22,047**	27,484	**1,123,359**	1,053,243

(1) Credit exposure excluding equity, securitization and other assets, such as non-significant investments, goodwill, deferred tax assets and intangibles.
(2) Includes remaining industries that individually comprise less than 2% of total exposures.
(3) Represents gross credit exposures without accounting for collateral.
(4) Credit exposure at default is inclusive of collateral.
(5) Repo-style transactions include repos, reverse repos and securities lending transactions, which represent both asset and liability exposures. The impact of collateral on the credit exposure for repo-style transactions is $228,691 million ($215,806 million in 2022).
(6) Excludes exposures arising from derivative and repo-style transactions that are cleared through a clearing house or a central counterparty totalling $9,025 million ($13,698 million in 2022).
(7) Drawn exposures include loans, acceptances, deposits with regulated financial institutions and certain securities.
(8) Undrawn commitments cover all unutilized authorizations associated with the drawn exposures noted above, including any authorizations that are unconditionally cancellable. EAD for undrawn commitments is model-generated, based on internal empirical data.
(9) Other off-balance sheet exposures include items such as guarantees, standby letters of credit and documentary credits.
(10) Over-the-counter (OTC) derivatives are those in proprietary accounts that result in exposure to credit risk in addition to market risk. EAD for OTC derivatives is calculated inclusive of collateral.
(11) EAD for repo-style transactions is the calculated exposure, net of collateral.

Certain comparative figures have been reclassified to conform with the current year's presentation.

Risk Rating Systems

BMO's risk rating systems are designed to assess and measure the risk of exposure.

Credit risk-based parameters are monitored, reviewed and validated regularly. Monitoring is on a quarterly basis for both the wholesale and retail models. Refer to the Model Risk section for a discussion of model risk mitigation processes.

Retail (Consumer and Small Business)

The retail portfolios comprise a diversified group of individual customer accounts and include residential mortgages, personal loans, credit cards, auto loans and small business loans. These loans are managed in pools of homogeneous risk exposures for risk rating purposes. Decision support processes are developed using established statistical techniques and expert systems for underwriting and monitoring purposes. Adjudication models, behavioural scorecards, decision trees and expert knowledge are combined to generate optimal credit decisions in a centralized and automated environment.

Material presented in a blue-tinted font above is an integral part of Note 5 of the 2023 audited annual consolidated financial statements.

The retail risk rating system assesses risk based on individual loan characteristics. We have a range of internally developed PD, LGD and EAD models for each of the major retail portfolios. The major product lines within each of the retail portfolios are modelled separately, so that the risk-based parameters capture the distinct nature of each product. The models, in general, are based on internal historical data recorded over a multi-year period that includes at least one full economic cycle, in compliance with regulatory requirements. Adjustments are incorporated into the parameters, as appropriate, to account for uncertainties. The retail parameters are tested and calibrated on an annual basis, if required, to incorporate additional data points and recent experience in the parameter estimation process. Risk drivers used in the retail credit models may include customer attributes such as delinquency status and credit scores, and account attributes such as loan amounts and utilization.

A PD estimate is assigned to each homogeneous pool to reflect the long-run average of one-year default rates over the economic cycle.

An LGD estimate is calculated by discounting future recovery payments to the time of default, including collection costs.

An EAD estimate is calculated as the balance at default divided by the credit limit at the beginning of the year. For non-revolving products, such as mortgages, EAD is equal to 100% of the current outstanding balance and has no undrawn component.

For capital purposes, the LGD and EAD estimates are calibrated to reflect downturn conditions. The PD, LGD and EAD estimates are updated annually and recalibrated as required by comparing the estimates to observed historical experience.

Retail Credit Probability of Default Bands by Risk Rating

Risk profile	Probability of default band
Exceptionally low	≤ 0.05%
Very low	> 0.05% to 0.20%
Low	> 0.20% to 0.75%
Medium	> 0.75% to 7.00%
High	> 7.00% to 99.99%
Default	100%

Wholesale (Sovereign, Bank, Corporate and Commercial)

Within our wholesale portfolios, an enterprise-wide risk rating framework is applied to all sovereign, bank, corporate and commercial counterparties. One key element of this framework is the assignment of appropriate borrower or counterparty risk ratings (BRRs). We have a range of internally developed general and sector-specific BRR models, as well as portfolio-level LGD and EAD models for each of the sovereign, bank, corporate and commercial portfolios.

The BRR models capture the key financial and non-financial characteristics of the borrowers and generate a borrower-level rating that reflects the relative rank order of the default risk. The models are primarily based on internal data, supplemented by judgment as necessary, for low-default portfolios.

BRRs are assessed and assigned at the time of loan origination, and reassessed when borrowers request changes to credit facilities or when events trigger a review, such as an external rating change or a covenant breach. BRRs are reviewed no less frequently than annually, and more frequent reviews are conducted for borrowers with less acceptable risk ratings. The assigned ratings are mapped to a PD reflecting the likelihood of default over a one-year time horizon. As a borrower migrates between risk ratings, the PD associated with the borrower also changes.

We employ a master scale with 14 BRRs above default, and PDs are assigned to each rating within an asset class to reflect the long-run average of one-year default rates over an economic cycle, supplemented by external benchmarking, as necessary.

An LGD estimate captures the priority of claim, collateral, product and sector characteristics of the credit facility extended to a borrower. LGD estimates are at the facility level.

An EAD estimate captures the facility type, sector and utilization rate characteristics of the credit facility extended to a borrower. EAD estimates are at the facility level. An EAD credit conversion factor is calculated for eligible facilities by comparing amounts drawn at the time of default and one year prior to default. The authorization and the amount drawn, one year prior to default, are used to split each facility into its respective drawn and undrawn portion, where applicable.

LGD and EAD models have been developed for each asset class using internal data recorded over a multi-year period that includes at least one full economic cycle, in compliance with regulatory requirements. Results are benchmarked using external data when necessary and adjustments are incorporated into the parameters, as appropriate, to account for uncertainties. For capital purposes, the LGD and EAD parameters are calibrated to reflect downturn conditions. The PD, LGD and EAD estimates are updated annually and recalibrated as required by comparing the estimates to observed historical experience.

As demonstrated in the table below, our internal risk rating system can be aligned with those of external rating agencies.

Wholesale Borrower Risk Rating Scale

BMO rating	Moody's Investors Service implied equivalent	Standard & Poor's implied equivalent
Acceptable		
I-1 to I-7	Aaa to Baa3	AAA to BBB-
S-1 to S-4	Ba1 to B1	BB+ to B+
Watchlist		
P-1 to P-3	B2 to Ca	B to CC
Default/Impaired		
D-1 to D-4	C	C to D

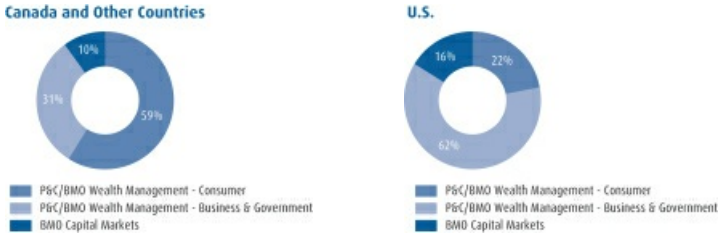
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Credit Quality Information

Portfolio Review

Total enterprise-wide outstanding credit risk exposures were $1,123.4 billion as at October 31, 2023, with $537.4 billion recorded in Canada, $539.2 billion in the United States and $46.8 billion in other jurisdictions. This represented an increase of $70.2 billion or 7% from the prior year.

BMO's loan book continues to be well-diversified by industry and geographic region. Gross loans and acceptances increased $101.2 billion or 18% from the prior year to $668.4 billion as at October 31, 2023. The geographic mix of BMO's Canadian and U.S. portfolios represented 55.9% and 42.4% of total loans, respectively, compared with 62.6% and 35.4% in the prior year. The loan portfolio is well-diversified, with the consumer loan portfolio representing 43.9% of the total portfolio, a slight increase from 43.1% in the prior year, and business and government loans representing 56.1% of the total portfolio, a slight decrease from 56.9% in the prior year.



Commercial Real Estate Lending

Commercial real estate (CRE) lending refers to loans made for the purpose of financing buildings or land intended to generate a profit, derived either from the sale of property or from rental income. CRE primarily refers to two distinct types of real estate businesses: income-producing real estate (office, industrial and retail space, and multi-family residential buildings with more than four dwelling units), including the construction of these assets; and development of land and construction of properties for sale (subdivisions, condominiums and other types of property). Our primary focus is on owners of income-producing commercial real estate portfolios with stable operating performance, diversified portfolios, modest leverage and continued access to capital, including those legally structured as real estate investment trusts (REITs), real estate investment funds and real estate operating companies (REOCs), as well as pension funds and other established owners of income-producing commercial real estate.

Our CRE portfolio was $69.8 billion as at October 31, 2023 ($54.5 billion as at October 31, 2022) and accounted for 10% of total gross loans and acceptances (10% as at October 31, 2022). The portfolio is well-managed, with consistent and conservative underwriting standards, strict lending criteria and structural resilience, resulting in strong credit quality. As at October 31, 2023, 57% of CRE loans are investment grade (69% as at October 31, 2022) and 41% are sub-investment grade (30% as at October 31, 2022), with impaired loans representing 1% of the portfolio (0% as at October 31, 2022).

Our CRE portfolio is well-diversified across businesses, property types and geographic regions. Given the post-pandemic prevalence of remote and hybrid work arrangements, office space is one of the higher-risk portfolio segments within commercial real estate and represents 1% of our total gross loans and acceptances. In addition to monitoring the limits we set for the CRE portfolio, we apply lower limits on each segment, including office space, which helps us mitigate any exposure to related risks.

Real Estate Secured Lending

Real estate secured lending comprises residential mortgages and home equity lines of credit (HELOC) we extend to individuals, secured by residential real estate, which is defined as residential structures with one to four dwelling units. The increases in prime interest rates during fiscal 2022 and 2023 impacted variable-rate mortgages, resulting in extended and negative amortization. These prime rate increases had no immediate impact on fixed-rate mortgages, which are fixed at one rate until renewal.

We regularly perform stress testing on our residential mortgage and HELOC portfolios to assess the potential effects of high-impact events. These stress tests incorporate scenarios ranging from moderately to severely adverse. The credit losses forecast in these tests vary with the severity of the scenario and are currently considered to be manageable.

The following tables provide a breakdown of residential mortgages and HELOCs by geographic region, as well as insured and uninsured balances. Residential mortgages and HELOCs are secured by residential properties.

Canadian Real Estate Secured Lending

(Canadian $ in millions)	Residential mortgages	Amortizing home equity lines of credit	Total amortizing real estate secured lending	Non-amortizing real estate secured lending	Total Canadian real estate secured lending
As at October 31, 2023	**150,575**	**35,741**	**186,316**	**12,982**	**199,298**
As at October 31, 2022	139,394	34,083	173,477	13,219	186,696

Material presented in a blue-tinted font above is an integral part of Note 5 of the 2023 audited annual consolidated financial statements.

Residential Mortgages [1]

(Canadian $ in millions, except as noted)	As at October 31, 2023					As at October 31, 2022				
	Outstanding balances				For the 12 months ended	Outstanding balances				For the 12 months ended
Region (2)	Insured (3)	Uninsured	Total	% of total	Average LTV uninsured (4)	Insured (3)	Uninsured	Total	% of total	Average LTV uninsured (4)
Atlantic	**3,347**	**3,452**	**6,799**	**3.8%**	**71%**	3,197	3,255	6,452	4.3%	72%
Quebec	**9,242**	**12,903**	**22,145**	**12.5%**	**71%**	8,892	12,156	21,048	14.2%	72%
Ontario	**14,643**	**56,798**	**71,441**	**40.3%**	**70%**	14,411	49,664	64,075	43%	70%
Alberta	**9,885**	**7,302**	**17,187**	**9.7%**	**73%**	9,552	6,854	16,406	11%	74%
British Columbia	**4,746**	**24,391**	**29,137**	**16.5%**	**67%**	4,680	22,919	27,599	18.5%	68%
All other Canada	**2,264**	**1,602**	**3,866**	**2.2%**	**73%**	2,179	1,635	3,814	2.6%	73%
Total Canada	**44,127**	**106,448**	**150,575**	**85.0%**	**70%**	42,911	96,483	139,394	93.6%	70%
United States	**68**	**26,607**	**26,675**	**15.0%**	**77%**	16	9,470	9,486	6.4%	72%
Total	**44,195**	**133,055**	**177,250**	**100%**	**71%**	42,927	105,953	148,880	100%	71%

Home Equity Lines of Credit [1]

(Canadian $ in millions, except as noted)	As at October 31, 2023					As at October 31, 2022				
	Portfolio				For the 12 months ended	Portfolio				For the 12 months ended
Region (2)	Outstanding balances	%	Authorizations	%	Average LTV (4)	Outstanding balances	%	Authorizations	%	Average LTV (4)
Atlantic	**996**	**1.8%**	**1,922**	**1.7%**	**60%**	967	1.9%	1,835	1.9%	64%
Quebec	**9,149**	**16.6%**	**18,071**	**15.9%**	**67%**	8,897	17.6%	17,085	17.4%	71%
Ontario	**24,601**	**44.6%**	**45,351**	**40.0%**	**59%**	23,647	46.8%	43,063	43.9%	63%
Alberta	**3,203**	**5.8%**	**6,970**	**6.2%**	**62%**	3,232	6.4%	6,835	6.9%	66%
British Columbia	**10,029**	**18.2%**	**18,899**	**16.7%**	**59%**	9,826	19.5%	17,953	18.3%	61%
All other Canada	**745**	**1.3%**	**1,474**	**1.3%**	**66%**	733	1.5%	1,443	1.5%	67%
Total Canada	**48,723**	**88.3%**	**92,687**	**81.8%**	**61%**	47,302	93.7%	88,214	89.9%	64%
United States	**6,471**	**11.7%**	**20,615**	**18.2%**	**60%**	3,196	6.3%	9,902	10.1%	64%
Total	**55,194**	**100%**	**113,302**	**100%**	**61%**	50,498	100%	98,116	100%	64%

(1) Reporting methodologies are in accordance with OSFI's Residential Mortgage Underwriting Practices and Procedures (B-20) Guideline.
(2) Region is based upon address of the property mortgaged.
(3) Portfolio insured mortgages are defined as mortgages that are insured individually or in bulk through an eligible insurer (i.e., CMHC, Sagen MI Canadâ).
(4) Loan-to-value (LTV) is based on the value of the property at mortgage origination, as well as outstanding balances for mortgages and authorized amounts for HELOCs.

Residential Mortgages by Remaining Term of Amortization [1] [2]

	Amortization period							
As at October 31, 2023	**< 5 years**	**6-10 years**	**11-15 years**	**16-20 years**	**21-25 years**	**26-30 years**	**31-35 years**	**> 35 years**
Canada [3]	**0.7%**	**2.5%**	**6.1%**	**13.6%**	**32.1%**	**18.0%**	**2.1%**	**24.9%**
United States [4]	**0.5%**	**2.2%**	**5.3%**	**2.8%**	**10.4%**	**78.6%**	**0.1%**	**0.1%**
Total	**0.7%**	**2.5%**	**5.9%**	**12.0%**	**28.8%**	**27.1%**	**1.8%**	**21.2%**

	Amortization period							
As at October 31, 2022	< 5 years	6-10 years	11-15 years	16-20 years	21-25 years	26-30 years	31-35 years	**> 35 years**
Canada [3]	0.8%	2.6%	5.7%	13.5%	32.3%	13.8%	3.4%	27.9%
United States [4]	0.7%	4.9%	9.9%	4.9%	14.3%	65.0%	0.1%	0.2%
Total	0.8%	2.7%	6.0%	13.0%	31.1%	17.1%	3.2%	26.1%

(1) In Canada, the remaining amortization is based on the current balance, interest rate, customer payment amount and payment frequency. Contractual payment schedule is used in the United States.
(2) Reporting methodologies are in accordance with OSFI's B-20 guideline.
(3) As a result of increases in interest rates, the portfolio included $29.9 billion ($22.3 billion as at October 31, 2022) of variable-rate mortgages in negative amortization, with all of the contractual payments currently being applied to interest, and the portion of interest due that is not met by each payment is added to the principal.
(4) A large proportion of U.S.-based mortgages in the longer-amortization band are primarily associated with modification programs for troubled borrowers and regulator-initiated mortgage refinancing programs.

Leveraged Finance

We define leveraged finance loans as loans and mezzanine financing provided to private equity-owned businesses for which our assessment indicates a higher level of credit risk. We have some exposure to leveraged finance loans, which represented 2% of total assets, with $26.7 billion outstanding as at October 31, 2023 (2% and $25.1 billion, respectively, in 2022). Of this amount, 25% of leveraged finance loans, with $6.8 billion outstanding as at October 31, 2023 (25% and $6.3 billion, respectively, in 2022), were well-secured by high-quality assets. The remainder of the portfolio is well-diversified across sectors and includes loans to borrowers where we have relatively small hold sizes. This portfolio is closely managed, and in some cases has risk mitigation and structural elements that lower the level of credit risk. As at October 31, 2023, $497 million or 2% of all leveraged finance loans were classified as impaired ($348 million or 1% in 2022). In addition to this leveraged finance lending business, we also enter into underwriting activities involving leveraged borrowers, which are managed through the market risk framework.

Provision for Credit Losses

Total provision for credit losses was $2,178 million on a reported basis and $1,473 million on an adjusted basis, compared with $313 million on both a reported and adjusted basis in the prior year, due to downward credit migration despite an improvement in the macroeconomic outlook, as well as higher losses on impaired loans. Detailed discussions of PCL, including historical PCL trends, are provided in Table 12 in the Supplemental Information and in Note 4 of the audited annual consolidated financial statements.

Gross Impaired Loans

Total gross impaired loans and acceptances (GIL) were $3,960 million, an increase from $1,991 million in the prior year. The increase in impaired loans was predominantly in business and government lending, with the largest increases in the service, commercial real estate and retail trade industries. GIL as a percentage of gross loans and acceptances was 0.59% in 2023, which increased from an historically low level of 0.35% in the prior year.

Factors contributing to the change in GIL are outlined in the table below. Loans classified as impaired during the year increased to $4,047 million from $1,635 million in 2022, reflecting higher impaired loan formations in both the wholesale and the consumer portfolios, including the purchased credit impaired loans related to the acquisition of Bank of the West. On a geographic basis, Canada accounted for 42% of total formations in 2023, compared with 71% in 2022.

Detailed breakdowns of impaired loans by geographic region and industry can be found in Table 8 in the Supplemental Information and in Note 4 of the audited annual consolidated financial statements.

Changes in Gross Impaired Loans and Acceptances

(Canadian $ in millions, except as noted)

For the year ended October 31	**2023**	2022
GIL, beginning of year	**1,991**	2,169
Classified as impaired during the year	**4,047**	1,635
Purchased credit impaired during the year	**415**	–
Transferred to not impaired during the year	**(545)**	(659)
Net repayments	**(1,214)**	(819)
Amounts written off	**(753)**	(363)
Recoveries of loans and advances previously written off	**–**	–
Disposals of loans	**(24)**	(54)
Foreign exchange and other movements	**43**	82
GIL, end of year	**3,960**	1,991
GIL as a % of gross loans and acceptances	**0.59**	0.35

Allowance for Credit Losses

We employ a disciplined approach to provisioning and loan loss evaluation across all loan portfolios, with the prompt identification of problem loans being a key risk management objective. We maintain both an allowance for credit losses on impaired loans and an allowance for credit losses on performing loans, in accordance with International Financial Reporting Standards (IFRS). An allowance on performing loans is maintained to cover impairment in the existing portfolio for loans that have not yet been individually identified as impaired. Our approach to establishing and maintaining the allowance on performing loans is based on the requirements of IFRS, considering the guideline issued by our regulator, OSFI. Under the IFRS 9 expected credit loss (ECL) methodology, an allowance is recorded for ECL on financial assets regardless of whether there has been an actual loss event. We recognize an allowance for loss at an amount generally based on 12 months of ECL, if the credit risk at the reporting date has not increased significantly since initial recognition (Stage 1). We record ECL over the remaining life of performing financial assets that are considered to have experienced a significant increase in credit risk (Stage 2).

ECL is calculated on a probability-weighted basis that involves three different economic scenarios and is a function of PD, EAD and LGD estimates calibrated to meet the requirements for calculating ECL for a specific financial asset. The timing of the loss is also considered, and ECL is estimated by incorporating forward-looking economic information and applying experienced credit judgment to reflect factors not captured in ECL models. An allowance on impaired loans is maintained to reduce the carrying value of individually identified impaired loans (Stage 3) to the expected recoverable amount. Allowances in the second quarter of 2023 included an initial provision of $705 million on the purchased Bank of the West performing loan portfolio.

We maintain an allowance for credit losses (ACL) at a level that we consider appropriate to absorb credit-related losses. As at October 31, 2023, the total ACL was $4,267 million, an increase of $1,269 million from the prior year, reflecting the initial provision of $705 million on the Bank of the West performing loans and higher allowances on both performing and impaired loans. The allowance on impaired loans was $695 million as at October 31, 2023, and the allowance on performing loans was $3,572 million. These amounts included an allowance on impaired loans of $11 million and an allowance on performing loans of $449 million, related to undrawn commitments and letters of credit that are considered other credit instruments and recorded in other liabilities. The allowance on impaired loans increased $138 million from $557 million in the prior year. The allowance on performing loans increased $1,131 million to $3,572 million from $2,441 million in the prior year, primarily driven by the initial provision on the Bank of the West performing loans, portfolio credit migration, uncertainty in credit conditions, growth in certain portfolios and movements in foreign exchange rates, partially offset by an improvement in the macroeconomic outlook.

Further details on the continuity in ACL by each product type can be found in Tables 9 and 10 in the Supplemental Information, and in Note 4 of the audited annual consolidated financial statements.

International Exposures

BMO's geographic exposures to regions outside of Canada and the United States are subject to a risk management framework that incorporates assessments of economic and political risks in each region or country. These exposures are also managed within limits based on product, entity and country of ultimate risk. Our total net exposure to these regions is set out in the table below.

The table outlines total net exposure for funded lending and undrawn commitments, securities (including cash products, traded credit and credit default swap activity), repo-style transactions and derivatives. Repo-style transactions and derivatives exposures are reported at mark-to-market value. Derivatives exposures incorporate transaction netting where master netting agreements with counterparties have been entered into, and collateral offsets for counterparties where a Credit Support Annex is in effect.

Exposure by Region

(Canadian $ in millions)	As at October 31, 2023													As at October 31, 2022
	Funded lending and commitments				Securities				Repo-style transactions and derivatives					
Region	Bank	Corporate	Sovereign	Total	Bank	Corporate	Sovereign	Total	Bank	Corporate	Sovereign	Total	Total net exposure	Total net exposure
Europe (excluding United Kingdom)	**641**	**2,978**	**–**	**3,619**	**495**	**214**	**6,423**	**7,132**	**377**	**124**	**29**	**530**	**11,281**	11,817
United Kingdom	**21**	**4,204**	**370**	**4,595**	**102**	**100**	**770**	**972**	**105**	**457**	**6**	**568**	**6,135**	7,095
Latin America	**2,978**	**6,922**	**–**	**9,900**	**1**	**118**	**–**	**119**	**13**	**238**	**–**	**251**	**10,270**	9,285
Asia-Pacific	**3,874**	**3,173**	**148**	**7,195**	**782**	**107**	**3,641**	**4,530**	**229**	**270**	**65**	**564**	**12,289**	13,706
Middle East and Africa	**782**	**437**	**105**	**1,324**	**–**	**4**	**28**	**32**	**12**	**28**	**1,075**	**1,115**	**2,471**	2,303
Other (1)	**–**	**5**	**51**	**56**	**6**	**–**	**3,681**	**3,687**	**–**	**–**	**1,832**	**1,832**	**5,575**	5,902
Total	**8,296**	**17,719**	**674**	**26,689**	**1,386**	**543**	**14,543**	**16,472**	**736**	**1,117**	**3,007**	**4,860**	**48,021**	50,108

(1) Primarily exposure to supranational entities.

Derivative Transactions

The following table presents the notional amounts of BMO's over-the-counter (OTC) derivative contracts, comprising contracts that are centrally cleared and settled through a designated clearing house or central counterparty (CCP) and contracts that are not centrally cleared.

CCPs are established under the supervision of central banks or other similar regulatory authorities and, as financial market infrastructure, must satisfy certain financial resilience requirements. Generally speaking, in order to centrally clear OTC derivative contracts, we acquire a membership in the CCP and, in addition to providing collateral to protect the CCP against risk of loss related to BMO, we are exposed to risk as a member for our contribution to a default fund. We may also be called on to make additional contributions or provide other support in the event of default by another member.

The notional amounts of our derivatives represent the amount to which a rate or price is applied in order to calculate the amount of cash that must be exchanged under each contract. Notional amounts do not represent assets or liabilities and therefore are not recorded in the Consolidated Balance Sheet. The fair values of OTC derivative contracts are recorded in the Consolidated Balance Sheet.

Over-the-Counter Derivative Contracts (Notional amounts)

(Canadian $ in millions)	Non-centrally cleared		Centrally cleared		Total	
As at October 31	**2023**	2022	**2023**	2022	**2023**	2022
Interest Rate Contracts						
Swaps	**413,856**	420,700	**9,197,174**	5,534,061	**9,611,030**	5,954,761
Forward rate agreements	**5,439**	3,929	**127,214**	18,468	**132,653**	22,397
Purchased options	**130,000**	98,113	**–**	–	**130,000**	98,113
Written options	**118,524**	87,941	**–**	–	**118,524**	87,941
Total interest rate contracts	**667,819**	610,683	**9,324,388**	5,552,529	**9,992,207**	6,163,212
Foreign Exchange Contracts						
Cross-currency swaps	**95,932**	119,976	**–**	–	**95,932**	119,976
Cross-currency interest rate swaps	**685,022**	582,092	**–**	–	**685,022**	582,092
Forward foreign exchange contracts	**555,031**	469,503	**9,335**	12,270	**564,366**	481,773
Purchased options	**51,143**	72,733	**–**	–	**51,143**	72,733
Written options	**55,370**	74,041	**–**	–	**55,370**	74,041
Total foreign exchange contracts	**1,442,498**	1,318,345	**9,335**	12,270	**1,451,833**	1,330,615
Commodity Contracts						
Swaps	**18,573**	24,487	**1**	38	**18,574**	24,525
Purchased options	**5,319**	5,686	**–**	–	**5,319**	5,686
Written options	**4,218**	5,011	**–**	–	**4,218**	5,011
Total commodity contracts	**28,110**	35,184	**1**	38	**28,111**	35,222
Equity Contracts	**116,011**	105,280	**129**	–	**116,140**	105,280
Credit Default Swaps						
Purchased	**1,705**	1,496	**15,222**	15,275	**16,927**	16,771
Written	**1,080**	962	**8,930**	10,137	**10,010**	11,099
Total credit default swaps	**2,785**	2,458	**24,152**	25,412	**26,937**	27,870
Total	**2,257,223**	2,071,950	**9,358,005**	5,590,249	**11,615,228**	7,662,199

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Market Risk

Market Risk is the potential for adverse changes in the value of our assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity and commodity prices and their implied volatilities, and credit spreads, and includes the risk of credit migration and default in our trading book.

Market risk arises from our trading and underwriting activities, as well as our structural banking activities. The magnitude and importance of these activities to the enterprise, along with the potential volatility of market variables, call for diligent governance and a robust market risk management framework that can provide effective identification, measurement, reporting and control of market risk exposures.

Trading and Underwriting Market Risk Governance

Our market risk-taking activities are subject to an extensive governance framework. The Risk Review Committee (RRC) oversees the management of market risk on behalf of the Board of Directors and approves limits governing market risk exposures that are consistent with our risk appetite. The Risk Management Committee (RMC) regularly reviews and assesses significant market risk exposures and positions, and exercises ongoing senior management oversight of our risk-taking activities. Both of these committees are kept apprised of specific market risk exposures and any developments that could expose BMO to unusual, unexpected or unquantified risks associated with those market risk exposures, as well as other current and emerging market risks. In addition, all businesses and individuals authorized to conduct trading and underwriting activities on behalf of BMO are required to work within our governance framework and, as part of their first-line-of-defence responsibilities, they must adhere to all relevant corporate policies, standards and procedures, and maintain and manage market risk exposures within specified limits and risk tolerances. In support of our risk governance framework, our market risk management framework comprises processes, infrastructure and supporting documentation, which together support the identification, assessment, independent monitoring and control of our market risk exposures.

Trading and Underwriting Market Risk

Our trading and underwriting businesses give rise to market risk associated with buying and selling financial products in the course of meeting our customers' needs, including market-making and related financing activities, and assisting clients to raise funds by way of securities issuance.

Identification and Assessment of Trading and Underwriting Market Risk

As the first step in the management of market risk, rigorous assessment processes are in place to identify market risk exposures associated with both new products and the evolving risk profile of existing products, including on- and off-balance sheet positions, trading and non-trading positions, leveraged loan, bond and equity underwriting, and market risk exposures arising from the domestic and foreign operations of our operating groups.

Various metrics and techniques are then employed to measure identified market risk exposures. These include Value-at-Risk and stress tests, as well as sensitivity to market risk factors, position concentrations and trading revenues. Results are reported to the appropriate line of business, the RMC and RRC on a regular basis.

Value-at-Risk (VaR) measures the maximum loss likely to be experienced in the trading and underwriting portfolios, measured at a 99% confidence level over a one-day holding period. VaR is calculated for specific classes of risk in BMO's trading and underwriting activities related to interest rates, foreign exchange rates, credit spreads, equity and commodity prices and their implied volatilities.

Stress Tests are used to determine the potential impact of low-frequency, high-severity events on the trading and underwriting portfolios. The portfolios are measured daily against a variety of hypothetical and historical event scenarios. Scenarios are continuously refined to reflect the latest market conditions and portfolio risk exposures.

Risk models support the measurement of our exposure to the risk of adverse outcomes for income, retained earnings and capital. We use a variety of methods to verify the integrity of our risk models, including the application of back-testing against hypothetical losses and approval by an independent model validation team. The data and correlations that underpin our models are updated frequently, so that risk metrics reflect current conditions.

Stress tests capture a wide range of hypothetical and historical events, including the 2008 global financial crisis and the COVID-19 pandemic, along with portfolio-specific impacts and asset class scenarios. In addition, a range of assumptions, including the duration of the scenario and management actions, are incorporated in the stress tests to better reflect the anticipated impact on the trading and underwriting business.

Our VaR model is back-tested daily, assuming there are no changes to the previous day's closing position and isolating the effects of each day's price movements against those closing positions. The one-day 99% confidence level VaR at the local and consolidated BMO levels is compared with the estimated daily profit and loss (P&L) that would be recorded if the portfolio composition remained unchanged. If this P&L result is negative and its absolute value is greater than the previous day's VaR, a back-testing exception occurs. Each exception is investigated, explained and documented.

Although it is a useful indicator of risk, VaR has limitations, as with any model-driven metric. These include the assumption that all portfolio positions can be liquidated within the assumed one-day holding period, which may not be the case under illiquid market conditions. Market liquidity horizons are reviewed for suitability and updated where appropriate for relevant risk metrics, such as stress testing. Further limitations of the VaR metric include the assumption that historical data can be used as a proxy to forecast future market events. In addition, VaR calculations are based on portfolio positions at the close of business and do not reflect the impact of intra-day trading activity.

VaR and stress testing continue to have a significant role in managing portfolio risks, although the determination of trading market risk regulatory capital will reflect Basel III Reforms starting in 2024. However, these metrics should not be viewed as definitive predictors of the maximum amount of losses that could be experienced in the trading and underwriting portfolios in any one day, as their results are based on models and estimates and are subject to confidence levels, and the estimates could be exceeded under unforeseen market conditions.

Material presented in a blue-tinted font above is an integral part of Note 5 of the 2023 audited annual consolidated financial statements.

Monitoring and Control of Trading and Underwriting Market Risk

Limits are applied to VaR, stress testing and other risk metrics, and these limits are subject to regular monitoring and reporting, with breaches escalated to the appropriate level of management for review. Risk profiles of our trading and underwriting activities are maintained within our risk appetite and supporting limits, and are monitored and reported to traders, management, senior executives and committees of our Board of Directors. Other significant controls include the independent valuation of financial assets and liabilities, as well as compliance with our Model Risk Management Framework to mitigate model risk.

Trading Market Risk Measures

Trading VaR

Average Total Trading VaR increased year-over-year due to portfolio changes and higher market volatility, primarily in our fixed income portfolio. Average diversification levels increased and provided a significant offset to the rise in average interest rate VaR and debt-specific risk VaR.

Total Trading Value at Risk (VaR) Summary (1)

As at or for the year ended October 31 (Pre-tax Canadian $ equivalent in millions)	2023				2022			
	Year-end	Average	High	Low	Year-end	Average	High	Low
Commodity VaR	**4.0**	**2.4**	**6.1**	**1.2**	1.6	3.1	5.5	1.0
Equity VaR	**13.6**	**14.0**	**24.5**	**8.5**	14.1	13.1	18.4	8.5
Foreign exchange VaR	**1.7**	**2.9**	**5.6**	**1.3**	2.3	1.8	5.2	0.5
Interest rate VaR (2)	**27.3**	**27.4**	**41.5**	**16.0**	22.1	18.0	26.5	12.4
Debt-specific risk	**11.0**	**10.9**	**15.9**	**7.5**	10.2	5.7	10.5	1.8
Diversification	**(25.0)**	**(25.5)**	**nm**	**nm**	(15.0)	(15.1)	nm	nm
Total Trading VaR	**32.6**	**32.1**	**47.9**	**21.2**	35.3	26.6	38.2	18.1

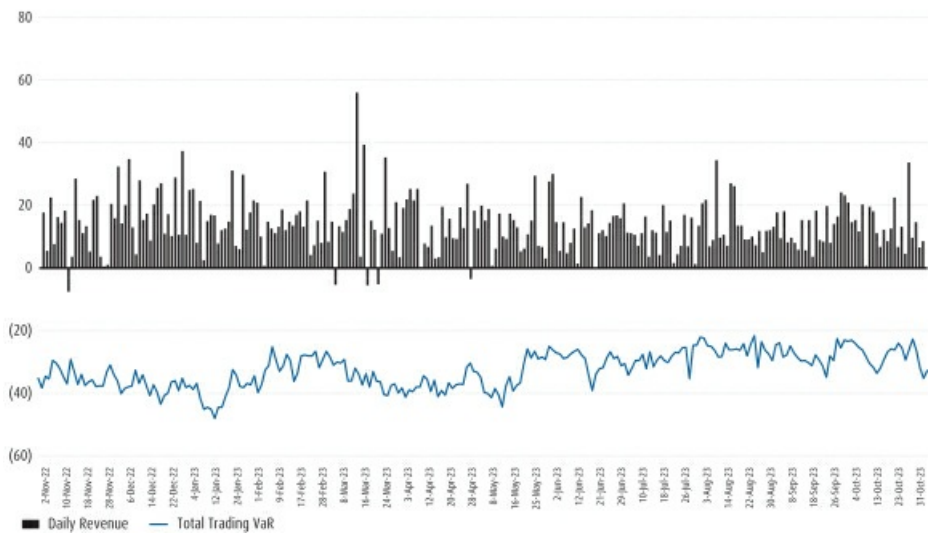
(1) One-day measure using a 99% confidence interval. Gains are presented in brackets and losses are presented as positive numbers.
(2) Interest rate VaR includes general credit spread risk.
nm – not meaningful

Trading Net Revenue

The charts below present daily net revenues plotted against Total Trading VaR, along with a representation of daily net revenue distribution. In 2023, net trading losses occurred on five days, with none of these losses exceeding Total Trading VaR. The losses on these days were attributable to lower than usual client activity, combined with market volatility, which had a negative impact on some of our positions.

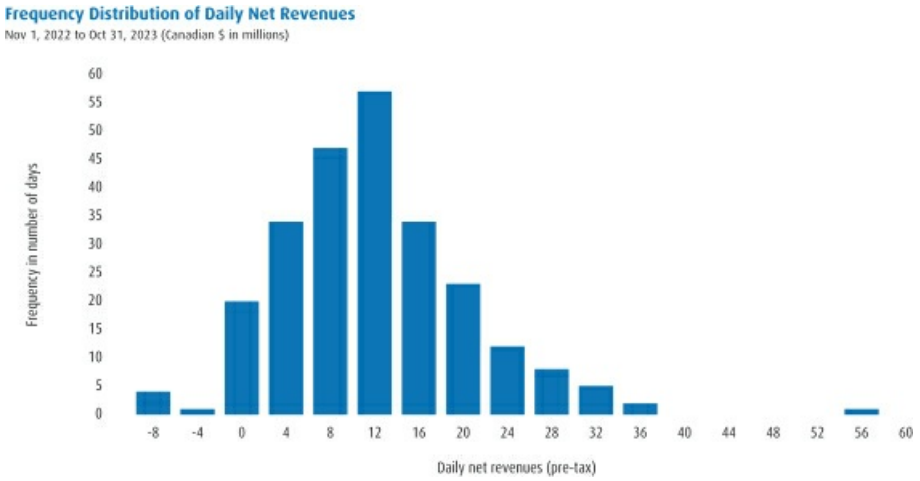
Trading Net Revenues versus Value at Risk

November 2, 2022 to October 31, 2023 (pre-tax basis, Canadian $ in millions)



Material presented in a blue-tinted font above is an integral part of Note 5 of the 2023 audited annual consolidated financial statements.

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Structural (Non-Trading) Market Risk

Structural market risk comprises interest rate risk arising from our banking activities (such as those involving loans and deposits) and foreign exchange risk arising from our foreign currency operations and exposures.

Structural Market Risk Governance

BMO's Corporate Treasury group is responsible for the ongoing management of structural market risk across the enterprise, with independent oversight provided by the Market Risk group. In addition to the limits approved by our Board of Directors on earnings at risk and the sensitivity of economic value to changes in interest rates, more granular management limits are in place to guide the daily management of this risk.

The RRC oversees structural market risk management, regularly reviews structural market risk positions and annually approves the structural market risk plan and limits. The RMC and Asset Liability Committee provide ongoing senior management oversight of risk positions and related activities.

Structural Market Risk Measurement

Interest Rate Risk

Structural interest rate risk arises when changes in interest rates affect the market value, cash flows and earnings of assets and liabilities related to our banking activities. The objective of structural interest rate risk management is to maintain high-quality earnings and maximize sustainable product spreads, while managing risk to the economic value of our net assets arising from changes in interest rates.

Structural interest rate risk primarily comprises interest rate mismatch risk and product-embedded option risk.

Interest rate mismatch risk arises when there are differences in the scheduled maturities, repricing dates or reference rates of assets, liabilities and derivatives. The net interest rate mismatch, representing residual assets funded by common shareholders' equity, is managed to align with a target profile through interest rate swaps and securities.

Product-embedded option risk arises when product features allow customers to alter the timing of cash flows, such as scheduled maturity or repricing dates, usually in response to changes in market conditions. Product-embedded options include loan prepayments, deposit redemption privileges and committed rates on unadvanced mortgages. Product-embedded options and associated customer behaviours are captured in risk modelling, and hedging programs may be used to limit the level of exposure to this risk.

Structural interest rate risk is measured using simulations, analyses of the sensitivity of earnings and economic value, stress testing and gap analysis, in addition to other risk metrics.

Earnings Sensitivity is a measure of the impact of potential changes in interest rates on the projected 12-month pre-tax net income from a portfolio of assets, liabilities and off-balance sheet positions in response to prescribed parallel interest rate movements, with interest rates floored at zero.

Economic Value Sensitivity is a measure of the impact of potential changes in interest rates on the market value of a portfolio of assets, liabilities and off-balance sheet positions in response to prescribed parallel interest rate movements, with interest rates floored at zero.

The models that measure structural interest rate risk incorporate projected changes in interest rates and predict the likely reaction of our customers to these changes. For customer loans and deposits with scheduled maturity and repricing dates (such as mortgages and term deposits), the models measure the extent to which customers are likely to use embedded options to alter those scheduled dates and timing. For customer loans and deposits without scheduled maturity and repricing dates (such as credit card loans and chequing accounts), exposure is measured using models that adjust for elasticity in product pricing and reflect historical and forecasted trends in balances. The results generated by these structural market risk models are inherently uncertain, as they reflect potential future pricing and customer behaviours, which may differ from actual experience. These models have been developed using statistical analysis and are independently validated and periodically updated through regular model performance assessment, back-testing and ongoing dialogue with the lines of business. Models developed to predict customer behaviour are also used to support product pricing.

Material presented in a blue-tinted font above is an integral part of Note 5 of the 2023 audited annual consolidated financial statements.

All models are subject to BMO's Model Risk Management Framework, which is described in more detail in the Enterprise-Wide Risk Management Framework section.

The sensitivity of structural interest rate earnings and economic value to an immediate parallel increase or decrease of 100 basis points in the yield curve is disclosed in the table below.

On February 1, 2023, we closed the acquisition of Bank of the West. Prior to closing, we entered into interest rate swaps to manage the exposure of our regulatory capital to the risk of changes in the fair value of the assets and liabilities of Bank of the West due to changes in interest rates between the announcement and closing of the acquisition. These swaps resulted in a cumulative mark-to-market gain of $5.7 billion at closing. Any exposure to interest rate risk in relation to these interest rate swaps was largely offset by our purchase of a portfolio of matched-duration U.S. treasuries and other balance sheet instruments. On closing, the mark-to-market swaps were unwound and replaced with fair value accounting hedges, which in effect crystallized an unrealized loss on the U.S. treasuries and other balance sheet instruments that will be recognized as a reduction in interest income over their remaining life. Refer to the Enterprise-Wide Capital Management section and the Recent Acquisitions section for further discussion.

The sensitivity of structural economic value to rising interest rates primarily reflects a lower market value for fixed-rate loans. The sensitivity of structural economic value to falling interest rates primarily reflects the impact of a higher market value for fixed-rate loans and minimum modelled client deposit rates. The exposure of structural economic value to rising interest rates and the benefits of falling interest rates increased relative to October 31, 2022, primarily due to a modestly shorter net duration of BMO's position in the prior year, in advance of our acquisition of Bank of the West. Structural earnings sensitivity quantifies the potential impact of interest rate changes on structural balance sheet pre-tax net income over the next 12 months. The sensitivity of structural earnings to falling interest rates primarily reflects the risk of fixed-rate and floating-rate loans repricing at lower rates and the more limited ability to reduce deposit pricing as rates fall. The benefits of rising interest rates to structural earnings primarily reflect the positive impact of reinvesting our net equity and non-rate sensitive deposits into assets with higher-term rates. The benefits of rising interest rates to structural earnings and exposures to falling interest rates decreased in 2023 relative to 2022, largely due to a modestly shorter net duration of BMO's position in the prior year, in advance of our acquisition of Bank of the West.

During 2023, both economic value sensitivity and earnings sensitivity remained within the limits established by the Board of Directors.

Structural Interest Rate Sensitivity (1)

	Economic value sensitivity				Earnings sensitivity			
	October 31, 2023			October 31, 2022	October 31, 2023			October 31, 2022
(Pre-tax Canadian $ equivalent in millions)	Canada (2)	United States	Total	Total	Canada (2)	United States	Total	Total
100 basis point increase	**(872.6)**	**(976.0)**	**(1,848.6)**	(990.2)	**31.0**	**273.4**	**304.5**	498.9
100 basis point decrease	**750.4**	**741.1**	**1,491.6**	647.9	**(36.2)**	**(289.2)**	**(325.4)**	(595.2)

(1) Losses are presented in brackets and gains are presented as positive numbers.
(2) Includes Canadian dollar and other currencies.

The following table presents net loans and acceptances by interest rate sensitivity:

(Canadian $ in millions)	2023	2022
Fixed rate (1)		
Contractual amounts that will reprice/repay within 3 months	**213,667**	147,232
Contractual amounts that will reprice/repay after 3 months	**248,688**	181,694
Floating rate (2)	**186,327**	215,625
Non-rate sensitive (3)	**15,907**	20,023
Total	**664,589**	564,574

(1) Includes index-based loans.
(2) Floating rate only includes loans that reprice immediately upon a change in interest rates.
(3) Includes credit card balances that are paid when due, customers' liability under acceptances, impaired loans and allowance for credit losses.

Certain comparative figures have been reclassified to conform with the current year's presentation.

Insurance Market Risk

Insurance market risk includes interest rate and equity market risk arising from our insurance business activities. We may enter into hedging arrangements to offset the impact of changes in interest rates and equity market values on our earnings, and we did so during the 2023 fiscal year. The sensitivity reflects the impact of these hedging relationships. An increase of 100 basis points in interest rates would result in a decrease in earnings before tax of $13 million as at October 31, 2023 (increase of $12 million as at July 31, 2023 and $35 million as at October 31, 2022). A decrease of 100 basis points in interest rates would result in an increase in earnings before tax of $15 million as at October 31, 2023 (decrease of $8 million as at July 31, 2023 and $34 million as at October 31, 2022). An increase of 10% in equity market values would result in an increase in earnings before tax of $14 million as at October 31, 2023 ($15 million as at July 31, 2023 and $13 million as at October 31, 2022). A decrease of 10% in equity market values would result in a decrease in earnings before tax of $11 million as at October 31, 2023 ($12 million as at July 31, 2023 and $13 million as at October 31, 2022). The impact of insurance market risk on earnings is reflected in insurance claims, commissions and changes in policy benefit liabilities in our Consolidated Statement of Income, and the corresponding change in the fair value of BMO's policy benefit liabilities is reflected in other liabilities in our Consolidated Balance Sheet. The impact of insurance market risk is not reflected in the table above.

BMO Insurance will adopt International Financial Reporting Standard 17, *Insurance Contracts* (IFRS 17) effective November 1, 2023. IFRS 17 will change the fundamental principles used to recognize and measure insurance contracts, including life insurance contracts, reinsurance contracts held and investment contracts with discretionary participation features. This change will impact the timing of when investment-related income emerges and the associated market risk sensitivities, as the discount rates used in calculating the present value of insurance liabilities will no longer be based on the assets supporting those liabilities, but rather on the features of the insurance contracts themselves. On transition, we will apply the full retrospective approach to our creditor business and the fair value approach to all other products written prior to November 1, 2022. For further information, refer to the Critical Accounting Estimates and Judgments – Future Changes in Accounting Policies section.

Material presented in a blue-tinted font above is an integral part of Note 5 of the 2023 audited annual consolidated financial statements.

Non-Trading Foreign Exchange Risk

Structural foreign exchange risk arises primarily from translation risk related to our net investment in U.S. operations and from transaction risk associated with U.S.-dollar-denominated net income.

Translation risk arises from the potential impact that changes in foreign exchange rates could have on our reported shareholders' equity and capital ratios. We may enter into arrangements to offset the impact of changes in foreign exchange rates on our capital ratios, and we did so during the 2023 fiscal year. In addition, BMO entered into forward contracts during 2022 to mitigate the impact of changes in the Canadian dollar equivalent of the Bank of the West purchase price between the announcement and the closing of the acquisition, which qualified for hedge accounting. Changes in the fair value of these forward contracts of $374 million ($269 million after-tax) were accounted for as a reduction of the Canadian dollar equivalent of the purchase price. Refer to the Enterprise-Wide Capital Management section and the Recent Acquisitions section for further discussion.

Transaction risk arises from the potential impact that fluctuations in the Canadian dollar/U.S. dollar exchange rate could have on the Canadian dollar equivalent of BMO's U.S.-dollar-denominated financial results. Exchange rate fluctuations will affect future results measured in Canadian dollars, and the impact on those results is a function of the periods during which revenues, expenses and provisions for credit losses arise. Hedging positions may be taken to partially offset the pre-tax effects of Canadian dollar/U.S. dollar exchange rate fluctuations on financial results, although we did not enter into any hedging arrangements in the current or prior year. If future results are consistent with results in 2023, each one cent increase (decrease) in the Canadian dollar/U.S. dollar exchange rate would be expected to increase (decrease) the Canadian dollar equivalent of U.S. segment net income before income taxes for the year by $38 million, in the absence of hedging arrangements. Refer to the Foreign Exchange section for a more complete discussion of the effects of changes in foreign exchange rates on our results.

Linkages between Balance Sheet Items and Market Risk Disclosures

The table below presents items reported on the Consolidated Balance Sheet that are subject to market risk, comprising balances that are subject to either traded risk or non-traded risk measurement techniques.

	As at October 31, 2023				As at October 31, 2022				
		Subject to market risk				Subject to market risk			
(Canadian $ in millions)	**Consolidated Balance Sheet**	**Traded risk (1)**	**Non-traded risk (2)**	**Not subject to market risk**	Consolidated Balance Sheet	Traded risk (1)	Non-traded risk (2)	Not subject to market risk	Primary risk factors for non-traded risk balances
Assets Subject to Market Risk									
Cash and cash equivalents	**77,934**	**–**	**77,934**	**–**	87,466	–	87,466	–	Interest rate
Interest bearing deposits with banks	**4,125**	**237**	**3,888**	**–**	5,734	142	5,592	–	Interest rate
Securities	**322,379**	**124,620**	**197,759**	**–**	273,262	108,303	164,959	–	Interest rate, credit spread, equity
Securities borrowed or purchased under resale agreements	**115,662**	**–**	**115,662**	**–**	113,194	–	113,194	–	Interest rate
Loans and acceptances (net of allowance for credit losses)	**656,478**	**4,412**	**652,066**	**–**	551,339	3,501	547,838	–	Interest rate, foreign exchange
Derivative instruments	**39,976**	**34,004**	**5,972**	**–**	48,160	45,537	2,623	–	Interest rate, foreign exchange
Customers' liabilities under acceptances	**8,111**	**–**	**8,111**	**–**	13,235	–	13,235	–	Interest rate
Other assets	**68,611**	**4,734**	**27,385**	**36,492**	46,809	3,030	26,561	17,218	Interest rate
Total Assets	**1,293,276**	**168,007**	**1,088,777**	**36,492**	1,139,199	160,513	961,468	17,218	
Liabilities Subject to Market Risk									
Deposits	**909,676**	**35,300**	**874,376**	**–**	769,478	26,305	743,173	–	Interest rate, foreign exchange
Derivative instruments	**50,193**	**43,166**	**7,027**	**–**	59,956	46,803	13,153	–	Interest rate, foreign exchange
Acceptances	**8,111**	**–**	**8,111**	**–**	13,235	–	13,235	–	Interest rate
Securities sold but not yet purchased	**43,781**	**43,781**	**–**	**–**	40,979	40,979	–	–	Interest rate
Securities lent or sold under repurchase agreements	**106,108**	**–**	**106,108**	**–**	103,963	–	103,963	–	Interest rate
Other liabilities	**90,142**	**33**	**90,049**	**60**	72,400	60	71,815	525	Interest rate
Subordinated debt	**8,228**	**–**	**8,228**	**–**	8,150	–	8,150	–	Interest rate
Total Liabilities	**1,216,239**	**122,280**	**1,093,899**	**60**	1,068,161	114,147	953,489	525	

(1) Primarily comprises balance sheet items that are subject to the trading and underwriting risk management framework and recorded at fair value through profit or loss.
(2) Primarily comprises balance sheet items that are subject to the structural balance sheet insurance risk management framework and secured financing transactions.

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Insurance Risk

Insurance Risk is the potential for loss as a result of actual experience differing from that assumed when an insurance product was designed and priced, and comprises claims risk, policyholder behaviour risk and expense risk.

Insurance risk generally entails the inherent unpredictability that can arise from the assumption of long-term policy liabilities or uncertainty regarding future events. Insurance provides protection against the financial consequences of insured risks by transferring those risks to the insurer (under specific terms and conditions) in exchange for premiums. Insurance risk is inherent in all of our insurance products: life insurance, annuities (which include the pension risk transfer business), accident and sickness insurance, and creditor insurance, as well as the reinsurance business. Insurance risk consists of:

- Claims risk – the risk that the actual magnitude or frequency of claims will differ from those assumed in the pricing or underwriting process, including mortality risk, morbidity risk, longevity risk and catastrophic risk;
- Policyholder behaviour risk – the risk that the behaviour of policyholders in regard to premium payments, withdrawals or loans, as well as policy lapses and surrenders and other voluntary terminations, will differ from the behaviour assumed in the pricing process; and
- Expense risk – the risk that actual expenses arising from acquiring and administering policies and processing claims will exceed the expenses assumed in the pricing process.

Our risk governance practices provide effective independent oversight and control of risk within BMO Insurance. BMO Insurance's risk management framework addresses the identification, assessment, management, monitoring and reporting of risks. The framework includes: the Risk Appetite Statement and key risk metrics; insurance risk policies and processes, including limits; capital requirements; stress testing; risk reports; the Own Risk and Solvency Assessment; and ongoing monitoring of experience. Senior management within the various lines of business uses this framework, serving as the first line of defence and assuming the primary responsibility for managing insurance risk. Second-line-of-defence oversight is provided by the CRO, BMO Insurance, who reports to the CRO, BMO Wealth Management. Internal risk committees, the boards of directors of the BMO Insurance subsidiaries and senior management provide senior governance and review. In particular, the Risk Committee of BMO Insurance oversees and reports on risk management activities to the insurance companies' boards of directors on a quarterly basis. In addition, the Audit and Conduct Review Committee of the Board of Directors acts as the Audit and Conduct Review Committee for BMO Life Insurance Company.

A robust product approval process is a cornerstone of the BMO Insurance risk management framework, as it identifies, assesses and manages risks associated with new insurance products or changes to existing products. This process, along with guidelines and practices for underwriting and claims management, promotes the effective identification, assessment and management of insurance risk. Reinsurance transactions that transfer or cede insurance risk from BMO Insurance to independent reinsurance companies also mitigate our exposure to insurance risk by diversifying risk and limiting claims. BMO Insurance has exited the Property and Casualty Reinsurance market, with the last remaining treaty terminated in January 2021, significantly reducing our exposure to catastrophic claims and in turn, the risks arising from climate change. However, a certain portion of our exposure to catastrophic claims remains as the portfolio runs off and until all outstanding claims that were made prior to the treaty termination dates are settled and paid.

Caution
This Insurance Risk section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Liquidity and Funding Risk

Liquidity and Funding Risk is the potential for loss if we are unable to meet our financial commitments in a timely manner at reasonable prices as they become due. Financial commitments include liabilities to depositors and suppliers, as well as lending, investment and pledging commitments.

Managing liquidity and funding risk is integral to maintaining enterprise soundness and safety, depositor confidence and earnings stability. It is BMO's policy to maintain a level of liquid assets and funding capacity sufficient to meet our financial commitments, even in times of stress.

Liquidity and Funding Risk Governance

The Corporate Treasury group and the operating groups, as the first line of defence, are responsible for the ongoing identification, assessment and management of liquidity and funding risk. The Corporate Treasury group is responsible for monitoring and reporting on exposures to liquidity and funding risk across the enterprise; develops and recommends for approval the Liquidity and Funding Risk Management Framework and the related risk appetite statement and limits; monitors compliance with relevant corporate policies; and assesses the impact of market events on liquidity and funding requirements on an ongoing basis.

Enterprise Risk and Portfolio Management, as the second line of defence, exercises oversight, independent risk assessment and effective challenge of liquidity and funding management frameworks, policies, limits, monitoring and reporting across the enterprise.

The Risk Management Committee (RMC) and Asset Liability Committee (ALCO) provide senior management oversight, and review and discuss significant liquidity and funding policies, issues and developments that arise in the pursuit of BMO's strategic priorities. The Risk Review Committee (RRC) provides oversight of the management of liquidity and funding risk, annually approves the applicable policies, limits and contingency plan, and regularly reviews liquidity and funding positions.

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Liquidity and Funding Risk Management

BMO's Liquidity and Funding Risk Management Framework is defined and authorized in alignment with corporate policies approved by our Board of Directors and standards approved by management. These policies and standards set out key management principles, liquidity and funding metrics and related limits, as well as roles and responsibilities in the management of liquidity and funding risk across the enterprise.

We have a robust limit structure in place in order to manage liquidity and funding risk. These limits define BMO's risk appetite for the key Stress Net Liquidity Position (Stress NLP) measure, regulatory liquidity ratios, secured and unsecured funding appetite (for both trading and structural activities), as well as enterprise collateral pledging. Limits also establish the tolerance for concentrations of maturities, as well as requirements for counterparty liability diversification, business pledging activity, and the size and type of uncommitted and committed credit and liquidity facilities that may be outstanding.

Operating within these limits helps to confirm that liquidity and funding risk is appropriately managed. An enterprise-wide contingency plan intended to facilitate effective risk management in the event of a disruption is also in place. Early warning indicators identified in the contingency plan are regularly monitored in order to detect any signs of rising levels of liquidity or funding risk in the market, or any exposure to other risks specific to BMO.

BMO legal entities include regulated and foreign subsidiaries and branches, and as a result, movements of funds between entities in the corporate group are subject to, among other things, the liquidity, funding and capital adequacy requirements of these entities. As such, liquidity and funding positions are managed on both a consolidated and key legal entity basis. Liquidity and funding risk management policies and limits, informed by the laws and regulations that apply to each entity, are in place for key legal entities, and positions are regularly reviewed at the key legal entity level to confirm compliance with applicable laws and regulations.

BMO continued to maintain a strong liquidity position during 2023. Customer loans and deposits continued to grow, while wholesale funding increased, reflecting net issuances. Our liquidity metrics, including the Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR), exceeded internal and regulatory requirements throughout 2023.

Liquidity and Funding Risk Measurement

A key component of liquidity risk management is the measurement of liquidity risk under stress. We use Stress NLP as a key measure of liquidity risk. Stress NLP represents the amount by which liquid assets exceed potential funding needs under severe systemic and enterprise-specific stress scenarios, and a combination thereof. Potential funding needs may arise from obligations to repay retail, commercial and wholesale deposits that are withdrawn or not renewed, or to fund drawdowns on available credit and liquidity lines, as well as from obligations to pledge collateral due to ratings downgrades or market volatility, along with the continuing need to fund new assets and strategic investments. Potential funding needs are quantified by applying factors to various business activities based on management's view of the relative level of liquidity risk related to each activity. These factors vary by deposit classification (e.g., retail, small business, non-financial corporate or wholesale counterparties) and deposit type (e.g., insured, uninsured, operational or non-operational deposits), as well as by commitment type (e.g., uncommitted or committed credit or liquidity facilities by counterparty type). Stress scenarios also consider the time horizon over which liquid assets can be monetized and management's assessment of the liquidity value of those assets under conditions of market stress. These potential funding needs are assessed under severe systemic and enterprise-specific stress scenarios, and a combination thereof.

Stress testing results are evaluated against our stated risk appetite and are considered in management's decisions on limit-setting and internal liquidity transfer pricing, and they also help to inform and shape the design of business plans and contingency plans. The Liquidity and Funding Risk Management Framework is integrated with enterprise-wide stress testing.

In addition to Stress NLP, we regularly monitor positions in relation to the limits and liquidity ratios noted in the Liquidity and Funding Risk Management section above. These include regulatory metrics such as LCR, Net Cumulative Cash Flow and NSFR.

Unencumbered Liquid Assets

Unencumbered liquid assets include high-quality assets that are marketable, can be pledged as security for borrowings, and can be converted to cash in a time frame that meets liquidity and funding requirements. Liquid assets are primarily held in our trading businesses, as well as in supplemental liquidity pools that are maintained for contingent liquidity risk management purposes. The liquidity values recognized for different asset classes under BMO's risk management framework reflect management's assessment of the liquidity values of those assets under a severe stress scenario. Liquid assets held in our trading businesses include cash on deposit with central banks, short-term deposits with other financial institutions, highly-rated debt securities, equity securities and short-term reverse repurchase agreements. Supplemental liquidity pool assets predominantly comprise cash on deposit with central banks, securities, and short-term reverse repurchase agreements for highly-rated Canadian federal and provincial government debt and U.S. federal government and agency debt. Substantially all supplemental liquidity pool assets meet the definition of high-quality liquid assets under Basel III. Approximately 60% of the supplemental liquidity pool is held at the parent bank level in assets denominated in Canadian or U.S. dollars, and most of the remaining supplemental liquidity pool is held at our U.S. bank entity, BMO Bank N.A., in U.S.-dollar-denominated assets. The size of the supplemental liquidity pool is integrated with our assessment of liquidity risk. In order to comply with local regulatory requirements, certain legal entities maintain their own minimum liquidity positions. There may be legal and regulatory restrictions on BMO's ability to use liquid assets held at one legal entity to support the liquidity requirements of another legal entity.

In the normal course of business, we may encumber a portion of cash and securities holdings as collateral in support of trading activities and participation in clearing and payment systems in Canada and abroad. In addition, we may receive liquid assets as collateral and may re-pledge these assets in exchange for cash or as collateral in support of trading activities. Net unencumbered liquid assets, defined as on-balance sheet assets, such as BMO-owned cash and securities and securities borrowed or purchased under resale agreements, plus other off-balance sheet eligible collateral received, less assets encumbered as collateral, totalled $360.2 billion as at October 31, 2023, compared with $335.3 billion as at October 31, 2022.

The increase in unencumbered liquid assets was primarily due to higher securities balances, partially offset by lower cash balances. Net unencumbered liquid assets are primarily held at the parent bank level, at BMO Bank N.A., and in our broker/dealer operations. In addition to liquid assets, we have access to the Bank of Canada's lending assistance programs, the Federal Reserve Bank discount window in the United States, the Bank of England's Sterling Monetary Framework, and European Central Bank standby liquidity facilities. We do not consider central bank facilities as a source of available liquidity when assessing the soundness of our liquidity position.

In addition to cash and securities holdings, we may also pledge other assets, including mortgages and loans, to raise long-term secured funding.As part of the Liquidity and Funding Risk Management Framework, a Pledging of Assets corporate policy sets out the framework and limits for pledging financial and non-financial assets.

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BMO's total encumbered assets and unencumbered liquid assets are summarized in the table below. Refer to Note 24 of the audited annual consolidated financial statements for further information on pledged assets.

Liquid Assets

(Canadian $ in millions)	As at October 31, 2023 Bank-owned assets	Other cash and securities received	Total gross assets (1)	Encumbered assets	Net unencumbered assets (2)	As at October 31, 2022 Net unencumbered assets (2)
Cash and cash equivalents	**77,934**	**–**	**77,934**	**125**	**77,809**	87,379
Deposits with other banks	**4,125**	**–**	**4,125**	**–**	**4,125**	5,734
Securities and securities borrowed or purchased under resale agreements						
Sovereigns / Central banks / Multilateral development banks	**155,249**	**107,854**	**263,103**	**141,176**	**121,927**	111,940
NHA mortgage-backed securities and U.S. agency mortgage-backed securities and collateralized mortgage obligations	**87,244**	**8,875**	**96,119**	**39,390**	**56,729**	39,978
Corporate and other debt	**24,783**	**20,368**	**45,151**	**8,683**	**36,468**	33,698
Corporate equity	**55,103**	**54,051**	**109,154**	**65,501**	**43,653**	39,966
Total securities and securities borrowed or purchased under resale agreements	**322,379**	**191,148**	**513,527**	**254,750**	**258,777**	225,582
NHA mortgage-backed securities (reported as loans at amortized cost) (3)	**23,983**	**–**	**23,983**	**4,481**	**19,502**	16,604
Total liquid assets	**428,421**	**191,148**	**619,569**	**259,356**	**360,213**	335,299

(1) Gross assets include bank-owned assets and cash and securities received from third parties.
(2) Net unencumbered liquid assets are defined as total gross assets less encumbered assets.
(3) Under IFRS, National Housing Act (NHA) mortgage-backed securities that include mortgages owned by BMO as the underlying collateral are classified as loans. Unencumbered NHA mortgage-backed securities have liquidity value and are included as liquid assets under BMO's Liquidity and Funding Risk Management Framework. This amount is shown as a separate line item, NHA mortgage-backed securities.

Asset Encumbrance

(Canadian $ in millions) As at October 31, 2023	Total gross assets (1)	Encumbered (2) Pledged as collateral	Encumbered (2) Other encumbered	Net unencumbered Other unencumbered (3)	Net unencumbered Available as collateral (4)
Cash and deposits with other banks	**82,059**	**–**	**125**	**–**	**81,934**
Securities (5)	**537,510**	**209,091**	**50,140**	**16,061**	**262,218**
Loans	**632,495**	**93,931**	**511**	**342,211**	**195,842**
Other assets					
Derivative instruments	**39,976**	**–**	**–**	**39,976**	**–**
Customers' liability under acceptances	**8,111**	**–**	**–**	**8,111**	**–**
Premises and equipment	**6,241**	**–**	**–**	**6,241**	**–**
Goodwill	**16,728**	**–**	**–**	**16,728**	**–**
Intangible assets	**5,216**	**–**	**–**	**5,216**	**–**
Current tax assets	**2,052**	**–**	**–**	**2,052**	**–**
Deferred tax assets	**3,081**	**–**	**–**	**3,081**	**–**
Other	**35,293**	**10,596**	**–**	**24,697**	**–**
Total other assets	**116,698**	**10,596**	**–**	**106,102**	**–**
Total assets	**1,368,762**	**313,618**	**50,776**	**464,374**	**539,994**

(Canadian $ in millions) As at October 31, 2022	Total gross assets (1)	Encumbered (2) Pledged as collateral	Encumbered (2) Other encumbered	Net unencumbered Other unencumbered (3)	Net unencumbered Available as collateral (4)
Cash and deposits with other banks	93,200	–	87	–	93,113
Securities (5)	472,443	183,275	46,982	12,620	229,566
Loans	529,458	71,139	656	299,358	158,305
Other assets					
Derivative instruments	48,160	–	–	48,160	–
Customers' liability under acceptances	13,235	–	–	13,235	–
Premises and equipment	4,841	–	–	4,841	–
Goodwill	5,285	–	–	5,285	–
Intangible assets	2,193	–	–	2,193	–
Current tax assets	1,421	–	–	1,421	–
Deferred tax assets	1,175	–	–	1,175	–
Other	31,894	13,991	–	17,903	–
Total other assets	108,204	13,991	–	94,213	–
Total assets	1,203,305	268,405	47,725	406,191	480,984

(1) Gross assets include on-balance sheet and off-balance sheet assets.
(2) Pledged as collateral refers to the portion of on-balance sheet assets and other cash and securities that is pledged through repurchase agreements, securities lending, derivative contracts, minimum required deposits at central banks, and requirements associated with participation in clearing houses and payment systems. Other encumbered assets include assets that are restricted for legal or other reasons, such as restricted cash and short sales.
(3) Other unencumbered assets include select liquid asset holdings that management believes are not readily available to support BMO's liquidity requirements. These include securities of $16.1 billion as at October 31, 2023, which include securities held at BMO's insurance subsidiary, significant equity investments and certain investments held at BMO's merchant banking business. Other unencumbered assets include mortgages and loans that may be securitized to access secured funding.
(4) Loans included in available as collateral represent loans currently lodged at central banks that may be used to access central bank funding. Loans available for pledging as collateral do not include other sources of additional liquidity that may be realized from BMO's loan portfolio, such as incremental securitization, covered bond issuances and U.S. Federal Home Loan Bank (FHLB) advances.
(5) Includes securities, securities borrowed or purchased under resale agreements and NHA mortgage-backed securities (reported as loans at amortized cost).

Funding Strategy

BMO's funding strategy requires that secured and unsecured wholesale funding used to support loans and less liquid assets must have a term (typically maturing in two to ten years) that will support the effective term to maturity of these assets. Secured and unsecured wholesale funding for liquid trading assets is largely shorter-term (maturing in one year or less), is aligned with the liquidity of the assets being funded and is subject to limits on aggregate maturities across different periods. Supplemental liquidity pools are funded largely with wholesale term funding.

We maintain a large and stable base of customer deposits that, in combination with our strong capital position, is a source of strength. This supports the maintenance of a sound liquidity position and reduces our reliance on wholesale funding. Customer deposits totalled $654.4 billion as at October 31, 2023, increasing from $544.4 billion in 2022, primarily due to the closing of the Bank of the West acquisition in February 2023, and underlying growth in both retail and commercial deposits.

Total secured and unsecured wholesale funding outstanding, which largely consists of negotiable marketable securities, was $269.6 billion as at October 31, 2023, with $78.2 billion sourced as secured funding and $191.4 billion sourced as unsecured funding. Total wholesale funding outstanding increased from $236.8 billion as at October 31, 2022, primarily due to the net issuance of wholesale funding during the year. The mix and maturities of BMO's wholesale term funding are outlined later in this section. Additional information on deposit maturities can also be found in the Contractual Maturities of Assets and Liabilities and Off-Balance Sheet Commitments section. We maintain a sizeable portfolio of unencumbered liquid assets, totalling $360.2 billion as at October 31, 2023 and $335.3 billion as at October 31, 2022, that can be monetized to meet potential funding requirements, as described in the Unencumbered Liquid Assets section above.

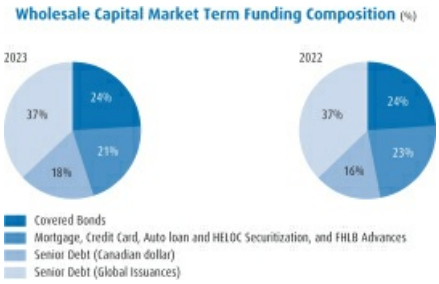
Wholesale Funding Maturities (1)

	As at October 31, 2023								As at October 31, 2022
(Canadian $ in millions)	Less than 1 month	1 to 3 months	3 to 6 months	6 to 12 months	Subtotal less than 1 year	1 to 2 years	Over 2 years	Total	Total
Deposits from banks	**4,374**	**1,660**	**753**	**927**	**7,714**	**–**	**–**	**7,714**	9,550
Certificates of deposit and commercial paper	**12,932**	**27,334**	**26,232**	**27,805**	**94,303**	**69**	**–**	**94,372**	80,696
Bearer deposit notes	**426**	**167**	**276**	**85**	**954**	**–**	**–**	**954**	1,661
Asset-backed commercial paper (ABCP)	**1,562**	**1,931**	**2,072**	**440**	**6,005**	**–**	**–**	**6,005**	–
Senior unsecured medium-term notes	**960**	**2,156**	**8,096**	**13,449**	**24,661**	**16,131**	**29,957**	**70,749**	65,234
Senior unsecured structured notes (2)	**135**	**215**	**–**	**31**	**381**	**156**	**8,878**	**9,415**	7,950
Secured funding									
Mortgage and HELOC securitizations	**–**	**585**	**1,165**	**1,717**	**3,467**	**3,405**	**11,044**	**17,916**	20,385
Covered bonds	**–**	**2,330**	**–**	**–**	**2,330**	**3,467**	**22,615**	**28,412**	29,047
Other asset-backed securitizations (3)	**–**	**–**	**–**	**148**	**148**	**176**	**7,337**	**7,661**	6,631
Federal Home Loan Bank advances	**693**	**–**	**–**	**–**	**693**	**13,265**	**4,190**	**18,148**	7,494
Subordinated debt	**–**	**–**	**–**	**–**	**–**	**–**	**8,227**	**8,227**	8,150
Total	**21,082**	**36,378**	**38,594**	**44,602**	**140,656**	**36,669**	**92,248**	**269,573**	236,798
Of which:									
Secured	**2,255**	**4,846**	**3,237**	**2,305**	**12,643**	**20,313**	**45,186**	**78,142**	63,557
Unsecured	**18,827**	**31,532**	**35,357**	**42,297**	**128,013**	**16,356**	**47,062**	**191,431**	173,241
Total (4)	**21,082**	**36,378**	**38,594**	**44,602**	**140,656**	**36,669**	**92,248**	**269,573**	236,798

(1) Wholesale unsecured funding primarily includes funding raised through the issuance of negotiable marketable securities. Wholesale funding excludes repo transactions and bankers' acceptances, which are disclosed in the Contractual Maturities of Assets and Liabilities and Off-Balance Sheet Commitments section, and also excludes ABCP issued by certain ABCP conduits that are not consolidated for financial reporting purposes.
(2) Primarily issued to institutional investors.
(3) Includes credit card, auto and transportation finance loan securitizations.
(4) Total wholesale funding comprised Canadian-dollar-denominated funding of $49.1 billion and U.S.-dollar-denominated and other foreign-currency-denominated funding of $220.5 billion as at October 31, 2023.

Diversification of our wholesale term funding sources is an important part of our overall liquidity management strategy. Our wholesale term funding is well-diversified by jurisdiction, currency, investor segment, instrument type and maturity profile. We maintain ready access to long-term wholesale funding through various borrowing programs, including a European Note Issuance Program, Canadian, Australian and U.S. Medium-Term Note programs, Canadian and U.S. mortgage securitizations, Canadian credit card loans, auto loans and home equity line of credit (HELOC) securitizations, U.S. transportation finance loans, covered bonds and Canadian and U.S. senior unsecured deposits.

Material presented in a blue-tinted font above is an integral part of Note 5 of the 2023 audited annual consolidated financial statements.



Our wholesale term funding plan seeks to ensure sufficient funding capacity is available to execute business strategies. The funding plan considers expected maturities, as well as asset and liability growth projected for businesses in our forecasting and planning processes, and assesses funding needs in relation to the sources available. The plan is reviewed annually by the senior management committees with specific related responsibilities and approved by the RRC, and is regularly updated to reflect actual results and incorporate updated forecast information.

Regulatory Developments

The Office of the Superintendent of Financial Institutions (OSFI) announced changes to its Liquidity Adequacy Requirements (LAR) Guideline that became effective April 1, 2023. The changes primarily relate to the calculation of the Net Cumulative Cash Flow regulatory metric. There was no material impact on our liquidity and funding practices or requirements as a result of these changes.

Credit Ratings

The credit ratings assigned to BMO's short-term and senior long-term debt securities by external rating agencies are important in raising both capital and funding to support the bank's business operations. Maintaining strong credit ratings allows us to access the wholesale markets at competitive pricing levels. Should BMO's credit ratings experience a downgrade, our cost of funding may increase and our access to funding and capital through the wholesale markets could be constrained. A material downgrade of BMO's ratings could also have other consequences, including those set out in Note 8 of the audited annual consolidated financial statements.

The credit ratings assigned to BMO's senior debt by rating agencies are indicative of high-grade, high-quality issues. On June 20, 2023, Fitch affirmed its ratings for BMO and revised its outlook to stable from negative, reflecting solid and above-target capital adequacy levels after the successful closing of our acquisition of Bank of the West. During the third quarter of fiscal 2023, Moody's, Standard & Poor's (S&P) and DBRS also affirmed their ratings, while maintaining their stable outlook on BMO.

As at October 31, 2023

Rating agency	Short-term debt	Senior debt (1)	Long-term deposits / Legacy senior debt (2)	Subordinated debt (NVCC)	Outlook
Moody's	P-1	A2	Aa2	Baa1(hyb)	Stable
S&P	A-1	A-	A+	BBB+	Stable
Fitch	F1+	AA-	AA	A	Stable
DBRS	R-1 (high)	AA (low)	AA	A (low)	Stable

(1) Subject to conversion under the Bank Recapitalization (Bail-In) Regime.
(2) Long-term deposits / Legacy senior debt includes senior debt issued prior to September 23, 2018 and senior debt issued on or after September 23, 2018 that is excluded from the Bank Recapitalization (Bail-In) Regime.

We are required to deliver collateral to certain counterparties in the event of a downgrade of BMO's current credit rating. The incremental collateral required is based on mark-to-market exposure, collateral valuations and collateral threshold arrangements, as applicable. As at October 31, 2023, we would be required to provide additional collateral to counterparties totalling $128 million, $368 million and $844 million as a result of a one-notch, two-notch and three-notch downgrade, respectively.

Liquidity Coverage Ratio

The Liquidity Coverage Ratio (LCR) is calculated in accordance with the OSFI LAR Guideline and is summarized in the following table. The LCR is calculated on a daily basis as the ratio of high-quality liquid assets (HQLA) held to total net stressed cash outflows over the next 30 calendar days. BMO's HQLA primarily comprise cash, highly-rated debt issued or backed by governments, highly-rated covered bonds and non-financial corporate debt, and non-financial equities that are part of a major stock index. Net cash flows include outflows from deposits, secured and unsecured wholesale funding, commitments and potential collateral requirements, offset by permitted inflows from loans, securities lending activities and other non-HQLA debt maturing over a 30-day horizon. Weightings prescribed by OSFI are applied to cash flows and HQLA to arrive at the weighted values and the LCR. The LCR does not reflect liquidity in BMO Financial Corp. (BFC) in excess of 100%, because of limitations on the transfer of liquidity between BFC and the parent bank. Canadian domestic systemically important banks, including BMO, are required to maintain a minimum LCR of 100%. The average daily LCR for the quarter ended October 31, 2023 was 128%, equivalent to a surplus of $49.9 billion above the regulatory minimum. The LCR decreased 7% from 135% in 2022, primarily as a result of the incorporation of Bank of the West business activities into the measure. The closing of the Bank of the West acquisition increased both HQLA and net cash outflows, but excess liquidity at BFC was capped at 100% in the LCR measure. In the prior year, HQLA were temporarily elevated, in anticipation of the closing of the acquisition. While banks are required to maintain an LCR of greater than 100% in normal conditions, they are also expected to be able to utilize HQLA during a period of stress, which may result in an LCR of less than 100% during such a period. The LCR is only one measure of a bank's liquidity position and does not fully capture all of its liquid assets or the funding alternatives that may be available during a period of stress. BMO's total liquid assets are shown in the Liquid Assets table below.

	As at October 31, 2023	
(Canadian $ in billions, except as noted)	**Total unweighted value (average)** (1) (2)	**Total weighted value (average)** (2) (3)
High-Quality Liquid Assets		
Total high-quality liquid assets (HQLA)	*	**228.4**
Cash Outflows		
Retail deposits and deposits from small business customers, of which:	**290.4**	**21.4**
Stable deposits	**135.0**	**4.1**
Less stable deposits	**155.4**	**17.3**
Unsecured wholesale funding, of which:	**295.0**	**131.7**
Operational deposits (all counterparties) and deposits in networks of cooperative banks	**143.6**	**35.5**
Non-operational deposits (all counterparties)	**128.5**	**73.3**
Unsecured debt	**22.9**	**22.9**
Secured wholesale funding		**20.9**
Additional requirements, of which:	**239.4**	**47.1**
Outflows related to derivatives exposures and other collateral requirements	**26.3**	**7.5**
Outflows related to loss of funding on debt products	**4.0**	**4.0**
Credit and liquidity facilities	**209.1**	**35.6**
Other contractual funding obligations	**1.1**	**–**
Other contingent funding obligations	**517.4**	**9.8**
Total cash outflows	*	**230.9**
Cash Inflows		
Secured lending (e.g., reverse repos)	**152.8**	**31.6**
Inflows from fully performing exposures	**17.7**	**9.6**
Other cash inflows	**11.2**	**11.2**
Total cash inflows	**181.7**	**52.4**
		Total adjusted value (4)
Total HQLA		**228.4**
Total net cash outflows		**178.5**
Liquidity Coverage Ratio (%)		**128**
For the quarter ended October 31, 2022		Total adjusted value (4)
Total HQLA		204.3
Total net cash outflows		151.2
Liquidity Coverage Ratio (%)		135

* Disclosure is not required under the LCR disclosure standard.

(1) Unweighted values are calculated at market value (for HQLA) or as outstanding balances maturing or callable within 30 days (for inflows and outflows).

(2) Values are calculated based on the simple average of the daily LCR over 62 business days in the fourth quarter of 2023.

(3) Weighted values are calculated after the application of the weightings prescribed under the OSFI LAR Guideline for HQLA and cash inflows and outflows.

(4) Adjusted values are calculated based on total weighted values after applicable caps, as defined in the LAR Guideline.

Net Stable Funding Ratio

The Net Stable Funding Ratio (NSFR) is a regulatory metric that assesses the stability of a bank's funding profile in relation to the liquidity value of its assets and is calculated in accordance with the OSFI LAR Guideline. Unlike the LCR, which is a short-term metric, the NSFR assesses a bank's medium-term and long-term resilience. The NSFR is defined as the ratio of the amount of available stable funding (ASF) to the amount of required stable funding (RSF). ASF represents the proportion of own and third-party resources that are expected to be reliably available to a bank over a one-year time horizon (including customer deposits, long-term wholesale funding and capital). The stable funding requirements for each institution are set by OSFI based on the liquidity and maturity characteristics of its balance sheet assets and off-balance sheet exposures. Weightings prescribed by OSFI are applied to notional asset and liability balances to determine ASF, RSF and the NSFR. Canadian domestic systemically important banks, including BMO, are required to maintain a minimum NSFR of 100%. Both ASF and RSF increased in 2023, primarily due to the impact of the Bank of the West acquisition. BMO's NSFR was 115% as at October 31, 2023, equivalent to a surplus of $96.3 billion above the regulatory minimum. The NSFR increased from 114% as at October 31, 2022, as higher required stable funding was more than offset by higher available stable funding.

	For the quarter ended October 31, 2023				
	Unweighted value by residual maturity				
(Canadian $ in billions, except as noted)	No maturity (1)	Less than 6 months	6 to 12 months	Over 1 year	Weighted value (2)
Available Stable Funding (ASF) Item					
Capital:	–	–	–	90.7	90.7
Regulatory capital	–	–	–	90.7	90.7
Other capital instruments	–	–	–	–	–
Retail deposits and deposits from small business customers:	228.4	54.6	36.2	61.5	348.2
Stable deposits	116.7	20.3	15.2	13.8	158.4
Less stable deposits	111.7	34.3	21.0	47.7	189.8
Wholesale funding:	276.1	262.9	61.7	115.2	280.4
Operational deposits	129.6	–	–	–	64.8
Other wholesale funding	146.5	262.9	61.7	115.2	215.6
Liabilities with matching interdependent assets	–	0.9	1.5	12.2	–
Other liabilities:	4.0	*	*	33.2	4.8
NSFR derivative liabilities	*	*	*	11.1	*
All other liabilities and equity not included in the above categories	4.0	17.2	0.1	4.8	4.8
Total ASF	*	*	*	*	724.1
Required Stable Funding (RSF) Item					
Total NSFR high-quality liquid assets (HQLA)	*	*	*	*	11.8
Deposits held at other financial institutions for operational purposes	–	0.3	–	–	0.1
Performing loans and securities:	185.2	179.1	61.1	370.7	525.7
Performing loans to financial institutions secured by Level 1 HQLA	–	72.6	2.5	0.3	3.3
Performing loans to financial institutions secured by non-Level 1 HQLA and unsecured performing loans to financial institutions	33.4	55.4	6.7	16.9	59.9
Performing loans to non-financial corporate clients, loans to retail and small business customers, and loans to sovereigns, central banks and public sector entities, of which:	109.6	40.4	42.1	193.2	300.8
With a risk weight of less than or equal to 35% under the Basel II standardized approach for credit risk	–	–	–	–	–
Performing residential mortgages, of which:	13.0	8.5	9.4	144.9	122.5
With a risk weight of less than or equal to 35% under the Basel II standardized approach for credit risk	13.0	8.5	9.4	144.9	122.5
Securities that are not in default and do not qualify as HQLA, including exchange-traded equities	29.2	2.2	0.4	15.4	39.2
Assets with matching interdependent liabilities	–	0.9	1.5	12.2	–
Other assets:	42.8	*	*	55.1	69.4
Physical traded commodities, including gold	4.9	*	*	*	4.1
Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs	*	*	*	12.7	10.8
NSFR derivative assets	*	*	*	6.1	–
NSFR derivative liabilities before deduction of variation margin posted	*	*	*	20.7	1.0
All other assets not included in the above categories	37.9	7.2	0.2	8.2	53.5
Off-balance sheet items	–	–	–	589.6	20.8
Total RSF	*	*	*	*	627.8
Net Stable Funding Ratio (%)	*	*	*	*	115

For the quarter ended October 31, 2022	Weighted value (2)
Total ASF	610.2
Total RSF	534.1
Net Stable Funding Ratio (%)	114

* Disclosure is not required under the NSFR disclosure standard.

(1) Items in the no maturity column do not have a stated maturity. These may include, but are not limited to, items such as non-maturity deposits, short positions, open maturity positions, non-HQLA equities, physical traded commodities and demand loans.

(2) Weighted values are calculated after the application of the weights prescribed under the OSFI LAR Guideline for ASF and RSF.

Contractual Maturities of Assets and Liabilities and Off-Balance Sheet Commitments

The tables below show the remaining contractual maturities of on-balance sheet assets and liabilities and off-balance sheet commitments. The contractual maturity of financial assets and liabilities is an input to, but is not necessarily consistent with, the expected maturity of assets and liabilities that is used in the management of liquidity and funding risk. We forecast asset and liability cash flows, under both normal market conditions and a number of stress scenarios, to manage liquidity and funding risk. Stress scenarios incorporate assumptions for loan repayments, deposit withdrawals, and credit commitment and liquidity facility drawdowns by counterparty and product type. Stress scenarios also consider the time horizon over which liquid assets can be monetized and the related discounts ("haircuts") and potential collateral requirements that may result from both market volatility and credit rating downgrades, among other assumptions.

										2023
(Canadian $ in millions)	0 to 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 2 years	2 to 5 years	Over 5 years	No maturity	Total
On-Balance Sheet Financial Instruments Assets										
Cash and cash equivalents	75,473	–	–	–	–	–	–	–	2,461	77,934
Interest bearing deposits with banks	2,791	680	383	153	118	–	–	–	–	4,125
Securities	4,037	8,408	7,472	5,614	6,816	29,374	63,601	141,953	55,104	322,379
Securities borrowed or purchased under resale agreements	93,707	12,311	6,903	2,491	–	250	–	–	–	115,662
Loans (1)										
Residential mortgages	1,121	2,188	3,403	4,246	4,761	27,229	107,347	26,689	266	177,250
Consumer instalment and other personal	283	621	1,028	1,343	1,542	8,094	35,467	29,992	25,670	104,040
Credit cards	–	–	–	–	–	–	–	–	12,294	12,294
Business and government	19,671	10,920	12,550	16,370	16,953	49,366	114,289	27,880	98,702	366,701
Allowance for credit losses	–	–	–	–	–	–	–	–	(3,807)	(3,807)
Total loans, net of allowance	21,075	13,729	16,981	21,959	23,256	84,689	257,103	84,561	133,125	656,478
Other Assets										
Derivative instruments	2,797	4,539	2,670	2,827	1,555	7,804	9,325	8,459	–	39,976
Customers' liabilities under acceptances	4,682	3,423	6	–	–	–	–	–	–	8,111
Other	4,023	814	336	42	4	10	19	7,629	55,734	68,611
Total other assets	11,502	8,776	3,012	2,869	1,559	7,814	9,344	16,088	55,734	116,698
Total Assets	208,585	43,904	34,751	33,086	31,749	122,127	330,048	242,602	246,424	1,293,276

										2023
(Canadian $ in millions)	0 to 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 2 years	2 to 5 years	Over 5 years	No maturity	Total
Liabilities and Equity										
Deposits (2) (3)	48,986	63,728	64,939	60,911	52,040	47,624	80,829	18,624	471,995	909,676
Other liabilities										
Derivative instruments	3,103	8,450	3,033	2,278	2,014	7,694	11,748	11,873	–	50,193
Acceptances	4,682	3,423	6	–	–	–	–	–	–	8,111
Securities sold but not yet purchased (4)	43,781	–	–	–	–	–	–	–	–	43,781
Securities lent or sold under repurchase agreements (4)	99,006	4,751	476	539	–	1,336	–	–	–	106,108
Securitization and liabilities related to structured entities	97	717	1,199	2,195	592	4,896	9,870	7,528	–	27,094
Other	15,672	2,269	116	110	107	14,109	2,763	6,160	21,742	63,048
Total other liabilities	166,341	19,610	4,830	5,122	2,713	28,035	24,381	25,561	21,742	298,335
Subordinated debt	–	–	–	–	–	–	25	8,203	–	8,228
Total Equity	–	–	–	–	–	–	–	–	77,037	77,037
Total Liabilities and Equity	215,327	83,338	69,769	66,033	54,753	75,659	105,235	52,388	570,774	1,293,276

(1) Loans receivable on demand have been included under no maturity.
(2) Deposits payable on demand and payable after notice have been included under no maturity.
(3) Deposits totalling $30,852 million as at October 31, 2023 have a fixed maturity date; however, they can be redeemed early (either fully or partially) by customers without penalty. These are classified as payable on a fixed date due to their stated contractual maturity date.
(4) Presented based on their earliest maturity date.

										2023
(Canadian $ in millions)	0 to 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 2 years	2 to 5 years	Over 5 years	No maturity	Total
Off-Balance Sheet Commitments										
Commitments to extend credit (1)	2,216	4,874	9,377	14,499	14,190	41,713	129,634	5,927	–	222,430
Letters of credit (2)	1,641	5,088	5,739	5,397	6,065	3,663	3,778	48	–	31,419
Backstop liquidity facilities	212	241	666	2,207	2,039	3,951	8,643	846	–	18,805
Other commitments (3)	46	91	106	101	155	354	626	141	–	1,620

(1) Commitments to extend credit exclude personal lines of credit and credit cards that are unconditionally cancellable at BMO's discretion. A large majority of these commitments expire without being drawn upon. As a result, the total contractual amounts may not be representative of the funding likely to be required for these commitments.
(2) Letters of credit can be drawn down at any time. These are classified based on their stated contractual maturity.
(3) Other commitments comprise purchase obligations and lease commitments for leases signed but not yet commenced.

Material presented in a blue-tinted font above is an integral part of Note 5 of the 2023 audited annual consolidated financial statements.

(Canadian $ in millions)	0 to 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 2 years	2 to 5 years	Over 5 years	No maturity	2022 Total
On-Balance Sheet Financial Instruments Assets										
Cash and cash equivalents	86,003	–	–	–	–	–	–	–	1,463	87,466
Interest bearing deposits with banks	3,844	1,662	86	44	98	–	–	–	–	5,734
Securities	4,189	4,284	5,480	5,375	6,060	18,272	68,521	108,072	53,009	273,262
Securities borrowed or purchased under resale agreements	83,861	21,736	5,101	2,448	48	–	–	–	–	113,194
Loans (1)										
Residential mortgages	526	1,519	3,708	5,778	6,501	14,665	105,285	10,810	88	148,880
Consumer instalment and other personal	211	553	940	1,693	1,537	4,844	37,742	14,084	24,499	86,103
Credit cards	–	–	–	–	–	–	–	–	9,663	9,663
Business and government	13,003	9,595	11,724	9,300	11,394	37,250	105,009	17,776	94,259	309,310
Allowance for credit losses	–	–	–	–	–	–	–	–	(2,617)	(2,617)
Total loans, net of allowance	13,740	11,667	16,372	16,771	19,432	56,759	248,036	42,670	125,892	551,339
Other Assets										
Derivative instruments	5,362	7,147	3,359	2,552	2,225	7,787	11,636	8,092	–	48,160
Customers' liabilities under acceptances	9,752	3,461	19	3	–	–	–	–	–	13,235
Other	2,735	625	225	21	2	10	19	5,817	37,355	46,809
Total other assets	17,849	11,233	3,603	2,576	2,227	7,797	11,655	13,909	37,355	108,204
Total Assets	209,486	50,582	30,642	27,214	27,865	82,828	328,212	164,651	217,719	1,139,199

(Canadian $ in millions)	0 to 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 2 years	2 to 5 years	Over 5 years	No maturity	2022 Total
Liabilities and Equity										
Deposits (2) (3)	38,064	44,637	49,626	47,908	48,444	39,992	62,978	16,265	421,564	769,478
Other liabilities										
Derivative instruments	3,370	11,764	4,399	3,814	2,895	7,619	14,092	12,003	–	59,956
Acceptances	9,752	3,461	19	3	–	–	–	–	–	13,235
Securities sold but not yet purchased (4)	40,979	–	–	–	–	–	–	–	–	40,979
Securities lent or sold under repurchase agreements (4)	94,215	6,476	1,046	2,226	–	–	–	–	–	103,963
Securitization and liabilities related to structured entities	14	2,803	1,300	794	1,673	5,136	9,342	6,006	–	27,068
Other	12,143	4,980	101	97	146	872	2,558	5,722	18,713	45,332
Total other liabilities	160,473	29,484	6,865	6,934	4,714	13,627	25,992	23,731	18,713	290,533
Subordinated debt	–	–	–	–	–	–	25	8,125	–	8,150
Total Equity	–	–	–	–	–	–	–	–	71,038	71,038
Total Liabilities and Equity	198,537	74,121	56,491	54,842	53,158	53,619	88,995	48,121	511,315	1,139,199

(1) Loans receivable on demand have been included under no maturity.
(2) Deposits payable on demand and payable after notice have been included under no maturity.
(3) Deposits totalling $29,966 million as at October 31, 2022 have a fixed maturity date; however, they can be redeemed early (either fully or partially) by customers without penalty. These are classified as payable on a fixed date due to their stated contractual maturity date.
(4) Presented based on their earliest maturity date.

(Canadian $ in millions)	0 to 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 2 years	2 to 5 years	Over 5 years	No maturity	2022 Total
Off-Balance Sheet Commitments										
Commitments to extend credit (1)	1,932	3,610	10,461	13,373	14,753	38,057	119,430	5,490	–	207,106
Letters of credit (2)	1,680	4,601	4,936	4,662	4,922	2,832	3,680	57	–	27,370
Backstop liquidity facilities	–	585	393	1,438	1,275	3,465	9,189	985	–	17,330
Other commitments (3)	27	98	55	55	58	220	353	278	–	1,144

(1) Commitments to extend credit exclude personal lines of credit and credit cards that are unconditionally cancellable at BMO's discretion. A large majority of these commitments expire without being drawn upon. As a result, the total contractual amounts may not be representative of the funding likely to be required for these commitments.
(2) Letters of credit can be drawn down at any time. These are classified based on their stated contractual maturity.
(3) Other commitments comprise purchase obligations and lease commitments for leases signed but not yet commenced.

Caution
This Liquidity and Funding Risk section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Material presented in a blue-tinted font above is an integral part of Note 5 of the 2023 audited annual consolidated financial statements.

Operational Non-Financial Risk

Operational Non-Financial Risk encompasses a wide range of non-financial risks, including those related to business change, customer trust, reputation and data, all of which can result in financial loss. These losses can stem from inadequate or failed internal processes or systems, human error or misconduct, and external events that may directly or indirectly impact the fair value of assets we hold in our credit or investment portfolios. Examples of these risks include cyber and cloud security risk, technology risk, fraud risk and business continuity risk, but exclude legal and regulatory risk, credit risk, market risk, liquidity risk and other types of financial risk.

Operational non-financial risk (ONFR) is inherent in all of our business and banking activities and can lead to significant impacts on our operating and financial results, including financial loss, restatements of financial results and damage to BMO's reputation. Like other financial service organizations, we are exposed to a variety of operational risks arising from the potential for failures of our internal processes, technology systems and employees, as well as from external threats. Potential losses may be the result of process and control failures, unauthorized transactions by employees, business disruption, information security breaches, theft or fraud and cyber security threats, exposure to risks related to third-party relationships and damage to physical assets. For example, given the large volume of transactions that we process on a daily basis and the complexity and speed of our business operations, there is a possibility that certain operational or human errors may be repeated or compounded before they are discovered and rectified.

ONFR is not only inherent in our business and banking activities, it is also inherent in the processes and controls we use to manage risks. There is the possibility that errors could occur, as well as the possibility that a failure in our internal processes or systems could lead to a failure to manage or mitigate risk, financial loss and reputational harm. Shortcomings or failures of internal processes, systems or employees, or of services and products provided by third parties, including any of our financial, accounting or other data processing systems, could lead to financial loss, restatements of financial results and damage to BMO's reputation.

The nature of our business activities also exposes us to the risk of theft and fraud when we enter into transactions with customers or counterparties. BMO relies on the accuracy and completeness of any information provided by, and any other representations made by, customers and counterparties. While we conduct due diligence in relation to such customer information and, where practicable and economically feasible, engage valuation experts and other experts or sources of information to assist in assessing the value of collateral and other customer risks, our financial results may be adversely impacted if the information provided by customers or counterparties is materially misleading and this is not discovered during the due diligence process.

We have established various risk management frameworks to manage and mitigate these risks, including internal controls, limits and governance processes. However, despite the contingency plans we have in place to maintain our ability to serve our clients and minimize disruptions and adverse impacts and the contingency plans of our third-party service providers, our ability to conduct business may be adversely affected by a disruption to the infrastructure that supports our operations and the communities in which we do business, including, but not limited to, disruption caused by public health emergencies or terrorist acts.

We regularly review top and emerging risk exposures that could impact BMO's business and operations, and we assess our preparedness to proactively manage the risks we face or could face in the future. Consistent with the management of risk across the enterprise, we employ a three-lines-of-defence approach in managing our exposures to non-financial risk.

Refer to the Risks That May Affect Future Results – Top and Emerging Risks That May Affect Future Results section for further discussion of these risks.

Operational Non-Financial Risk Governance

The Enterprise Operational Risk Committee (EORC), a sub-committee of the Risk Management Committee (RMC), is the primary governance committee exercising oversight of all operational non-financial risk management matters, including: providing direction on, and monitoring against, strategic objectives and deliverables; improving operational resilience; and helping ensure that BMO maintains its reputation for preventing avoidable operating failures and mistakes. As part of its governance responsibilities, the EORC reviews and recommends corporate policies and standards to the Board of Directors and senior executives for review and approval as required, as well as the methodologies and tools that comprise the governing principles of the Operational Non-Financial Risk Management Framework (ONFRMF). The documentation that gives effect to these governing principles is reviewed on a regular basis in order to confirm that it incorporates sound governance practices and is consistent with BMO's risk appetite. Regular analysis and reporting of our enterprise operational risk profile to the various committees (EORC, RMC and Risk Review Committee (RRC)) are important elements of our risk governance framework. Enterprise operational risk reporting provides an integrated view of top and emerging risks, trends in loss data, capital consumption, key risk indicators and operating group profiles. We continue to invest in our reporting platforms, supporting timely and comprehensive reporting capabilities in order to enhance risk transparency and facilitate the proactive management of operational risk exposures.

Operational Non-Financial Risk Management

As the first line of defence, the operating groups and Corporate Services are accountable for the day-to-day management of non-financial risk, including the Chief Risk Officers of our businesses, who provide governance and oversight for their respective business units, along with Corporate Services, which provides additional governance and oversight in certain targeted areas. Operational Risk Officers independently assess the operational risk profiles of our operating groups, identify material exposures and potential weaknesses in our product, service and process-based risk and control environment, and recommend appropriate mitigation strategies and actions.

Independent risk management oversight is provided by ONFR, which is responsible for developing and implementing effective risk-related strategies, tools and policies, and for exercising second-line oversight, effective challenge and governance. ONFR establishes and maintains the ONFRMF, which defines the processes to be used by the first line of defence to identify, assess, manage, mitigate, monitor and report on key operational risk exposures, losses and near-miss operational risk events with significant potential impact. In addition, the ONFRMF sets out the processes by which ONFR, as the second line of defence, guides, supports, monitors, assesses and communicates with the first line in its management of operational non-financial risks.

Implementing the governing principles of the ONFRMF also involves continuing to strengthen our risk culture by promoting greater awareness and understanding of non-financial risk across all three lines of defence, learning from loss events and near-misses, and providing related training and communication, as well as day-to-day execution and oversight of the ONFRMF. We also continue to strengthen our second-line-of-defence support and oversight capabilities with an enhanced Operational Non-Financial Risk Operating Model, which takes a differentiated approach based on the nature of the underlying risk and existing organizational structures.

Through the implementation and oversight of the ONFRMF, we seek to maintain an operational risk profile that is not only consistent with our risk appetite and supported by adequate capital, but is also reinforced by enhanced operational resilience. Operational resilience is an organization's ability to protect and sustain core business services that are essential for its clients, both during the normal course of business and when experiencing operational stress or disruption. It involves our ability to deal with unpredictable events and adapt to changes and external circumstances. Operational resilience is a positive, forward-looking strategic posture that allows us to take measured risks with confidence and prepare BMO to withstand challenges in the market arising from both expected and unexpected events.

The following are the key programs, methodologies and processes set out in the ONFRMF that assist us in the ongoing review of our operational risk profile:

- **Risk and Control Self-Assessment** is an established process that is evolving into the Product/Service and Process Risk Assessment program in 2023-2024. This new program will be used by our operating groups and Corporate Services areas to assess the controls and residual exposures to risk in their business operations by focusing on the key controls they have in place to address specific material risks associated with their products, services, internal activities and processes. It provides a current and forward-looking view of the impact of both our internal controls and the external business environment on the risk profiles of our operating groups and Corporate Services areas, supporting the proactive prevention, mitigation and management of risk.
- BMO's **Initiative Assessment and Approval Process** is used to assess, document and approve qualifying initiatives when a new business, service or product is developed, or existing services and products are enhanced. This process supports continuous oversight of change in risk exposure by setting out specific requirements for due diligence, approval, monitoring and reporting that apply at all levels of the organization.
- Material trends, metrics and risk assessments comprising **Key Risk Indicators, Issues Management** and **Internal Loss Data Events** are integral components of an operational risk profile and are utilized to assess specific risk exposures in relation to BMO's overall risk appetite.
- **Historical Internal Loss Data Events** are key data elements utilized in the Standardized Approach for the calculation of operational risk regulatory capital. BMO adopted the new Basel III Standardized Approach for regulatory capital reporting as of February 1, 2023, as set out in the Capital Adequacy Requirements (CAR) Guideline published by OSFI.
- **Stress Testing** assesses the potential impact of severe negative events on key risk exposures and critical business processes in order to inform risk management. Stress testing helps management identify and understand the impact of large-scale events, including events that have a low frequency of occurrence but a high severity of impact, as well as environmental stresses, and develop mitigation measures or controls that aim to help manage tail risk.
- BMO's **Corporate Risk & Insurance (CR&I)** group provides a second layer of mitigation for certain operational risk exposures. CR&I is also accountable for establishing and maintaining the enterprise-wide insurance program. We purchase insurance when required by law, regulation or contractual agreement, and when it is economically attractive and practicable to mitigate our risks, in order to provide adequate protection against unexpected material loss. The policy structures and coverage provisions of our insurance positions are assessed annually to confirm alignment with BMO's overall risk tolerance.

The following are some of the operational non-financial risks that may adversely affect BMO's business and financial results.

Anti-Money Laundering

Money laundering, terrorist financing and sanctions risks are associated with laundering the proceeds of crime, financing terrorist activity, or violating economic sanctions by making use of our products or services. Compliance with all anti-money laundering, anti-terrorist financing (AML/ATF) and sanctions measures is critical to safeguarding BMO, our customers and the communities in which we operate. We are committed to managing AML/ATF and sanctions risks effectively, and to complying with all relevant laws and regulations. The consequences of non-compliance with these requirements can include enforcement action, criminal prosecution, legal action and damage to our reputation. Under the direction of the Chief Anti-Money Laundering Officer (CAMLO), BMO's AML/ATF and sanctions compliance program promotes effective governance and oversight across all of our businesses, and sets out policies, risk assessments, due diligence processes and controls, and training, including mandatory annual training for all employees. BMO's compliance program applies analytics, technology and professional expertise in order to deter, detect and report suspicious activity. The CAMLO reports regularly to the Audit and Conduct Review Committee (ACRC) of the Board of Directors and to senior management on the effectiveness of the compliance program. The effectiveness of our AML/ATF and sanctions compliance program is subject to regular review and independent assessment by the Corporate Audit Division. We remain committed to effective compliance and the ongoing effort to protect the financial system and the communities in which we operate.

Artificial Intelligence Risk

Artificial intelligence (AI) risk is the potential for loss or harm arising from incorrect use or misuse of AI systems, which can include one or many AI techniques, such as machine learning (ML) or generative AI.

These outcomes can include financial loss, poor customer experiences and damage to our reputation. AI continues to present new opportunities for innovative products and services, including system automation and revenue-generating capabilities, and is expected to become a key enabler of future operating efficiencies, but only if we safely and responsibly adopt and integrate new AI technologies. The application of AI in our business operations is governed and managed by our existing risk management policies. Significant initiatives are reviewed by a cross-enterprise group before implementation with the aim to ensure that ethical, privacy and fair and responsible banking requirements are met.

Our management and oversight of AI risk is focused on advancing our commitment to serving our customers in a way that fosters confidence and trust in our secure, ethical and responsible use of these technologies, utilizing our robust risk management practices and internal safeguards in a manner aligned with, and in compliance with, regulatory expectations.

Business Continuity Risk
Business continuity risk is related to the possibility that we may be unable to maintain, continue or restore essential business operations during and/or after an event that prevents BMO from conducting business in the normal course.

Business continuity management should enable BMO to recover, maintain and manage critical processes, as well as safeguard the interests and well-being of our customers, shareholders and employees. In the event of an operational disruption, effective business continuity plans minimize adverse impacts on our customers, employees and other stakeholders. These operational disruptions could result from severe weather, technology failures, cyber attacks or any other event that can lead to process failure. We have a framework in place that facilitates the rapid recovery and timely resumption of critical operations, including availability of our people, processes, facilities and technology, and maintenance of our third-party arrangements. Our comprehensive business continuity management strategy involves developing, testing and maintaining recovery strategies and plans, and is intended to ensure that critical processes and third-party arrangements remain viable.

Cyber and Cloud Security Risk
Cyber and cloud security risk arises from the possibility that BMO could experience security incidents, including the loss, theft or misuse of information, including all types of data (e.g., client data, employee data and the organization's proprietary data), as well as any potential failure to comply with rules concerning information or cyber security.

Cyber and cloud security is integral to BMO's business operations, brand and reputation. As technology evolves rapidly and the connective capabilities of digital devices continue to grow, cyber threats and risks also evolve. These threats include: breaches of, or disruptions to, our systems or operations, as well as unauthorized access to, or use or dissemination of, information pertaining to BMO, our customers or employees. At BMO, our response includes investing in our Financial Crimes Unit and technological infrastructure, equipping our team to detect and address cyber security threats across North America, Europe and Asia in order to help us keep our customers' and employees' data secure.

Data Risk
Data risk is the risk of loss resulting from inadequate or failed internal processes and systems, or from external events impacting data. Data quality, governance and architecture impact our understanding and management of BMO's data assets.

We continue to invest in new capabilities in support of BMO's digital transformation. Our ability to effectively manage and safeguard critical data has a direct impact on our successful deployment of digital processes and our ability to develop and introduce innovative new capabilities with tools and systems driven by AI. Our management of data risk is focused on the quality, resilience, retention and governance of BMO's data assets, which are foundational to our business operations, strategy and future growth, including BMO's Digital First strategy.

Fraud and Physical Security Risk
Fraud risk is related to the possibility that an intentional act, misstatement or omission designed to deceive others may result in the intended target experiencing a loss or the perpetrator achieving a gain. Fraud may be perpetrated by our employees, suppliers or other external parties, including BMO customers. Fraudsters are getting more sophisticated and may open accounts with financial institutions, including BMO, and then use those accounts to commit fraud. BMO maintains a Fraud Risk Management program intended to proactively manage fraud risks across the bank. A recessionary or tightening interest rate environment may lead to an increase in fraud attacks against BMO and our customers.

The management of physical security risk seeks to ensure that the bank, its customers, employees and third parties are protected against the risk of loss, interference, unauthorized physical access, damage or injury to which they may be exposed as a result of the bank's operations. Physical security risks may emerge through various threat vectors, including criminal activities, terrorist attacks, sociopolitical unrest, human error, natural events and/or geopolitical threats. Physical security measures may also support the management of a number of other risks, including risks related to information security, privacy and fraud.

Project and Change Management Risk
Project and change management risk is related to the possibility that BMO could experience a loss due to substandard delivery of an initiative that may lead to the business not achieving its intended outcome, as well as attracting additional regulatory scrutiny.

The bank has established a Project and Change Management Risk Framework to drive consistency in the delivery of an initiative within a prescribed control environment. This framework outlines the principles and processes for providing governance, monitoring and reporting, as well as the roles and responsibilities necessary to address project and change management risk across the enterprise and meet or exceed stakeholder expectations.

Technology Risk
Technology risk, including risks related to emerging technology and digital platforms, arises from the possibility that the inadequacy, misuse, disruption or failure of information technology systems, infrastructure or data could result in an inability to meet business needs. Failure to maintain and invest in technology can lead to operational disruption and impede the achievement of strategic organizational goals, at significant financial cost. Technology risk management measures are intended to protect BMO's systems, data and assets, and help ensure their confidentiality, integrity and availability. As the adoption of digital banking channels continues to grow, we continue to invest in new and innovative technological capabilities in order to meet our customers' expectations and keep their data secure. In alignment with our operational risk management framework, we follow a program that addresses exposures to technology risk, supported by a team of technology risk management experts.

Third-Party Risk
Third-party risk is the risk associated with the acquisition of goods, services and arrangements that permit BMO's products, processes and/or systems to be managed or supplied by external service providers, which could result in a negative impact on our business operations, regulatory compliance or reputation. Failure to effectively manage these third-party arrangements exposes BMO to the risk that data may be compromised, or the delivery of critical products and services may be disrupted. In addition, third-party service providers may use sub-contractors, introducing an additional layer of

complexity for oversight. Any concentration of third parties will also heighten exposures to existing risks of disruption arising from other events, such as natural disasters or geopolitical events. BMO's third-party risk management (TPRM) framework defines the identification, governance, measurement, mitigation, monitoring and reporting of third-party risk across the third-party life cycle. This framework is supported by enterprise-wide TPRM policies that are intended to ensure compliance with the framework.

We continue to enhance our capabilities in order to maintain robust risk management practices, support operational resilience objectives and comply with relevant regulatory requirements.

Model Risk

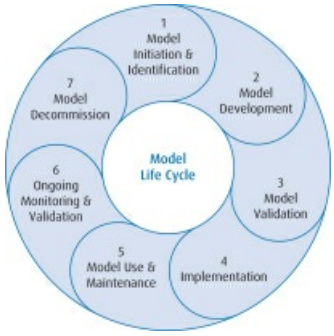
Model Risk is the potential for adverse outcomes resulting from decisions that are based on incorrect or misused model results. These adverse outcomes can include financial loss, poor business decision-making and damage to reputation.

Model risk arises from the use of quantitative analytical tools that apply statistical, mathematical, economic, algorithmic or other advanced techniques, such as AI and ML, to process input data and generate quantitative output or estimates. These analytical tools range from very simple quantitative methods that produce straightforward estimates to highly sophisticated models that can be used to value complex transactions or provide a broad range of forward-looking estimates. These analytical tools generate results that can inform business, risk and capital management decision-making, and assist in making daily lending, trading, underwriting, funding, investment and operational decisions.

These quantitative analytical tools provide important insights and are effective when used within a framework that identifies key assumptions and limitations, while controlling and mitigating model risk. In addition to applying judgment to evaluate the reliability of model results, we mitigate model risk by maintaining strong controls over the development, validation, implementation and use of all models across the enterprise. We also seek to ensure that any additional overlays and approaches to estimation in evaluating risks are intuitive, experience-based, well-documented and subject to effective challenge by those with sufficient expertise and knowledge, in order to deliver reasonable results.

Model Risk Management Framework

Risk is inherent in models because model results are estimates that rely on statistical, mathematical or other quantitative techniques to approximate reality and transform data into estimates or forecasts of future outcomes. Model risk also arises from the potential for misuse of models or model results. Model risk is governed at BMO by a risk-based enterprise-wide Model Risk Management Framework.



The Model Risk Management Framework sets out an end-to-end approach for model risk governance across the model life cycle and for the management of model risk within the limits of our risk appetite. The framework includes BMO's Model Risk Corporate Policy, Model Risk Guidelines and supporting operating procedures, which outline the governing principles for managing model risk, describe model risk management processes in detail and define the roles and responsibilities of all stakeholders across the model life cycle. Model owners, developers and users serve as the first line of defence, while the Model Risk group is the second line of defence, and the Corporate Audit Division is the third line of defence.

Our Model Risk group is responsible for developing and maintaining our Model Risk Management Framework in alignment with regulatory expectations, as well as exercising oversight of the effectiveness of model processes, model inventory and the overall aggregation, assessment and reporting of model risk. This framework incorporates guidance on the management of risks, the safe and responsible adoption of advances in automation used for decision-making, such as large language models and algorithmic trading, as well as other AI and ML applications. Our enterprise Model Risk Management Committee (MRMC), a sub-committee of the RMC, is a cross-functional group representing key stakeholders across the enterprise. The MRMC meets regularly to help direct BMO's use of models, oversee the development, implementation and maintenance of the Model Risk Management Framework, provide effective challenge and discuss governance of the enterprise's models.

Outcomes Analysis and Back-Testing

Once models are validated, approved and in use, they are subject to ongoing monitoring, including outcomes analysis, at varying frequencies. As a key component of outcomes analysis, back-testing compares model results against actual observed outcomes. Variances between model forecasts and actual observed outcomes are measured against defined risk materiality thresholds and tolerance ranges, which may result in further steps being taken, such as model review and parameter recalibration, as appropriate. This analysis serves to confirm the validity of a model's performance over time. Controls are in place to address identified issues and enhance our models' overall performance.

All models used within BMO, including models that incorporate AI and ML techniques, are subject to validation and ongoing monitoring to confirm that they are being used in alignment with our framework and in compliance with regulatory expectations, such as those related to ethics, privacy, fairness and explainability. This framework applies to a wide variety of models, ranging from market, credit and non-financial risk models to stress testing, pricing and valuation, and anti-money laundering models.

Caution

This Operational Non-Financial Risk section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Legal and Regulatory Risk

Legal and Regulatory Risk is the potential for loss or harm resulting from failure to comply with laws or satisfy contractual obligations or regulatory requirements. This includes the risk arising from any failure to: comply with the law (in letter or in spirit) or maintain standards of care; implement legal or regulatory requirements; enforce or comply with contractual terms; assert non-contractual rights; effectively manage disputes; or act in a manner so as to maintain our reputation.

The success of BMO's business operations relies in part on our ability to manage our exposure to legal and regulatory risk. The financial services industry is highly regulated and subject to strict enforcement of legal and regulatory requirements. Banks globally continue to be subject to fines and other penalties for a number of regulatory and conduct issues, and we are exposed to risks in connection with regulatory and governmental inquiries, investigations and enforcement actions, as well as criminal prosecutions. As rulemaking and supervisory expectations continue to evolve, we monitor developments to enable BMO to respond by implementing changes as required.

Under the direction of BMO's General Counsel, our Legal & Regulatory Compliance group maintains enterprise-wide frameworks that set out the steps to be taken to identify, assess, manage, monitor and report on exposure to legal and regulatory risk. We identify applicable laws and regulations and potential risks, recommend mitigation measures and strategies, conduct internal investigations, and oversee legal proceedings and enforcement actions, including civil claims and litigation, criminal charges, and regulatory examinations and audits.

Heightened regulatory and supervisory scrutiny has a significant impact on the way we conduct business. Working with the operating groups and Corporate Services, Legal & Regulatory Compliance assesses and analyzes the implications of changes in regulatory and supervisory expectations. We devote substantial resources to the implementation of systems and processes required to comply with new regulations. Failure to comply with applicable legal and regulatory requirements may lead to legal proceedings, financial losses, regulatory sanctions or fines, enforcement actions, criminal convictions and penalties, restrictions on or an inability to execute certain business strategies, a decline in investor and customer confidence, and damage to our reputation. Certain businesses are also subject to fiduciary requirements, including policies and practices that address the responsibilities of a business to a customer, such as service requirements and expectations, customer suitability determinations, disclosure obligations and communications.

BMO is subject to legal proceedings, including investigations by regulators, arising in the ordinary course of business, and the unfavourable resolution of any such legal proceedings could have a material adverse effect on our business, financial condition, results of operations, cash flows, capital position or credit ratings; require material changes in our operations; result in loss of customers; and damage our reputation. The volume of legal proceedings and the amount of damages and penalties assessed in such legal proceedings could grow in the future. Information regarding material legal proceedings to which we are a party is included in the Legal Proceedings section in Note 24 of the audited annual consolidated financial statements. Our disclosure controls and procedures are intended to provide reasonable assurance that all relevant information is gathered and reported to senior management on a timely basis, so that appropriate decisions can be made regarding public disclosure. In assessing the materiality of legal proceedings, factors considered include a case-by-case assessment of specific facts and circumstances, our past experience, and the opinions of legal experts. However, some legal proceedings may be highly complex, and may include novel or untested legal claims or theories. The outcome of such proceedings may be difficult to anticipate until late in the proceedings, which may last several years.

BMO's Anti-Corruption Office, through its global program, has articulated key principles and procedures that support the effective oversight of compliance with anti-corruption legislation in the jurisdictions in which we operate. These include guidance on both identifying, avoiding and reporting on corrupt practices and rigorously investigating allegations of corrupt activity.

Governments and regulators around the world continue to focus on anti-money laundering and related concerns, raising their expectations for the quality and efficacy of anti-money laundering programs and penalizing institutions that fail to meet these expectations. Under the direction of the Chief Anti-Money Laundering Officer (CAMLO), BMO's Anti-Money Laundering Office is responsible for the assessment, governance and oversight of the principles and procedures we have in place to help ensure compliance with laws and regulations and internal risk parameters related to anti-money laundering, anti-terrorist financing and sanctions measures. For additional discussion, refer to the Operational Non-Financial Risk Management – Anti-Money Laundering section.

The success of our business operations has been built on BMO's reputation for good conduct. In recognition of this, we have adopted a wide range of practices, in addition to BMO's Code of Conduct, to support the ethical conduct of our employees. BMO's Ethical Culture and Conduct Framework sets out our approach to managing and mitigating the risk of potential misconduct. Misconduct is behaviour that falls short of legal, professional, internal conduct and ethical standards. Similar to our approach to other non-financial risks, this framework is supported by our Enterprise-Wide Risk Management Framework and our focus on maintaining a strong risk culture. For further discussion, refer to the Risk Culture section.

All of these frameworks reflect the three-lines-of-defence operating model described previously. The operating groups and Corporate Services manage day-to-day risks by implementing and observing corporate policies and standards, while Legal & Regulatory Compliance units specifically assigned to each of the operating groups provide advice and independent legal and regulatory risk management oversight.

We continue to respond to other global regulatory developments, including the impact of changes in capital and liquidity requirements. These developments include consumer protection measures and specific financial reforms, including proposals in respect of the assessment, management and disclosure of climate-related financial risk, which are discussed further below. For additional discussion of regulatory developments related to capital management and liquidity and funding risk, refer to the Enterprise-Wide Capital Management section and the Liquidity and Funding Risk section. For a discussion of the impact of certain other regulatory developments, refer to: Critical Accounting Estimates and Judgments – Income Taxes and Deferred Tax Assets; Fiscal and Monetary Policies and Other Economic Conditions in the Countries in which BMO Conducts Business; Tax Legislation and Interpretations; and Other Regulatory Developments.

Climate Change and Environmental, Social and Governance Matters
We continue to monitor the rulemaking activities of regulatory authorities, and we are participating in programs and consultations that focus on risk management and disclosures related to environmental, social and governance (ESG) matters, as well as trends in climate-related litigation. Globally, we are also tracking the emergence and finalization of formal supervisory regulatory frameworks governing the analysis and reporting of risks related to sustainability and climate change, including frameworks in Canada, the United States, the United Kingdom and the European Union. In addition, current and emerging regulatory requirements in certain U.S. states may apply restrictions or sanctions on financial institutions that impose any environmental standards that exceed the legal or regulatory requirements in the states in which they operate. Trends in litigation and regulatory investigation involving disclosure practices or financing activities related to climate or ESG matters, as well as allegations of "greenwashing", also continue to evolve. We are monitoring these trends and assessing their potential impact in the context of BMO's climate-related sustainable finance and responsible investment activities, environmental and social risk management, and disclosure practices related to climate or ESG matters. For further discussion, refer to the Environmental and Social Risk section.

Consumer and Investor Protection
Regulators around the world continue to focus on consumer protection measures, including those related to seniors and other vulnerable customers, interactions with consumers, and standards of conduct for individuals in the financial services industry. In Canada, the Financial Consumer Agency of Canada (FCAC) issued a Guideline on Existing Consumer Mortgage Loans in Exceptional Circumstances. The guideline requires banks to establish policies and procedures that can provide tailored support to consumers who are experiencing severe financial stress as a result of exceptional circumstances, including rising interest rates, and who are at risk of mortgage default. Recently enacted provincial legislation specifies various language requirements, including with respect to consumer contracts and the manner in which we conduct business. In addition, reforms to the Canadian securities regulatory regime related to the protection of investors are also proceeding. Canadian securities regulatory reforms included the consolidation of the Mutual Fund Dealers Association of Canada (MFDA) and the Investment Industry Regulatory Organization of Canada (IIROC) into a single self-regulatory organization known as the Canadian Investment Regulatory Organization (CIRO), as well as the merger of two investor protection funds under the continuing name of the Canadian Investor Protection Fund (CIPF). Further, the Canadian Securities Administrators (CSA) and the Canadian Council of Insurance Regulators adopted changes to harmonize and enhance reporting of the ongoing costs, including embedded fees, of owning investment funds and segregated funds. In addition, the Canadian government announced that it will implement new measures to reduce fees for non-sufficient funds and certain other fees charged by financial institutions. If these proposed measures are enacted, the expected impact would be a reduction in BMO fee revenue. In the United States, banking regulators have a heightened focus, with respect to all consumer products, on matters pertaining to racial equity, financial inclusion and consumer protection. Key consumer concerns, including fair lending and unfair, deceptive or abusive acts or practices, are now the subject of heightened regulatory scrutiny in bank examination programs.

Privacy
There is a growing focus on regulation related to privacy and the use and safeguarding of personal information, and we continue to advance our privacy program so that we are able to comply with evolving regulatory requirements. In Canada, significant reform to federal privacy laws is expected under Bill C-27, including new regulatory powers and penalties and additional legislation to address artificial intelligence. In Quebec, Law 25 (previously Bill 64) is coming into effect in phases, which began in 2021 and will end in 2024. Law 25 modernizes the province's private-sector privacy regime, introduces new regulations related to biometrics and automated decisions, and gives new powers to regulators to impose monetary administrative penalties. Outside of Canada, large fines and settlements have been imposed for breaches of privacy rights and failure to comply with regulatory privacy requirements – evidence of heightened regulatory vigilance and enforcement. The *California Consumer Privacy Act,* which is currently the most comprehensive privacy law at the state level in the United States, was enhanced and amended in 2023 by the *California Privacy Rights Act*, which includes new and expanded privacy rights for California residents. Other states have introduced privacy legislation, which is leading to a growing patchwork of privacy laws in the United States. In the European Union and the United Kingdom, there are continuing concerns regarding the transfer of personal data to countries lacking adequate privacy protection. For further discussion, refer to the Top and Emerging Risks That May Affect Future Results – Cyber and Cloud Security Risk section and the Operational Non-Financial Risk – Cyber and Cloud Security Risk section.

The General Counsel and the Chief Compliance Officer regularly report to the Audit and Conduct Review Committee (ACRC) of the Board of Directors and senior management on the effectiveness of our enterprise compliance program. The program uses a risk-based approach to identify, assess and manage any risks related to compliance with applicable laws and regulations, and directs operating groups and Corporate Services to maintain policies, procedures and controls that address these laws and regulations. Under the direction of the Chief Compliance Officer, we identify and report on gaps and deficiencies, and we track remedial action plans. The CAMLO also regularly reports to the ACRC.

All BMO employees must regularly complete legal and regulatory training on topics such as anti-corruption, anti-money laundering and privacy policies, standards and directives. This is carried out in conjunction with our Code of Conduct training, which tests employees' knowledge and understanding of the behaviour required of employees of BMO.

Securities Transaction Settlement Cycle
The U.S. Securities and Exchange Commission published final rules, effective in May 2024, shortening the settlement cycle for most securities transactions to T+1. Canadian securities regulators have also proposed rule amendments to support the adoption of a T+1 settlement cycle, and this is expected to occur in 2024, in step with the U.S. rules. Planning for implementation at BMO is underway.

Third-Party Risk Management
On April 24, 2023, OSFI released its final Guideline B-10 – *Third-Party Risk Management*, which sets out expectations for federally regulated financial institutions, including BMO, in managing risks involving third-party arrangements. Federally regulated financial institutions retain accountability for business activities and services outsourced to a third party. We continue to prepare for compliance with this guideline, which comes into effect on May 1, 2024. Refer to the Operational Non-Financial Risk – Third-Party Risk section for further discussion.

U.S. Regulatory Developments

On October 25, 2023, the U.S. Federal Reserve announced proposed revisions to the debit card interchange fee cap under Regulation II of the*Dodd-Frank Act*, which would: (i) reduce the base component of the interchange fee cap and the transaction value; and (ii) increase the fraud-prevention adjustment. If these revisions are enacted as proposed, the expected impact would be a reduction in BMO's U.S. interchange revenue.

U.S. Regulatory Reform

Following the closing of our acquisition of Bank of the West and with the increasing size and scope of our U.S. operations, BMO Financial Corp. (BFC), BMO's U.S. holding company, has met the threshold for designation as a Category III firm under the Enhanced Prudential Standards issued by the Federal Reserve Board. This change requires BFC to meet certain increased regulatory requirements related to capital, liquidity and risk management, including complying with single counterparty credit limits. Additional information regarding regulatory requirements that now apply to BFC is set out in the Enterprise-Wide Capital Management section.

On August 29, 2023, the U.S. banking agencies issued a new rule proposal that would require large banks with total assets of $100 billion or more to maintain a layer of long-term debt, which would improve financial stability by increasing the resolvability and resiliency of such institutions. The impact of these proposed rules on our results will depend on the final rules issued by the U.S. banking agencies, but we do not currently expect a material change to our enterprise-level funding activities.

On July 27, 2023, the U.S. banking agencies issued new rule proposals that would revise the regulatory capital framework for large bank holding companies and their depository institutions, including BFC and BMO Bank N.A. These proposals would implement the risk-based capital standards contained in the Basel III Reforms (referred to as Basel III Endgame) published by the Basel Committee on Banking Supervision. The impact of these proposed rules on our results will depend on the final rules issued by the U.S. banking agencies.

Caution

This Legal and Regulatory Risk section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Strategic Risk

Strategic Risk is the potential for loss due to fluctuations in the external business environment and/or failure to properly respond to these fluctuations due to inaction, ineffective strategies or poor implementation of strategies.

Strategic risk arises from exposure to the external risks inherent in the business environment within which BMO operates, as well as from the potential financial loss or other negative impact that BMO could experience as a result of failing to address those external risks effectively. While external strategic risks – including possible changes in the macroeconomic, geopolitical or regulatory environment, and changes in legal, innovation, competitive, environmental and social factors – cannot be controlled, the likelihood and magnitude of their impact can be limited through an effective strategic risk management framework, and the potential impact of certain of these risks can be assessed through stress testing.

BMO's Corporate Strategy group oversees the strategic planning process and works with the lines of business and Corporate Services to identify, monitor and mitigate strategic risk across the enterprise. Our rigorous strategic risk management framework encourages a consistent approach in the development of strategic plans, carried out through an integrated, multi-year strategic and financial planning process that directs funding to support specific strategic choices across each line of business, in alignment with our enterprise risk appetite.

The framework promotes consistency and adherence to strategic management standards, including a consideration of the results of stress testing as an input into strategic decision-making. The potential impacts of changes in the business environment, including macroeconomic developments, broad industry trends, the actions of existing and new competitors and regulatory developments, are considered in this process and inform strategic decision-making within each line of business. Oversight of strategic risk is the responsibility of the Executive Committee and the Board of Directors. This is carried out through an annual review of enterprise and group strategies, which involves interactive sessions that challenge assumptions and strategies in the context of both the current and potential future business environment. Where required, these strategies are revised to address new or unexpected developments.

Strategic risk also includes business risk arising from specific enterprise activities and the effects these could have on earnings. Within BMO, each operating group is responsible for controlling its respective business risk by assessing, managing and mitigating risks. To manage exposure to transverse business risks (i.e., those spanning multiple lines of business, such as climate change), the Corporate Strategy group works in tandem with the relevant business stakeholders to shape effective mitigation approaches.

Our ability to implement the strategic plans developed by management influences our financial performance. Performance objectives are established through the strategic planning process and our progress toward those objectives is monitored regularly and reported on quarterly, using both leading and lagging indicators of absolute and relative performance, so that strategies can be reviewed and adjusted where necessary. Regular strategic and financial updates are also reviewed closely in order to identify any significant emerging risk issues.

Environmental and Social Risk

Environmental and Social Risk is the potential for loss or harm directly or indirectly resulting from environmental and social factors that impact BMO or its customers, and BMO's impact on the environment and society.

In recognition of its unique characteristics, environmental and social (E&S) risk is classified in BMO's Risk Taxonomy as a transverse risk that may manifest itself through other risk types, namely: credit and counterparty risk, market risk, insurance risk, liquidity and funding risk, operational non-financial risk, legal and regulatory risk, strategic risk and reputation risk. E&S risk may arise over a range of time frames, from short-term to long-term. Factors that may give rise to E&S risk include, but are not limited to: climate change; pollution and waste; the use of energy, water and other resources; biodiversity and land use; human rights; diversity, equity and inclusion; labour standards; community health, safety and security; land acquisition and involuntary resettlement; Indigenous peoples' rights; and cultural heritage. We are advancing our risk identification efforts by defining these factors and identifying any risk exposures that may be affected by the transverse impact of these factors.

We may have direct exposure to E&S risk associated with the ownership and operation of BMO's businesses. We may be indirectly exposed to the risk of financial loss or reputational harm if our customers or suppliers are affected by E&S factors or are associated with adverse environmental or social impacts to such an extent that they are unable to meet their financial or other obligations to us, or that they cause reputational risks for BMO. E&S factors may also give rise to the risk of reputational harm, if we are perceived to not respond effectively to those factors, or to cause, contribute or be linked to adverse impacts on the environment or society, as discussed in the Reputation Risk section.

Governance

The Board of Directors, through the Risk Review Committee (RRC), approves the E&S Risk Appetite Statement and the E&S Risk Corporate Policy, as discussed below. The RRC assists the Board of Directors in meeting its oversight responsibilities for the identification, assessment and management of our exposure to E&S risk, including risks arising from climate change, for the overall adherence to risk management corporate policies, and for complying with risk-related regulatory requirements. The Audit and Conduct Review Committee (ACRC) assesses the effectiveness of BMO's governance of sustainability matters and approves BMO's sustainability reporting and disclosures, including our Sustainability Report and Public Accountability Statement, and our Climate Report. The Human Resources Committee has responsibility for the alignment of executive compensation with performance, including performance in relation to BMO's environmental and social objectives. The Governance and Nominating Committee regularly reviews the charters of our Board of Directors and its committees to assess the coverage and alignment of their responsibilities for overseeing environmental, social and governance (ESG) issues with their respective mandates.

BMO's General Counsel is the bank's Executive Committee Sponsor for Sustainability and Climate and has accountability for legal and regulatory risk, reputation risk, business conduct and ethics, and sustainability, including climate change. Our ESG Executive Committee comprises senior leaders from the lines of business and Corporate Services across the enterprise, and provides oversight and leadership for our sustainability strategy, including our Climate Ambition. In addition to the ESG Executive Committee, BMO has a Sustainability Council, which is a leadership forum for advancing sustainability initiatives. Senior management oversees E&S risk through management committees and forums that provide oversight and receive updates on sustainability matters and E&S risk. These include, but are not limited to: Disclosure Committee, Risk Management Committee (RMC), Reputation Risk Management Committee (RRMC), Enterprise Regulatory Committee, Climate Commercialization Working Group and Impact Investment Fund Committee, as well as the Investment Committee of BMO Global Asset Management. Additional committees, forums and working groups may be established as needed. In addition, the Board of Directors and any management committees active in other jurisdictions receive updates and oversee E&S risk for the relevant jurisdiction. They also receive updates on sustainability matters and E&S risk across the enterprise.

The Chief Risk Officer (CRO), as Head of Enterprise Risk and Portfolio Management (ERPM) and supported by the Risk Executive Committee, acts as the second line of defence on the transverse impacts of E&S risk on credit and counterparty risk, market risk, liquidity and funding risk, insurance risk and operational non-financial risk; oversees risk appetite for E&S risk in the context of these risks; and reports to the Board of Directors, its RRC and the RMC on E&S risk.

Strategy

As a global bank, we are partnering with our clients to accelerate their transition to a low-carbon operating environment, identifying and advancing solutions that meet net zero emissions and climate objectives and support positive social change. This ambition is explicitly linked to our enterprise commercial strategy and we are working to realize this ambition through a four-pillar climate strategy: Commitment; Capabilities; Client partnership and commercialization; and Convening for climate action. Our strategy seeks to capture commercialization opportunities by working with our clients on their decarbonization journeys. The strategy is being implemented by our operating groups, overseen by the ESG Executive Committee and supported by the BMO Climate Institute, which serves as an enterprise resource that is accelerating BMO's climate-related transition efforts and as an internal and external convenor on climate action.

In order to remain informed about emerging E&S risks, we participate in global forums with other financial institutions and maintain an open dialogue with our external stakeholders.

E&S Risk Management

A successful future for BMO and our customers depends on the sustainability of the environment, communities and economies in which we operate. We seek to understand the impact that E&S risk factors could have on our business environment, as well as our clients, portfolios and operations. With this understanding, we are better positioned to make informed strategic decisions.

Our E&S Risk Corporate Policy, applicable to all BMO employees, sets out our approach to integrating E&S risk into the ERMF. The policy affirms the expectation of our Board of Directors that BMO will integrate considerations of E&S risk across the ERMF. It is supported by BMO's three-lines-of-defence operating model, and is underpinned by our risk culture. Its implementation involves building new capabilities, while also leveraging

our existing risk governance provisions and resources, to identify, assess, manage, monitor and report on potential impacts on our clients, portfolios and operations. On March 7, 2023, the Office of the Superintendent of Financial Institutions (OSFI) published its final version of Guideline B-15 – *Climate Risk Management* (Guideline B-15), setting out its expectations for the sound management of climate-related risks for Canadian financial institutions. The guideline is effective October 2024, and the E&S risk group is considering updates to the E&S Risk Corporate Policy and related documentation for alignment across the enterprise.

We have developed a qualitative Risk Appetite Statement that includes E&S risks, including risks related to climate change. In addition, we have developed a key metric with risk tolerance thresholds, which measures our lending in support of carbon-related assets as a percentage of our total net loans and acceptances, net of the allowance for credit losses on impaired loans.

E&S risk is also addressed in our Credit Risk Management Framework, including provisions for governance and accountabilities, enhanced due diligence and thresholds for escalations or exceptions. Sector-specific financing guidelines help us identify and manage exposure to E&S risk in higher-risk sectors and to integrate a consideration of these risks into our decision-making, which also considers factors such as climate change and Indigenous consultation. The Environmental and Social Risk General Financing Guideline is an enterprise-level second-line directive that applies to wholesale lending transactions; articulates our lending risk appetite for E&S risk; outlines the enhanced due diligence process, supported by E&S Risk Rating (ESRR) assessment tools developed to address sectors with heightened risk; and outlines lending prohibitions, escalations and elevations. Social and environmental requirements in financing arrangements and transactions are monitored by the lines of business as part of our overall monitoring process.

We recognize that climate change involves exposure to physical risks and transition risks. Physical risks are risks associated with a changing climate, which can have both acute and chronic physical effects. These risks may include an increase in the frequency and intensity of weather-related events, such as storms, floods, wildfires and heatwaves, or longer-term changes, such as temperature changes, rising sea levels and changes in soil productivity. To date, key climate change indicators, weather-related events and associated scientific research indicate that global exposure to climate change risks appears to be accelerating. Transition risks are associated with the shift to a net zero carbon economy. These risks may arise from climate-related policy changes, technological changes and behavioural changes involving carbon-pricing mechanisms, or a shift in consumer preferences toward lower-carbon products and services. We continue to closely monitor these changes, some of which may unfold more rapidly than others as consumers, clients, investors, governments and communities act to enhance their resilience to climate-related risks. We consider the physical and transition risks arising from climate change to be transverse risks. Our Environmental and Social Risk General Financing Guideline includes direction on developing an understanding of the specific impacts of climate change on borrowers and their operations, including regulatory and/or legislative changes. To limit our involvement in any one sector or geographic region that might be exposed to climate-related risks, we maintain a diversified lending portfolio. We continue to conduct sector-specific reviews across our lending portfolio to assess exposure to climate-sensitive industries. Transactions involving significant environmental or social concerns may be escalated to the RRMC for consideration.

We are developing a climate scenario analysis program to explore climate-specific vulnerabilities in order to enhance our resilience to climate-related risks, in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). The climate scenario analysis program leverages existing risk capabilities in combination with climate-specific expertise. This program includes the evaluation of transition risks and/or physical risks, where relevant and potentially significant, across a selection of climate-sensitive portfolios, and we will continue expanding the scope of these analyses across sectors and risk types in line with internal policies and any applicable regulatory requirements. Utilizing scenario analysis to gain a deeper understanding of climate-related risks is a relatively new approach that is evolving rapidly. As we enhance our knowledge of climate-related impacts and consider comprehensive climate-based scenarios, and as data modelling techniques and data availability improve, we expect our approach to analyzing these scenarios will evolve. These analyses will help identify potential exposures to material financial risks and may inform our business strategy in relation to climate change going forward.

We continue to assess the credibility, reliability, comparability and decision-making usefulness of various measurement, assessment and reporting approaches, as well as the ways in which we could incorporate them into our climate risk management program and associated disclosures.

Managing E&S Risk in the Supply Chain

Our Sustainability group partners with the Procurement and Corporate Real Estate groups on operational sustainability. Together, these groups are responsible for establishing and maintaining an operational environmental management approach, including the application of the framework set out in ISO 14001, and for setting objectives and targets that are intended to align our operations with our sustainability performance goals.

BMO's Code of Conduct has been approved by our Board of Directors, and reflects our commitment to manage our business responsibly. We report publicly under the United Kingdom *Modern Slavery Act 2015* and the Australian *Modern Slavery Act 2018*, and we have in place a Supplier Code of Conduct, which outlines our standards for integrity, fair dealing and sustainability. We require our suppliers to be aware of, understand and comply with the principles of our Supplier Code of Conduct.

In Canada, Bill S-211, *An Act to enact the Fighting Against Forced Labour and Child Labour in Supply Chains Act and to amend the Customs Tariff*(Bill S-211) received royal assent on May 11, 2023, and comes into effect January 1, 2024. Under the provisions of Bill S-211, corporate entities that meet certain criteria will be required to file public reports on measures they have taken to identify, address and prevent the use of forced labour, prison labour and child labour in their supply chains. BMO is developing a plan for compliance with this new legislation.

Climate-Related Financial Disclosures
BMO provides voluntary annual disclosures by way of the BMO Climate Report and BMO Sustainability Report. We are implementing plans to adapt and extend our sustainability and climate disclosure to align with requirements set forth by regulators and standard setters.

We have adopted the TCFD framework to guide climate-related financial disclosures, as set out in our Climate Report. The Canadian Securities Administrators (CSA) has proposed National Instrument 51-107, *Disclosure of Climate-Related Matters* (NI 51-107), but related policies have yet to be finalized and would require certain additional disclosures. On June 26, 2023, the International Sustainability Standards Board (ISSB) issued its inaugural standards: IFRS S1, *General Requirements for Disclosure of Sustainability-Related Financial Information*, and IFRS S2, *Climate-Related Disclosures* (the ISSB Standards), which are intended to provide a global baseline for disclosures related to sustainability and climate-related risks and opportunities. The ISSB Standards are effective for our fiscal year beginning November 1, 2024, on a voluntary basis, and any mandatory application will be determined by the rules and requirements issued by regulators in the jurisdictions in which we operate.

We are implementing plans to prepare BMO to meet the expectations of OSFI regarding the first set of climate-related financial disclosures it has mandated, which are effective for our fiscal year ending October 31, 2024. Other disclosures mandated by OSFI will be effective for the 2025 fiscal year.

Metrics and Targets

Our reporting of climate-related metrics and targets includes a discussion of BMO's Scope 1 and 2 greenhouse gas (GHG) emissions, calculated using the GHG Protocol, and a discussion of our Scope 3 emissions, calculated using the Partnership for Carbon Accounting Financials (PCAF). More detailed discussion, as well as a discussion of financed emissions targets for certain sectors, can be found in the Climate Report. Metrics related to sustainability are discussed in the Sustainability Report. Our sustainability reporting suite is prepared in accordance with the Global Reporting Initiative (GRI) Standards and the GRI Financial Services Sector Disclosure, and integrates the disclosure frameworks of the TCFD and the Sustainability Accounting Standards Board. These include the Public Accountability Statements for Bank of Montreal, Bank of Montreal Mortgage Corporation, BMO Life Assurance Company and BMO Life Insurance Company, outlining certain aspects of BMO's contributions, and the contributions of its affiliates with operations in Canada, to the Canadian economy and society. These statements meet the requirements of the Canadian federal government's Public Accountability Statement regulations. The shareholders' auditors provide a limited assurance report on selected environmental and social indicators in the Sustainability Report and the Climate Report. We are currently assessing the impact of our adoption of the ISSB Standards and monitoring domestic implementation processes in the United States and Canada.

Caution
This Environmental and Social Risk section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Reputation Risk

Reputation Risk is the potential for loss or harm to the BMO brand. It can arise even if other risks are managed effectively.

Our reputation is built on our commitment to high standards of business conduct, and is one of our most valuable assets. By protecting and maintaining our reputation, we safeguard our brand, increase shareholder value, reduce our cost of capital, improve employee engagement and preserve our customers' loyalty and trust.

We manage risks to our reputation by considering the potential reputational impact of all business activities, including strategy development and implementation, transactions and initiatives, data and technology use (including artificial intelligence), product and service offerings, and events or incidents impacting BMO, as well as day-to-day decision-making and conduct. We consider our reputation in everything that we do.

BMO's Code of Conduct is the foundation of our ethical culture, and it provides employees with guidance on the behaviour that is expected of them, so that they can make the right choice in decisions that affect our customers and stakeholders. Ongoing reinforcement of the principles set out in the Code of Conduct minimizes risks to our reputation that may result from inappropriate behaviour or poor decision-making. Recognizing that non-financial risks can have a negative impact as significant as the effect of financial risks, we actively promote a culture in which employees are encouraged to raise concerns and are supported in doing so, with zero tolerance for retaliation.

In our corporate governance practices and Enterprise-Wide Risk Management Framework, we have specific controls in place to manage risks to our reputation. We seek to identify activities or events that could impact our reputation with customers, regulators or other stakeholders. Where we identify a potential risk to our reputation, we take steps to assess and manage that risk. Instances of significant or heightened exposure to reputation risk are escalated to BMO's Reputation Risk Management Committee (RRMC) for review. As misconduct can impact our reputation, the Chief Ethics Officer, who is responsible for enterprise-wide reporting on employee conduct, may escalate instances of misconduct involving significant reputation risk to BMO's RRMC for review, as appropriate.

Accounting Matters and Disclosure and Internal Control

Critical Accounting Estimates and Judgments

The most significant assets and liabilities for which we must make estimates and judgments include: allowance for credit losses; financial instruments measured at fair value; pension and other employee future benefits; impairment of securities; income taxes and deferred tax assets; goodwill and intangible assets; insurance-related liabilities; provisions, including legal proceedings and restructuring charges; transfers of financial assets; consolidation of structured entities; and valuation of the Bank of the West assets acquired and liabilities assumed. We make judgments in assessing the business model for financial assets, as well as whether substantially all risks and rewards have been transferred in respect of transfers of financial assets and whether we control structured entities (SEs). These judgments are discussed in Notes 6 and 7 of the audited annual consolidated financial statements. Note 17 of the audited annual consolidated financial statements provides further details on the estimates and judgments made in determining the fair value of financial instruments. If actual results were to differ from these estimates, the impact would be recorded in future periods.

By their nature, the judgments and estimates that we make for the purposes of preparing financial statements relate to matters that are inherently uncertain. However, we have detailed policies and control procedures that are intended to ensure the judgments made in estimating these amounts are well-controlled, independently reviewed and consistently applied from period to period. We believe that the estimates of the values of our assets and liabilities are appropriate.

For a more detailed discussion of the use of estimates, refer to Note 1 of the audited annual consolidated financial statements.

Allowance for Credit Losses

The allowance for credit losses consists of allowances for estimated losses related to impaired loans in the portfolio provided for but not yet written off, and allowances for performing loans, which represent our best estimate of impairment in the existing portfolio for loans that have not yet been individually identified as impaired. Our approach to establishing and maintaining the allowance on performing loans is based on the requirements of IFRS 9, *Financial Instruments*, and considering the guideline issued by the Office of the Superintendent of Financial Institutions (OSFI). Under the IFRS 9 expected credit loss (ECL) methodology, an allowance is recorded for expected credit losses on financial assets regardless of whether there has been actual impairment. ECL is calculated on a probability-weighted basis, based on three economic scenarios, and is calculated for each exposure in the portfolio as a function of the probability of default (PD), exposure at default (EAD) and loss given default (LGD), with the timing of the loss also considered. Where there has been a significant increase in credit risk, lifetime ECL is recorded; otherwise, 12 months of ECL is generally recorded. The determination of a significant increase in credit risk requires a consideration of many different factors that will vary by product and risk segment. The main factors considered in making this determination are the change in PD since origination and certain other criteria, such as 30-day past due and watchlist status. We may apply experienced credit judgment to reflect factors not captured in the results produced by the ECL models, as we deem necessary. We apply experienced credit judgment to reflect the impact of the uncertain environment on credit conditions and the economy. We have controls and processes in place to govern the ECL process, including judgments and assumptions used in determining the allowance on performing loans. These judgments and assumptions will change over time, and the impact of any such change will be recorded in future periods.

In establishing our allowance on performing loans, we attach probability weightings to three economic scenarios, which represent our view of economic and market conditions – a base scenario, which in our view represents the most probable outcome, as well as benign and adverse scenarios, all developed by our Economics group. The allowance on performing loans is sensitive to changes in economic forecasts and the probability weight assigned to each forecast scenario.

When changes in economic performance in the forecasts are measured, we use real GDP as the basis, which acts as the key driver for movements in many of the other economic and market variables used, including the equity volatility index (VIX), corporate BBB credit spreads, unemployment rates, housing price indices and consumer credit. We also consider industry-specific variables, where applicable. Many of the variables have a high degree of interdependency, and as such, there is no single factor to which the allowances as a whole are sensitive. Holding all else constant, as economic variables worsen, the allowance on performing loans would increase and conversely, as they improve, the allowance would decrease. In addition, assuming all variables are held constant, an increase in loan balances or a deterioration in the credit quality of the loan portfolio would both drive an increase in the allowance on performing loans.

Information on the provision for credit losses for the years ended October 31, 2023 and 2022 can be found in the Total Provision for Credit Losses section. Additional information on the process and methodology for determining the allowance for credit losses can be found in the discussion of Credit and Counterparty Risk, as well as in Note 4 of the audited annual consolidated financial statements.

Financial Instruments Measured at Fair Value

We record assets and liabilities classified as held for trading, assets and liabilities designated at fair value, derivatives, certain equity and debt securities and securities sold but not yet purchased at fair value. Fair value represents the amount that would be received on the sale of an asset or paid on the transfer of a liability in an orderly transaction between willing parties at the measurement date. We employ a fair value hierarchy based on inputs we use in valuation techniques to measure the fair value of our financial instruments. The extent of our use of quoted market prices (Level 1), internal models with observable market information (Level 2) and internal models without observable market information (Level 3) in the valuation of loans, securities, derivatives, certain other assets, and liabilities recorded at fair value as at October 31, 2023 and October 31, 2022 is disclosed in Note 17 of the audited annual consolidated financial statements. For instruments that are valued using models, we consider all reasonable available information and maximize the use of observable market data.

Valuation Product Control (VPC), a group independent of the trading lines of business, seeks to ensure that the recorded fair values of financial instruments are materially accurate by:

- Developing and maintaining valuation policies, procedures and methodologies in accordance with IFRS and regulatory requirements
- Establishing official rate sources for valuation data inputs, and
- Providing independent review of portfolios for which prices supplied by traders are used for valuation.

When VPC determines that adjustments to valuations are needed to better reflect fair value estimates based on data inputs from official rate sources, the adjustments are subject to review and approval by the Valuation Steering Committee (VSC).

The VSC is our senior management valuation committee. It meets at least monthly to address the more challenging valuation issues related to our portfolios, approves valuation methodology changes as needed to enhance the reliability of our fair value estimates, and is a key forum for the discussion of sources of valuation uncertainty and how these have been addressed by management. Certain financial instruments, including corporate equities, are valued by the respective business groups. Senior management oversees our valuation processes through various valuation and risk committees.

As at October 31, 2023, total valuation adjustments were a net decrease in value of $135 million for financial instruments carried at fair value on the Consolidated Balance Sheet (net decrease of $197 million as at October 31, 2022).

Pension and Other Employee Future Benefits

Our pension and other employee future benefits expense is calculated by independent actuaries using assumptions determined by management. Differences between actual experience and the assumptions used are recognized in other comprehensive income.

Pension and other employee future benefits expense, plan assets and defined benefit obligations are sensitive to changes in discount rates. We determine discount rates at each year-end for all plans, using high-quality corporate bonds with terms matching the plans' specific cash flows.

Additional information regarding accounting for pension and other employee future benefits, including a sensitivity analysis for key assumptions, is included in Note 21 of the audited annual consolidated financial statements.

Impairment of Securities

We have investments in associates and joint ventures, which we review at each quarter-end reporting period in order to identify and evaluate any investments that show indications of possible impairment. For these investments, a significant or prolonged decline in their fair value to an amount below their cost is objective evidence of impairment.

Debt securities measured at amortized cost or fair value through other comprehensive income (FVOCI) are assessed for impairment using the expected credit loss model. For securities determined to have low credit risk, the allowance for credit losses is measured at a 12-month expected credit loss.

Additional information regarding accounting for debt securities measured at amortized cost or FVOCI, other securities, the related allowance for credit losses and the determination of fair value is included in Notes 3 and 17 of the audited annual consolidated financial statements.

Income Taxes and Deferred Tax Assets

Our approach to tax matters is guided by our Statement on Tax Principles, elements of which are described below, and governed by our tax risk management framework, which is implemented through internal controls and processes. We operate with due regard to risks, including tax and reputation risks. We actively seek to identify, assess, manage, monitor and report any tax risks that may arise, in order to understand our financial exposure to those risks. Our intention is to comply fully with tax laws. We consider all applicable laws in connection with our commercial activities, and where tax laws change in our business or for our customers, we adapt and make adjustments accordingly. We monitor applicable tax-related developments, including legislative proposals, case law and guidance from tax authorities. When an interpretation or application of tax laws is not clear, we take well-reasoned positions based on available case law and administrative positions of tax authorities, and we engage external advisors when necessary. We do not engage in tax planning that does not have commercial substance, and we do not knowingly work with customers we believe use tax strategies to evade taxes. We are committed to maintaining productive relationships and cooperating with tax authorities on all tax matters. We seek to resolve disputes in a collaborative manner; however, when our interpretation of tax law differs from that of tax authorities, we are prepared to defend our position.

The provision for income taxes is calculated based on the expected tax treatment of transactions recorded in either the Consolidated Statement of Income or the Consolidated Statement of Changes in Equity. In determining the provision for income taxes, we interpret tax legislation, case law and administrative positions in numerous jurisdictions and, based on our judgment, we record the estimate of the amount required to settle tax obligations. We also make assumptions about the expected timing of the reversal of deferred tax assets and liabilities. If the interpretations and assumptions differ from those of tax authorities or if the timing of reversals is not as expected, the provision for income taxes could increase or decrease in future periods. The amount of any such increase or decrease cannot be reasonably estimated.

Deferred tax assets are recognized only when it is probable that sufficient taxable profit will be available in future periods against which deductible temporary differences or unused tax losses and tax credits may be utilized. We are required to assess whether it is probable that deferred income tax assets will be realized. Factors used to assess the probability of realization are past experience of income and capital gains, forecasts of future net income before taxes, and the remaining expiration period of tax loss carryforwards and tax credits. Changes in our assessment of these factors could increase or decrease the provision for income taxes in future periods.

Canadian tax authorities have reassessed us for additional income tax and interest in an amount of approximately $1,465 million, in respect of certain 2011-2018 Canadian corporate dividends. Those reassessments denied certain dividend deductions on the basis that the dividends were received as part of a "dividend rental arrangement". In general, the tax rules raised by Canadian tax authorities were prospectively addressed in the 2015 and 2018 Canadian federal budgets.

We filed Notices of Appeal with the Tax Court of Canada and the matter is in litigation. We remain of the view that our tax filing positions were appropriate and intend to challenge all reassessments. However, if such challenges are unsuccessful, the additional expense would negatively impact net income.

Additional information regarding accounting for income taxes is included in Note 22 of the audited annual consolidated financial statements.

Goodwill and Intangible Assets

Goodwill is assessed for impairment at least annually. This assessment includes a comparison of the carrying value and the recoverable amount of each of our cash-generating units (CGUs) in order to verify that the recoverable amount of each CGU is greater than its carrying value. If the carrying value of a CGU were to exceed its recoverable amount, an impairment calculation would be performed. The recoverable amount of a CGU is the higher of its fair value less costs to sell and its value in use.

Fair value less costs to sell has been used to perform the impairment test in all periods. In determining fair value less costs to sell, we employ the discounted cash flow model, consistent with that used when a business is acquired. This model is dependent on assumptions related to revenue growth, discount rates, synergies achieved on acquisition and the availability of comparable acquisition data. Changes in any of these assumptions would affect the determination of fair value for each of our CGUs in a different manner. Management must exercise judgment and make assumptions in determining fair value. Differences in judgments and assumptions could affect the determination of fair value and any resulting impairment write-down.

As at October 31, 2023 and October 31, 2022, no goodwill impairment was recorded, as the estimated fair value of the CGUs was greater than their carrying value.

Intangible assets with definite lives are amortized to income on either a straight-line or an accelerated basis over a period not exceeding 15 years, depending on the nature of the asset. We test intangible assets with definite lives for impairment when circumstances indicate that the carrying value may not be recoverable.

Intangible assets with indefinite lives are tested annually for impairment. If an intangible asset is determined to be impaired, it will be written down to its recoverable amount, the higher of value in use and fair value less costs to sell, when this is less than the carrying value.

Additional information regarding the composition of goodwill and intangible assets is included in Note 11 of the audited annual consolidated financial statements.

Insurance-Related Liabilities

Insurance claims and policy benefit liabilities represent current claims and estimates of future insurance policy benefit liabilities. Liabilities for life insurance contracts are determined using the Canadian Asset Liability Method, which incorporates best-estimate assumptions for mortality, morbidity, policy lapses, surrenders, future investment yields, policy dividends, administration costs and margins for adverse deviation. These assumptions are reviewed at least annually and updated to reflect actual experience and market conditions. There is a significant potential impact on the valuation of these liabilities should there be a change in assumptions for interest rates and equity market values.

Additional information on insurance-related liabilities is provided in Note 14 of the audited annual consolidated financial statements, and information on insurance risk is provided in the Insurance Risk section and the Insurance Market Risk section.

Provisions

A provision is recognized if, as a result of a past event, we have a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are recorded at the best estimate of the amount required to settle any obligation as at the balance sheet date, considering the risks and uncertainties surrounding the obligation. For example, BMO and its subsidiaries are involved in various legal actions in the normal course of business. Factors considered in estimating any obligation related to these legal actions include a case-by-case assessment of specific facts and circumstances, past experience and the opinions of legal experts. Management and internal and external experts are involved in estimating any amounts that may be required. Certain provisions also relate to restructuring initiatives that we have undertaken. These provisions are recorded at management's best estimate of the amounts that will ultimately be paid out.

The actual costs of settling some obligations may be substantially higher or lower than the amount of the provisions.

Additional information regarding provisions is included in the Legal and Regulatory Risk section and in Note 24 of the audited annual consolidated financial statements.

Transfer of Financial Assets

We sell Canadian residential mortgages to third-party Canadian securitization programs, including the Canada Mortgage Bond Program, and directly to third-party investors under the National Housing Act Mortgage-Backed Securities program.

We also purchase or originate certain commercial mortgage loans that are subsequently sold and derecognized, and we purchase U.S. government agency collateralized mortgage obligations (CMOs) issued by third-party sponsored vehicles, which we may further securitize by repackaging them into new CMOs prior to selling to third-party investors.

We assess whether substantially all of the risks and rewards of these financial instruments have been transferred in order to determine if they qualify for derecognition. Where we continue to be substantially exposed to prepayment, interest rate and/or credit risk of these financial instruments, they do not qualify for derecognition. We continue to recognize these financial instruments, and recognize the related cash proceeds as a secured financing on our Consolidated Balance Sheet.

Consolidation of Structured Entities

In the normal course of business, we enter into arrangements with SEs as described in the Off-Balance Sheet Arrangements section. We are required to consolidate a SE if we control the SE. We control a SE when we have power over the SE, exposure or rights to variable returns as a result of our involvement, and the ability to exercise power to affect the amount of those returns. For certain SEs, we exercise judgment in determining whether we control the entity.

Additional information concerning our interests in SEs is included in the Off-Balance Sheet Arrangements section, as well as in Note 7 of the audited annual consolidated financial statements.

Acquisition of Bank of the West – Valuation of Assets and Liabilities

Significant judgments and assumptions were used to determine fair value of the Bank of the West assets acquired and liabilities assumed, including the loan portfolio, core deposit and other relationship intangible assets and fixed-maturity deposits.

Additional information regarding the accounting for this acquisition is included in Notes 4 and 10 of the audited annual consolidated financial statements.

Caution

This Critical Accounting Estimates and Judgments section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Future Changes in Accounting Policies

IFRS 17, *Insurance Contracts*

In May 2017, the IASB issued IFRS 17, *Insurance Contracts* (IFRS 17), which provides a comprehensive approach to accounting for all types of insurance contracts and will replace existing IFRS 4, *Insurance Contracts* (IFRS 4). The standard was subsequently amended in June 2020, with additional narrow-scope amendments in December 2021. IFRS 17 will be effective for our fiscal year beginning November 1, 2023. We established an enterprise-wide project in order to meet the requirements of IFRS 17.

IFRS 17 will change the fundamental principles used to recognize and measure insurance contracts, including life insurance contracts, reinsurance contracts held and investment contracts with discretionary participation features. Key differences from IFRS 4 are as follows:

- IFRS 17 requires us to measure groups of contracts based on our estimates of the present value of future cash flows that are expected to arise as we fulfill the contracts, an explicit risk adjustment for insurance-specific risk, and a contractual service margin (CSM) representing unearned profits.
- The CSM component of the insurance contract liability will be amortized into income as services/insurance coverage is provided. For groups of onerous contracts that are expected to experience losses, these losses are recorded in income immediately. Under IFRS 4, there is no similar grouping requirement and gains/losses on new business are recognized in income immediately.
- The discount rate we use under IFRS 4 is connected to the net yield of the assets held to support insurance contract liabilities. Under IFRS 17, the rate used to discount our insurance contract liabilities will reflect the characteristics of those insurance contract liabilities. We have elected the accounting policy choice under IFRS 17 to recognize changes in the discount rate and financial assumptions on insurance contract liabilities through the Consolidated Statement of Income.

On transition, we are required to apply a full retrospective approach, where we restate prior periods as if we had always applied IFRS 17, unless impracticable, in which case we will apply either the modified retrospective approach, where we apply specific modifications to the full retrospective approach, or the fair value approach, where we determine a fair value for the CSM by taking the difference between discounted fulfilment cash flows and risk adjustment using market participant assumptions versus using our own IFRS 17 assumptions. We have completed our assessment of IFRS 17 and will apply the full retrospective approach to our creditor business and the fair value approach to all other products written prior to November 1, 2022.

Further information on these amendments can be found in Note 1 of the audited annual consolidated financial statements.

IAS 40, *Investment Property*

On transition to IFRS 17, we plan to voluntarily change our accounting policy for the measurement of investment properties, recorded in insurance-related assets in other assets in our Consolidated Balance Sheet, from cost to fair value. International Accounting Standard 40, *Investment Property* (IAS 40), permits either measurement approach. We will apply the change retrospectively, as if we had always accounted for investment properties at fair value.

Further information on these amendments can be found in Note 1 of the audited annual consolidated financial statements.

IAS 12, *Income Taxes*

In May 2021, the IASB issued an amendment to IAS 12, *Income Taxes* (IAS 12), which will be effective for our fiscal year beginning November 1, 2023.

The amendment narrows the IAS 12 exemption to exclude transactions that give rise to equal and offsetting temporary differences (e.g. leases and asset retirement obligations). Upon adoption of the amendment, we will record separate deferred tax assets and liabilities related to the assets and liabilities that give rise to these temporary differences. This change will impact note disclosure only. There will be no impact on our Consolidated Balance Sheet, as the balances are eligible for offset when levied by the same tax authority.

In May 2023, the IASB issued an additional amendment to IAS 12. The amendment addresses concerns related to accounting for the global minimum top-up tax, as outlined in the two-pillar plan (Pillar 2) for international tax reform developed by members of the Organisation for Economic Co-operation and Development (OECD)/G20 Inclusive Framework on Base Erosion and Profit Shifting. The objective of the tax reform is to ensure that large multinational groups are subject to a minimum tax rate of 15% on income earned in each jurisdiction in which they operate. We will be impacted by the tax reform once the Canadian federal government, or a foreign government of a country in which we operate, passes into law the global minimum tax. The amendment to IAS 12 includes temporary mandatory relief from recognizing and disclosing deferred taxes for the top-up tax, that will be applicable once the measures are substantively enacted.

Further details are provided in Note 1 of the audited annual consolidated financial statements.

Caution

This Future Changes in Accounting Policies section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Other Regulatory Developments

We continue to monitor and prepare for other regulatory developments, including those referenced elsewhere in this document.

For a comprehensive discussion of other regulatory developments, refer to the Enterprise-Wide Capital Management section, the Risks That May Affect Future Results section, the Liquidity and Funding Risk section, and the Legal and Regulatory Risk section.

New Canadian Tax Measures

On August 4, 2023, the Canadian government released proposed legislation on a number of measures, including a 2% tax on share buybacks that occur after December 31, 2023, and the two-pillar plan (Pillar 2) for international tax reform developed by members of the Organisation for Economic Co-operation and Development (OECD)/G20 Inclusive Framework on Base Erosion and Profit Shifting, which is expected to establish rules for a 15% minimum tax on operations globally, effective in the fiscal years of multinational enterprises that begin on or after December 31, 2023.

On June 22, 2023, the Canadian government enacted legislation amending the definition of a financial service in order to make payment card clearing services taxable for GST/HST purposes, retroactive to the enactment of the GST. The third quarter of 2023 included a one-time charge of $131 million ($160 million pre-tax), comprising $138 million pre-tax recorded in non-interest revenue and $22 million pre-tax recorded in non-interest expense, both in Corporate Services. In addition, the Canadian federal budget proposed a number of tax measures, including a rule that would, in certain circumstances, deny any deductions for dividends that are received after December 31, 2023. This was reaffirmed in the government's 2023 Fall Economic Statement.

On December 15, 2022, the Canadian government enacted legislation related to tax measures that are applicable to certain Canadian companies in a bank or life insurer group, including a one-time 15% tax (referred to as the Canada Recovery Dividend, or CRD), based on average taxable income for fiscal 2020 and fiscal 2021, less a $1 billion exemption, payable in equal instalments over five years. The legislation also included a permanent 1.5% increase in the tax rate, applicable to taxable income above $100 million (effective for taxation years that end after April 7, 2022, pro-rated for the first year). The first quarter of 2023 included a one-time tax expense of $371 million, comprising a CRD of $312 million and $59 million related to the pro-rated fiscal 2022 impact of the 1.5% tax rate increase, net of a deferred tax asset remeasurement. These amounts were recorded in Corporate Services.

Interbank Offered Rate Reform – Phase 2 amendments

Effective November 1, 2020, BMO early adopted Phase 2 amendments to IFRS 9, *Financial Instruments*, IAS 39, *Financial Instruments: Recognition and Measurement* (IAS 39), IFRS 7, *Financial Instruments: Disclosures*, and IFRS 4, *Insurance Contracts*, as well as IFRS 16, *Leases*. These amendments address issues that arise from the implementation of Interbank Offered Rate (IBOR) reform.

For financial instruments at amortized cost, the amendments introduce a practical expedient such that if a change in the contractual cash flows is as a result of IBOR reform and occurs on an economically equivalent basis, the change will be accounted for by updating the effective interest rate with no immediate gain or loss recognized. The amendments also provide temporary relief from the application of specific IAS 39 hedge accounting requirements to hedging relationships affected by IBOR reform. For example, there is an exemption available from the requirement to discontinue hedge accounting as a result of changes to hedge documentation required solely by IBOR reform. The amendments also require additional disclosure that allows users to understand the impact of IBOR reform on our financial instruments and risk management strategy.

Further details are provided in Note 1 of the audited annual consolidated financial statements.

On July 27, 2023, the Canadian Alternative Reference Rate (CARR) working group announced that lenders may not offer new Canadian Dollar Offered Rate (CDOR) and bankers' acceptance (BA) loans after November 1, 2023, which will result in the Canadian loan markets' shift away from CDOR and BAs by the CDOR cessation date in June 2024.

U.S. Federal Deposit Insurance Corporation Assessment

On November 16, 2023, the U.S. Federal Deposit Insurance Corporation (FDIC) approved the final rule to implement the special assessment on depository institutions to recover the losses incurred in the deposit insurance fund that were attributable to the protection of uninsured depositors of Silicon Valley Bank and Signature Bank. The special assessment is set at an annual rate of approximately 13.4 basis points on a U.S. depository institution's total estimated uninsured deposits for the December 31, 2022 reporting period, payable over eight quarterly assessment periods, beginning in the first assessment period in 2024. BMO expects to record a one-time charge related to the FDIC special assessment in the first quarter of fiscal 2024 of approximately US$300 million in non-interest expense.

Caution

This Other Regulatory Developments section contains forward-looking statements. Please refer to the Caution Regarding Forward-Looking Statements.

Transactions with Related Parties

In the normal course of business, we provide banking services to key management personnel on the same terms that we offer these services to preferred customers. Key management personnel are those persons having authority and responsibility for planning, directing and/or controlling the activities of an entity, being the directors and the most senior executives of the bank. Banking services are provided to joint ventures and equity-accounted investees on the same terms that we offer these services to our customers. We also offer employees a subsidy on annual credit card fees.

Details of our investments in joint ventures and associates and the compensation of key management personnel are disclosed in Note 27 of the audited annual consolidated financial statements.

Shareholders' Auditors' Services and Fees

Review of Shareholders' Auditors

The Audit and Conduct Review Committee (ACRC) of the Board of Directors is responsible for the appointment, compensation and oversight of the shareholders' auditors and conducts an annual assessment of the performance and effectiveness of the shareholders' auditors, considering factors such as: the quality of the services provided by the engagement team of the shareholders' auditors during the audit period; the qualifications, experience and geographical reach relevant to serving BMO Financial Group; the quality of communications received from the shareholders' auditors; and the independence, objectivity and professional skepticism of the shareholders' auditors.

The ACRC believes that it has a robust review process in place to monitor audit quality and oversee the work of the shareholders' auditors, including the lead audit partner, which includes:

- Annually reviewing the audit plan in two separate meetings, including a consideration of the impact of business risks on the audit plan and an assessment of the reasonableness of the audit fee
- Reviewing the qualifications of the senior engagement team members
- Monitoring the execution of the audit plan of the shareholders' auditors, with a focus on the more complex and challenging areas of the audit
- Reviewing and evaluating the audit findings, including during in-camera sessions
- Evaluating audit quality and performance, including recent Canadian Public Accountability Board (CPAB) and Public Company Accounting Oversight Board (PCAOB) inspection reports on the shareholders' auditors and their peer firms
- At a minimum, holding quarterly meetings with the chair of the ACRC and the lead audit partner to discuss audit-related issues independently of management
- Performing a comprehensive review of the shareholders' auditors every five years, and performing an annual review in the years between these comprehensive reviews, following the guidelines set out by the Chartered Professional Accountants of Canada (CPA Canada) and the CPAB.

In 2023, an annual review of the shareholders' auditors was completed. Input was sought from ACRC members and management in areas such as the effectiveness of the auditors' communications, their industry insights, audit performance, independence and professional skepticism. In addition, the most recent comprehensive review was completed in 2020, based on the latest recommendations of CPA Canada and the CPAB. These reviews focused on: (i) the independence, objectivity and professional skepticism of the shareholders' auditors; (ii) the quality of the engagement team; and (iii) the quality of communications and interactions with the shareholders' auditors. As a result of the reviews, the ACRC was satisfied with the performance of the shareholders' auditors.

Independence of the shareholders' auditors is overseen by the ACRC in accordance with BMO's Auditor Independence Standard. The ACRC considered the risks and benefits of audit firm rotation, including reports issued by the CPAB and CPA Canada. The ACRC concluded that existing requirements, including audit firm review and audit team member rotation, ensure auditor independence while maintaining and enhancing audit quality, which may be impaired by audit firm rotation. The ACRC also confirms that the lead audit partner rotates out of that role after five consecutive years and does not return to that role for a further five years.

Pre-Approval Policies and Procedures

As part of BMO Financial Group's corporate governance practices, the ACRC oversees the application of its policy limiting the services provided by the shareholders' auditors that are not related to their role as auditors. All services must comply with BMO's Auditor Independence Standard, as well as professional standards and securities regulations governing auditor independence. The ACRC pre-approves the types of services (permitted services) that can be provided by the shareholders' auditors, as well as the annual audit plan, which includes fees for specific types of services. For permitted services that are not included in the pre-approved annual audit plan, approval to proceed with the engagement is provided in accordance with BMO's Auditor Independence Standard.

Shareholders' Auditors' Fees

(Canadian $ in millions)

Fees (1)	**2023**	2022
Audit fees	**34.4**	23.5
Audit-related fees (2)	**3.0**	4.8
Tax services fees (3)	**0.2**	0.3
All other fees (4)	**0.9**	0.7
Total	**38.5**	29.3

(1) The classification of fees is based on applicable Canadian securities laws and U.S. Securities and Exchange Commission definitions.
(2) Includes fees paid for specified procedures on BMO's Proxy Circular and other services, and French translation of financial statements, related continuous disclosures and other public documents containing financial information.
(3) Includes fees paid for tax compliance services provided to various BMO-managed investment company complexes.
(4) Includes other fees paid by BMO-managed investment company complexes.

Management's Annual Report on Disclosure Controls and Procedures and Internal Control over Financial Reporting

Disclosure Controls and Procedures

Disclosure controls and procedures are designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the Chief Executive Officer (CEO) and the Chief Financial Officer (CFO), on a timely basis, so that appropriate decisions can be made regarding public disclosure.

As at October 31, 2023, under the supervision of the CEO and the CFO, the management of BMO Financial Group (BMO) evaluated the effectiveness of the design and operation of its disclosure controls and procedures, as defined in Canada by National Instrument 52-109, *Certification of Disclosure in Issuers' Annual and Interim Filings*, and in the United States by Rule 13a-15(e) of the *Securities Exchange Act of 1934* (the Exchange Act). Based on this evaluation, the CEO and the CFO have concluded that BMO's disclosure controls and procedures were effective as at October 31, 2023.

Internal Control over Financial Reporting

Internal control over financial reporting is a process designed under the supervision of the CEO and the CFO to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements in accordance with IFRS and the requirements of the Securities and Exchange Commission (SEC) in the United States, as applicable. Management is responsible for establishing and maintaining adequate internal control over financial reporting for BMO.

Internal control over financial reporting at BMO includes policies and procedures that:

- Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of BMO
- Are designed to provide reasonable assurance that transactions are recorded as necessary to permit preparation of the consolidated financial statements in accordance with IFRS and the requirements of the SEC in the United States, as applicable, and that receipts and expenditures of BMO are being made only in accordance with authorizations by management and directors of BMO, and
- Are designed to provide reasonable assurance that any unauthorized acquisition, use or disposition of BMO's assets that could have a material effect on the consolidated financial statements is prevented or detected in a timely manner.

Because of its inherent limitations, internal control over financial reporting can provide only reasonable assurance and may not prevent or detect misstatements. Furthermore, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the related policies and procedures may deteriorate.

BMO's management, under the supervision of the CEO and the CFO, has evaluated the effectiveness of internal control over financial reporting using the framework and criteria established in *Internal Control – Integrated Framework*, issued by the Committee of Sponsoring Organizations of the Treadway Commission in May 2013 (2013 COSO Framework). Based on this evaluation, management has concluded that internal control over financial reporting was effective as at October 31, 2023.

At the request of BMO's Audit and Conduct Review Committee, KPMG LLP (the shareholders' auditors), an independent registered public accounting firm, has conducted an audit of the effectiveness of our internal control over financial reporting. The audit report states in its conclusion that, in KPMG's opinion, BMO maintained, in all material respects, effective internal control over financial reporting as at October 31, 2023, in accordance with the criteria established in the 2013 COSO Framework.

Changes in Internal Control over Financial Reporting

During the year, the bank acquired Bank of the West, contributing $128 billion or 11% to total assets as at February 1, 2023. We evaluated the effectiveness of internal control over financial reporting as we completed the integration of Bank of the West with BMO, and made changes to our internal control framework, as necessary.

Other than as mentioned above, there were no changes in our internal control over financial reporting during the year ended October 31, 2023, which materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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SUPPLEMENTAL INFORMATION

Supplemental Information

Table 1: Ten-Year Statistical Review

($ millions) As at or for the year ended October 31	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Condensed Consolidated Balance Sheet										
Assets										
Cash and cash equivalents	**77,934**	87,466	93,261	57,408	48,803	42,142	32,599	31,653	40,295	28,386
Interest bearing deposits with banks	**4,125**	5,734	8,303	9,035	7,987	8,305	6,490	4,449	7,382	6,110
Securities	**322,379**	273,262	232,849	234,260	189,438	180,935	163,198	149,985	130,918	143,319
Securities borrowed or purchased under resale agreements	**115,662**	113,194	107,382	111,878	104,004	85,051	75,047	66,646	68,066	53,555
Loans, net of allowances	**656,478**	551,339	458,262	447,420	426,984	384,172	358,507	357,518	321,531	291,400
Other	**116,698**	108,204	88,118	89,260	74,979	72,688	73,763	77,709	73,689	65,889
Total assets	**1,293,276**	1,139,199	988,175	949,261	852,195	773,293	709,604	687,960	641,881	588,659
Liabilities										
Deposits	**909,676**	769,478	685,631	659,034	568,143	520,928	479,792	470,281	438,169	393,088
Other	**298,335**	290,533	238,128	225,218	225,981	199,862	180,438	170,910	159,383	155,254
Subordinated debt	**8,228**	8,150	6,893	8,416	6,995	6,782	5,029	4,439	4,416	4,913
Total liabilities	**1,216,239**	1,068,161	930,652	892,668	801,119	727,572	665,259	645,630	601,968	553,255
Total equity	**77,037**	71,038	57,523	56,593	51,076	45,721	44,345	42,306	39,422	34,313
Total liabilities and equity	**1,293,276**	1,139,199	988,175	949,261	852,195	773,293	709,604	687,960	641,881	588,659
Condensed Consolidated Statement of Income										
Net interest income	**18,681**	15,885	14,310	13,971	12,888	11,438	11,275	10,945	9,796	8,292
Non-interest revenue	**12,518**	17,825	12,876	11,215	12,595	11,467	10,832	10,015	9,593	9,931
Total revenue	**31,199**	33,710	27,186	25,186	25,483	22,905	22,107	20,960	19,389	18,223
Insurance claims, commissions and changes in policy benefit liabilities (CCPB)	**1,939**	(683)	1,399	1,708	2,709	1,352	1,538	1,543	1,254	1,505
Provision for credit losses (PCL)	**2,178**	313	20	2,953	872	662	746	771	544	527
Non-interest expense	**21,219**	16,194	15,509	14,177	14,630	13,477	13,192	12,916	12,250	10,955
Income before income taxes	**5,863**	17,886	10,258	6,348	7,272	7,414	6,631	5,730	5,341	5,236
Provision for income taxes	**1,486**	4,349	2,504	1,251	1,514	1,961	1,292	1,100	936	903
Net income	**4,377**	13,537	7,754	5,097	5,758	5,453	5,339	4,630	4,405	4,333
Net income available to common shareholders	**4,034**	13,306	7,510	4,850	5,547	5,269	5,153	4,471	4,253	4,157
Condensed Consolidated Statement of Changes in Equity										
Preferred shares and other equity instruments	**6,958**	6,308	5,558	6,598	5,348	4,340	4,240	3,840	3,240	3,040
Common shares	**22,941**	17,744	13,599	13,430	12,971	12,929	13,032	12,539	12,313	12,357
Contributed surplus	**328**	317	313	302	303	300	307	294	299	304
Retained earnings	**44,920**	45,117	35,497	30,745	28,725	25,850	23,700	21,207	18,930	17,237
Accumulated other comprehensive income	**1,862**	1,552	2,556	5,518	3,729	2,302	3,066	4,426	4,640	1,375
Non-controlling interest in subsidiaries	**28**	–	–	–	–	–	–	–	–	–
Total equity	**77,037**	71,038	57,523	56,593	51,076	45,721	44,345	42,306	39,422	34,313

BMO adopted various new and amended IFRS standards in 2015, IFRS 9 *Financial Instruments* in 2018 and IFRS 16 *Leases* in 2020 prospectively, with no changes to prior periods. In 2019, BMO adopted IFRS 15 *Revenue from Contracts with Customers* and elected to reclassify 2017 and 2018 amounts.

($ millions, except as noted) As at or for the year ended October 31	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Other Financial Measures										
Common Share Data ($)										
Basic earnings per share	**5.69**	20.04	11.60	7.56	8.68	8.19	7.93	6.94	6.59	6.44
Diluted earnings per share	**5.68**	19.99	11.58	7.55	8.66	8.17	7.90	6.92	6.57	6.41
Dividends declared per share	**5.80**	5.44	4.24	4.24	4.06	3.78	3.56	3.40	3.24	3.08
Book value per share	**97.17**	95.60	80.18	77.40	71.54	64.73	61.91	59.57	56.31	48.18
Closing share price	**104.79**	125.49	134.37	79.33	97.50	98.43	98.83	85.36	76.04	81.73
Number outstanding (in thousands)										
End of year	**720,909**	677,107	648,136	645,889	639,232	639,330	647,816	645,761	642,583	649,050
Market capitalization ($ billions)	**75.5**	85.0	87.1	51.2	62.3	62.9	64.0	55.1	48.9	53.0
Price-to-earnings multiple	**18.5**	6.3	11.6	10.5	11.3	12.0	12.5	12.3	11.6	12.8
Market-to-book value multiple	**1.08**	1.31	1.68	1.02	1.36	1.52	1.60	1.43	1.35	1.70
Dividend yield (%)	**5.5**	4.3	3.2	5.3	4.2	3.8	3.6	4.0	4.3	3.8
Dividend payout ratio (%)	**102.0**	27.1	36.5	56.1	46.8	46.1	44.9	49.0	49.2	47.8
Financial Measures and Ratios (%)										
Return on equity	**6.0**	22.9	14.9	10.1	12.6	13.3	13.2	12.1	12.5	14.0
Efficiency ratio	**68.0**	48.0	57.0	56.3	57.4	58.8	59.7	61.6	63.2	60.1
Net interest margin on average earning assets	**1.63**	1.62	1.59	1.64	1.70	1.67	1.74	1.76	1.69	1.57
Total PCL-to-average net loans and acceptances	**0.35**	0.06	–	0.63	0.20	0.17	0.20	0.22	0.17	0.18
PCL on impaired loans-to-average net loans and acceptances	**0.19**	0.10	0.11	0.33	0.17	0.18	0.22	0.22	–	–
Return on average assets	**0.35**	1.26	0.79	0.54	0.69	0.72	0.74	0.65	0.66	0.72
Return on average risk-weighted assets (1)	**1.08**	3.89	2.38	1.51	1.86	1.97	1.98	1.71	1.84	1.85
Average assets ($ millions)	**1,248,356**	1,072,497	981,140	942,450	833,252	754,295	722,626	707,122	664,391	593,928
Capital Measures (%) (1)										
Common Equity Tier 1 Ratio	**12.5**	16.7	13.7	11.9	11.4	11.3	11.4	10.1	10.7	10.1
Tier 1 Capital Ratio	**14.1**	18.4	15.4	13.6	13.0	12.9	13.0	11.6	12.3	12.0
Total Capital Ratio	**16.2**	20.7	17.6	16.2	15.2	15.2	15.1	13.6	14.4	14.3
Leverage Ratio	**4.2**	5.6	5.1	4.8	4.3	4.2	4.4	4.2	4.2	na
Other Statistical Information										
Number of employees	**55,767**	46,722	43,863	43,360	45,513	45,454	45,200	45,234	46,353	46,778
Number of bank branches	**1,890**	1,383	1,405	1,409	1,456	1,483	1,503	1,522	1,535	1,553
Number of automated teller machines	**5,765**	4,717	4,851	4,820	4,967	4,828	4,731	4,599	4,761	4,338

BMO adopted various new and amended IFRS standards in 2015, IFRS 9*Financial Instruments* in 2018 and IFRS 16*Leases* in 2020 prospectively, with no changes to prior periods. In 2019, BMO adopted IFRS 15*Revenue from Contracts with Customers* and elected to reclassify 2017 and 2018 amounts.

(1) Capital ratios and risk-weighted assets are disclosed in accordance with the Capital Adequacy Requirements (CAR) Guideline, as set out by OSFI, as applicable.

na – not applicable

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Table 2: Average Assets, Liabilities and Interest Rates

($ millions, except as noted) For the year ended October 31	2023 Average balances	2023 Average interest rate (%)	2023 Interest income/ expense	2022 Average balances	2022 Average interest rate (%)	2022 Interest income/ expense
Assets						
Canadian Dollar						
Interest bearing deposits with banks and other interest bearing assets	**33,102**	**4.77**	**1,579**	33,950	1.23	416
Securities	**94,697**	**4.08**	**3,859**	80,971	2.52	2,043
Securities borrowed or purchased under resale agreements	**47,239**	**4.90**	**2,317**	50,090	1.39	695
Loans						
Residential mortgages	**143,958**	**3.96**	**5,696**	132,118	2.53	3,345
Consumer instalment and other personal	**69,611**	**5.70**	**3,969**	66,899	3.65	2,442
Credit cards	**9,519**	**14.69**	**1,399**	7,933	13.37	1,061
Business and government	**114,176**	**4.88**	**5,575**	101,011	3.90	3,940
Total loans	**337,264**	**4.93**	**16,639**	307,961	3.50	10,788
Total Canadian dollar	**512,302**	**4.76**	**24,394**	472,972	2.95	13,942
U.S. Dollar and Other Currencies						
Interest bearing deposits with banks and other interest bearing assets	**66,212**	**4.33**	**2,866**	60,463	0.83	504
Securities	**218,443**	**3.45**	**7,533**	185,099	1.92	3,548
Securities borrowed or purchased under resale agreements	**69,405**	**5.11**	**3,543**	62,416	1.02	640
Loans						
Residential mortgages	**20,168**	**4.41**	**890**	8,312	2.97	247
Consumer instalment and other personal	**29,021**	**6.54**	**1,899**	14,439	3.63	525
Credit cards	**1,265**	**10.70**	**135**	621	9.92	61
Business and government	**225,567**	**6.35**	**14,314**	172,583	4.31	7,430
Total loans	**276,021**	**6.25**	**17,238**	195,955	4.22	8,263
Total U.S. dollar and other currencies	**630,081**	**4.95**	**31,180**	503,933	2.57	12,955
Other non-interest bearing assets	**105,973**			95,592		
Total All Currencies						
Total assets and interest income	**1,248,356**	**4.45**	**55,574**	1,072,497	2.51	26,897
Liabilities						
Canadian Dollar						
Deposits						
Banks	**4,415**	**2.01**	**89**	4,983	0.37	19
Business and government	**181,371**	**3.47**	**6,301**	169,063	1.31	2,221
Individuals	**166,134**	**2.02**	**3,352**	149,329	0.58	866
Total deposits	**351,920**	**2.77**	**9,742**	323,375	0.96	3,106
Securities sold but not yet purchased and securities lent or sold under repurchase agreements (1)	**55,466**	**4.22**	**2,340**	60,163	1.62	974
Subordinated debt and other interest bearing liabilities	**25,750**	**3.58**	**921**	25,788	2.39	616
Total Canadian dollar	**433,136**	**3.00**	**13,003**	409,326	1.15	4,696
U.S. Dollar and Other Currencies						
Deposits						
Banks	**25,940**	**4.43**	**1,148**	23,583	1.21	285
Business and government	**368,237**	**3.70**	**13,617**	305,576	1.02	3,104
Individuals	**119,710**	**1.70**	**2,040**	75,160	0.29	216
Total deposits	**513,887**	**3.27**	**16,805**	404,319	0.89	3,605
Securities sold but not yet purchased and securities lent or sold under repurchase agreements (1)	**100,084**	**4.95**	**4,957**	90,324	1.85	1,671
Subordinated debt and other interest bearing liabilities	**33,403**	**6.37**	**2,128**	20,600	5.05	1,040
Total U.S. dollar and other currencies	**647,374**	**3.69**	**23,890**	515,243	1.23	6,316
Other non-interest bearing liabilities	**93,548**			84,253		
Total All Currencies						
Total liabilities and interest expense	**1,174,058**	**3.14**	**36,893**	1,008,822	1.09	11,012
Total equity	**74,298**			63,675		
Total Liabilities, Equity and Interest Expense	**1,248,356**	**2.96**	**36,893**	1,072,497	1.03	11,012
Net interest margin						
– based on earning assets		**1.63**			1.62	
– based on total assets		**1.50**			1.48	
Net interest income			**18,681**			15,885

Certain comparative figures have been reclassified to conform with the current year's presentation.

(1) For the years ended October 31, 2023 and 2022, the maximum amount of securities lent or sold under repurchase agreements at any month end was $111,685 million and $129,549 million, respectively.

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Table 3: Volume/Rate Analysis of Changes in Net Interest Income

($ millions) For the year ended October 31	2023/2022 Increase (decrease) due to change in Average balance	Average rate	Total
Assets			
Canadian Dollar			
Interest bearing deposits with banks and other interest bearing assets	(10)	1,173	1,163
Securities	346	1,470	1,816
Securities borrowed or purchased under resale agreements	(40)	1,662	1,622
Loans			
Residential mortgages	300	2,051	2,351
Consumer instalment and other personal	99	1,428	1,527
Credit cards	212	126	338
Business and government	513	1,122	1,635
Total loans	1,124	4,727	5,851
Change in Canadian dollar interest income	1,420	9,032	10,452
U.S. Dollar and Other Currencies			
Interest bearing deposits with banks and other interest bearing assets	48	2,314	2,362
Securities	639	3,346	3,985
Securities borrowed or purchased under resale agreements	71	2,832	2,903
Loans			
Residential mortgages	353	290	643
Consumer instalment and other personal	530	844	1,374
Credit cards	64	10	74
Business and government	2,281	4,603	6,884
Total loans	3,228	5,747	8,975
Change in U.S. dollar and other currencies interest income	3,986	14,239	18,225
Total All Currencies			
Change in total interest income (a)	5,406	23,271	28,677
Liabilities			
Canadian Dollar			
Deposits			
Banks	(2)	72	70
Business and government	162	3,918	4,080
Individuals	98	2,388	2,486
Total deposits	258	6,378	6,636
Securities sold but not yet purchased and securities lent or sold under repurchase agreements	(76)	1,442	1,366
Subordinated debt and other interest bearing liabilities	(1)	306	305
Change in Canadian dollar interest expense	181	8,126	8,307
U.S. Dollar and Other Currencies			
Deposits			
Banks	29	834	863
Business and government	636	9,877	10,513
Individuals	128	1,696	1,824
Total deposits	793	12,407	13,200
Securities sold but not yet purchased and securities lent or sold under repurchase agreements	180	3,106	3,286
Subordinated debt and other interest bearing liabilities	646	442	1,088
Change in U.S. dollar and other currencies interest expense	1,619	15,955	17,574
Total All Currencies			
Change in total interest expense (b)	1,800	24,081	25,881
Change in total net interest income (a – b)	3,606	(810)	2,796

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Table 4: Net Loans and Acceptances – by Geography [1]

($ millions)	Canada		United States		Other countries		Total	
As at October 31	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022
Consumer								
Residential mortgages	**150,570**	139,387	**26,675**	9,483	**–**	–	**177,245**	148,870
Credit cards	**10,880**	9,069	**1,414**	594	**–**	–	**12,294**	9,663
Consumer instalment and other personal loans	**69,919**	71,070	**33,969**	14,931	**–**	–	**103,888**	86,001
Total consumer	**231,369**	219,526	**62,058**	25,008	**–**	–	**293,427**	244,534
Business and government	**141,405**	135,317	**221,218**	175,571	**11,662**	11,225	**374,285**	322,113
Total loans and acceptances, net of allowance for credit losses on impaired loans	**372,774**	354,843	**283,276**	200,579	**11,662**	11,225	**667,712**	566,647
Allowance for credit losses on performing loans	**(1,272)**	(1,102)	**(1,833)**	(959)	**(18)**	(12)	**(3,123)**	(2,073)
Total net loans and acceptances	**371,502**	353,741	**281,443**	199,620	**11,644**	11,213	**664,589**	564,574

Table 5: Net Loans and Acceptances – Segmented Information [1]

($ millions)		
As at October 31	**2023**	2022
Net Loans and Acceptances by Province		
Atlantic provinces	**17,741**	17,617
Quebec	**55,978**	53,975
Ontario	**171,236**	159,862
Prairie provinces	**57,877**	54,607
British Columbia and territories	**68,670**	67,680
Total net loans and acceptances in Canada	**371,502**	353,741
Net Business and Government Loans by Industry		
Commercial real estate	**69,726**	54,478
Construction (non-real estate)	**7,531**	5,761
Retail trade	**30,374**	23,716
Wholesale trade	**23,643**	20,693
Agriculture	**18,400**	14,181
Communications	**1,917**	876
Financing products	**4,710**	1,588
Manufacturing	**40,547**	36,607
Mining	**3,268**	3,503
Oil and gas	**3,711**	3,780
Transportation	**15,656**	14,691
Utilities	**12,247**	9,754
Forest products	**1,302**	1,113
Service industries	**65,593**	55,658
Financial	**71,179**	70,438
Government	**2,746**	1,859
Other	**1,735**	3,417
Total business and government [2]	**374,285**	322,113

(1) Segmented credit information by geographic area is based upon the country of ultimate risk.
(2) The Business and government Net Loans and Acceptances balances are net of allowance for credit losses on impaired loans only.

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Table 6: Gross Impaired Loans (GIL) – by Geography (1)

($ millions, except as noted)	Canada		United States		Other countries		Total	
As at October 31	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022
Consumer								
Residential mortgages	**249**	194	**175**	101	**–**	–	**424**	295
Consumer instalment and other personal loans	**291**	197	**258**	115	**–**	–	**549**	312
Total consumer	**540**	391	**433**	216	**–**	–	**973**	607
Business and government	**1,089**	767	**1,898**	604	**–**	13	**2,987**	1,384
Total impaired loans and acceptances, net of allowance for credit losses on impaired loans	**1,629**	1,158	**2,331**	820	**–**	13	**3,960**	1,991
Condition Ratios								
GIL as a % of gross loans and acceptances	**0.44**	0.33	**0.82**	0.41	**–**	0.12	**0.59**	0.35
Consumer	**0.23**	0.18	**0.70**	0.86	**–**	–	**0.33**	0.25
Business and government	**0.77**	0.57	**0.86**	0.34	**–**	0.12	**0.80**	0.43

Table 7: Gross Impaired Loans – Segmented Information

($ millions) As at October 31	**2023**	2022
Gross Impaired Business and Government Loans		
Commercial real estate	**438**	72
Construction (non-real estate)	**123**	59
Retail trade	**479**	173
Wholesale trade	**243**	78
Agriculture	**135**	202
Communications	**4**	1
Financing products	**–**	–
Manufacturing	**422**	184
Mining	**2**	19
Oil and gas	**22**	39
Transportation	**170**	73
Utilities	**3**	4
Forest products	**4**	3
Service industries	**868**	410
Financial	**52**	54
Government	**3**	3
Other	**19**	10
Total business and government	**2,987**	1,384

(1) Segmented credit information by geographic area is based upon the country of ultimate risk.

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Table 8: Changes in Gross Impaired Loans – by Geography [1]

($ millions, except as noted)	Canada		United States		Other countries		Total	
As at October 31	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022
Gross impaired loans and acceptances (GIL), beginning of year								
Consumer	**391**	382	**216**	256	**–**	–	**607**	638
Business and government	**767**	813	**604**	718	**13**	–	**1,384**	1,531
Total GIL, beginning of year	**1,158**	1,195	**820**	974	**13**	–	**1,991**	2,169
Purchased credit impaired (PCI) loans								
Consumer	**–**	–	**104**	–	**–**	–	**104**	–
Business and government	**–**	–	**311**	–	**–**	–	**311**	–
Total PCI	**–**	–	**415**	–	**–**	–	**415**	–
Additions to impaired loans and acceptances								
Consumer	**897**	630	**332**	77	**–**	–	**1,229**	707
Business and government	**819**	538	**1,994**	377	**5**	13	**2,818**	928
Total additions	**1,716**	1,168	**2,326**	454	**5**	13	**4,047**	1,635
Reductions to impaired loans and acceptances [2]								
Consumer	**(506)**	(462)	**(80)**	(66)	**–**	–	**(586)**	(528)
Business and government	**(413)**	(533)	**(723)**	(389)	**(18)**	–	**(1,154)**	(922)
Total reductions due to net repayments and other	**(919)**	(995)	**(803)**	(455)	**(18)**	–	**(1,740)**	(1,450)
Write-offs [3]								
Consumer	**(243)**	(159)	**(138)**	(51)	**–**	–	**(381)**	(210)
Business and government	**(83)**	(51)	**(289)**	(102)	**–**	–	**(372)**	(153)
Total write-offs	**(326)**	(210)	**(427)**	(153)	**–**	–	**(753)**	(363)
Gross impaired loans and acceptances, end of year								
Consumer	**539**	391	**434**	216	**–**	–	**973**	607
Business and government	**1,090**	767	**1,897**	604	**–**	13	**2,987**	1,384
Total GIL, end of year	**1,629**	1,158	**2,331**	820	**–**	13	**3,960**	1,991
Condition Ratios								
GIL as a % of Gross Loans								
Consumer	**0.23**	0.18	**0.70**	0.86	**–**	–	**0.33**	0.25
Business and government	**0.77**	0.57	**0.86**	0.34	**–**	0.12	**0.80**	0.43
GIL as a % of gross loans and acceptances	**0.44**	0.33	**0.82**	0.41	**–**	0.12	**0.59**	0.35

Table 9: Allowance for Credit Losses – by Geography [1] [2] [4]

($ millions, except as noted)	Canada		United States		Other countries		Total	
As at October 31	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022
Consumer								
Residential mortgages	**5**	7	**–**	3	**–**	–	**5**	10
Consumer instalment and other personal loans	**118**	88	**34**	14	**–**	–	**152**	102
Total consumer	**123**	95	**34**	17	**–**	–	**157**	112
Business and government	**334**	268	**193**	159	**–**	5	**527**	432
Total allowance for credit losses on impaired loans	**457**	363	**227**	176	**–**	5	**684**	544
Allowance for credit losses on performing loans	**1,272**	1,102	**1,833**	959	**18**	12	**3,123**	2,073
Allowance for credit losses	**1,729**	1,465	**2,060**	1,135	**18**	17	**3,807**	2,617
Coverage Ratios								
Allowance for credit losses on impaired loans as a % of gross impaired loans and acceptances								
Total	**28.1**	31.3	**9.7**	21.5	**–**	38.5	**17.3**	27.3
Consumer	**22.8**	24.3	**7.8**	7.9	**–**	–	**16.1**	18.5
Business and government	**30.6**	34.9	**10.2**	26.3	**–**	38.5	**17.6**	31.2

(1) Segmented credit information by geographic area is based upon the country of ultimate risk.
(2) Includes impaired amounts returned to performing status, sales, repayments, the impact of foreign exchange fluctuations and offsets for consumer write-offs which have not been recognized in formations.
(3) Excludes certain loans that are written off directly and not classified as new formations.
(4) Amounts exclude Allowance for Credit Losses related to off-balance sheet instruments, which are reported in Other Liabilities.

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Table 10: Allowance for Credit Losses on Impaired Loans – Segmented Information

($ millions) As at October 31	2023	2022
Business and Government		
Allowance for Credit Losses on Impaired Loans by Industry		
Commercial real estate	**34**	11
Construction (non-real estate)	**55**	25
Retail trade	**167**	81
Wholesale trade	**43**	31
Agriculture	**4**	13
Communications	**–**	–
Financing products	**–**	–
Manufacturing	**61**	41
Mining	**–**	5
Oil and gas	**22**	39
Transportation	**20**	10
Utilities	**2**	1
Forest products	**2**	1
Service industries	**108**	144
Financial	**9**	29
Government	**–**	–
Other	**–**	1
Total business and government (1)	**527**	432

Table 11: Changes in Allowance for Credit Losses – by Geography (2)

($ millions, except as noted)	Canada		United States		Other countries		Total	
As at October 31	2023	2022	2023	2022	2023	2022	2023	2022
Allowance for credit losses (ACL), beginning of year								
Consumer	**851**	907	**173**	133	**–**	–	**1,024**	1,040
Business and government	**797**	792	**1,162**	1,111	**15**	15	**1,974**	1,918
Total ACL, beginning of year	**1,648**	1,699	**1,335**	1,244	**15**	15	**2,998**	2,958
Provision for credit losses (3)								
Consumer	**789**	268	**437**	45	**–**	–	**1,226**	313
Business and government	**124**	48	**845**	(43)	**(9)**	(7)	**960**	(2)
Total provision for credit losses	**913**	316	**1,282**	2	**(9)**	(7)	**2,186**	311
Recoveries								
Consumer	**121**	105	**63**	60	**–**	–	**184**	165
Business and government	**26**	–	**55**	50	**–**	–	**81**	50
Total recoveries	**147**	105	**118**	110	**–**	–	**265**	215
Write-offs								
Consumer	**(621)**	(390)	**(196)**	(69)	**–**	–	**(817)**	(459)
Business and government	**(83)**	(51)	**(289)**	(102)	**–**	–	**(372)**	(153)
Total write-offs	**(704)**	(441)	**(485)**	(171)	**–**	–	**(1,189)**	(612)
Other, including foreign exchange rate changes								
Consumer	**(66)**	(39)	**(15)**	4	**–**	–	**(81)**	(35)
Business and government	**(40)**	8	**112**	146	**16**	7	**88**	161
Total other, including foreign exchange rate changes	**(106)**	(31)	**97**	150	**16**	7	**7**	126
ACL, end of year								
Consumer	**1,074**	851	**462**	173	**–**	–	**1,536**	1,024
Business and government	**824**	797	**1,885**	1,162	**22**	15	**2,731**	1,974
Total ACL, end of year	**1,898**	1,648	**2,347**	1,335	**22**	15	**4,267**	2,998
Net write-offs as a % of average loans and acceptances (4)	**un**	un	**un**	un	**un**	un	**0.15**	0.08

(1) Amounts exclude Allowance for Credit Losses related to off-balance sheet instruments, which are reported in Other Liabilities.
(2) Segmented credit information by geographic area is based upon the country of ultimate risk.
(3) Excludes provision for credit losses on other assets.
(4) Aggregate Net Loans and Acceptances balances are net of allowance for credit losses on performing loans and impaired loans (excluding those related to off-balance sheet instruments).
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Table 12: Provision for Credit Losses – Segmented Information

($ millions) For the year ended October 31	2023	2022
Consumer		
Residential mortgages	**19**	7
Cards	**366**	190
Consumer instalment and other personal loans	**379**	151
Total consumer	**764**	348
Business and Government		
Commercial real estate	**60**	2
Construction (non-real estate)	**37**	20
Retail trade	**113**	4
Wholesale trade	**31**	7
Agriculture	**(50)**	(2)
Communications	**1**	(5)
Financing products	**–**	–
Manufacturing	**37**	10
Mining	**(6)**	5
Oil and gas	**(10)**	(32)
Transportation	**69**	(7)
Utilities	**–**	1
Forest products	**2**	–
Service industries	**92**	133
Financial	**14**	16
Government	**–**	–
Other	**26**	2
Total business and government	**416**	154
Total provision for credit losses on impaired loans	**1,180**	502
Provision for credit losses on performing loans	**998**	(189)
	2,178	313
Performance Ratios (%)		
PCL-to-average net loans and acceptances	**0.35**	0.06
PCL on impaired loans-to-segmented average net loans and acceptances		
Consumer	**0.28**	0.15
Business and government	**0.12**	0.05
PCL on impaired loans-to-average net loans and acceptances	**0.19**	0.10

Table 13: Average Deposits

	2023		2022	
($ millions, except as noted)	**Average balance**	**Average rate paid (%)**	Average balance	Average rate paid (%)
Deposits Booked in Canada				
Payable on demand – interest bearing	**51,830**	**4.24**	51,184	1.09
Payable on demand – non-interest bearing	**71,789**	**–**	84,280	–
Payable after notice	**125,664**	**3.03**	130,812	0.90
Payable on a fixed date	**292,597**	**4.11**	205,284	1.74
Total deposits booked in Canada	**541,880**	**3.33**	471,560	1.13
Deposits Booked in the United States				
Payable on demand – interest bearing	**17,837**	**3.30**	8,856	1.02
Payable on demand – non-interest bearing	**26,656**	**–**	10,699	–
Payable after notice	**164,149**	**1.74**	139,952	0.29
Payable on a fixed date	**71,643**	**4.43**	63,047	0.94
Total deposits booked in the United States	**280,285**	**2.36**	222,554	0.49
Deposits Booked in Other Countries				
Payable on demand – interest bearing	**178**	**2.53**	318	0.77
Payable on demand – non-interest bearing	**44**	**–**	73	–
Payable after notice	**2,161**	**4.27**	1,486	0.87
Payable on a fixed date	**41,259**	**4.35**	31,703	0.91
Total deposits booked in other countries	**43,642**	**4.34**	33,580	0.91
Total average deposits (1)	**865,807**	**3.07**	727,694	0.92

Certain comparative figures have been reclassified to conform with the current year's presentation.

As at October 31, 2023 and 2022, deposits by foreign depositors in our Canadian bank offices amounted to $112,818 million and $95,292 million, respectively.

(1) Average deposits payable on a fixed date included $88 million, $44,520 million and $17,664 million of federal funds purchased, commercial paper issued and other deposit liabilities, respectively, as at October 31, 2023 ($101 million, $27,287 million and $17,394 million, respectively, as at October 31, 2022).

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Glossary of Financial Terms

Adjusted Earnings and Measures

Management considers both reported and adjusted results to be useful in assessing underlying ongoing business performance, as set out in the Non-GAAP and Other Financial Measures section.

- *Adjusted Revenue* – calculated as revenue excluding the impact of certain non-recurring items, and adjusted net revenue is adjusted revenue, net of CCPB.
- *Adjusted Provision for Credit Losses* – calculated as provision for credit losses excluding the impact of certain non-recurring items.
- *Adjusted Non-Interest Expense* – calculated as non-interest expense excluding the impact of certain non-recurring items.
- *Adjusted Effective Tax Rate* – calculated as adjusted provision for income taxes divided by adjusted income before provision for income taxes.
- *Adjusted Net Income* – calculated as net income excluding the impact of certain non-recurring items.

Allowance for Credit Losses represents an amount deemed appropriate by management to absorb credit-related losses on loans and acceptances and other credit instruments, in accordance with applicable accounting standards. Allowance on Performing Loans is maintained to cover impairment in the existing portfolio for loans that have not yet been individually identified as impaired. Allowance on Impaired Loans is maintained to reduce the carrying value of individually identified impaired loans to the expected recoverable amount.

Assets under Administration and Assets under Management refers to assets administered or managed by a financial institution that are beneficially owned by clients and therefore not reported on the balance sheet of the administering or managing financial institution.

Asset-Backed Commercial Paper (ABCP) is a short-term investment. The commercial paper is backed by assets such as trade receivables, and is generally used for short-term financing needs.

Average Annual Total Shareholder Return (TSR) represents the average annual total return earned on an investment in BMO common shares made at the beginning of a fixed period. The return includes the change in share price and assumes dividends received were reinvested in additional common shares.

Average Earning Assets represents the daily average balance of deposits at central banks, deposits with other banks, securities borrowed or purchased under resale agreements, securities, and loans over a one-year period.

Average Net Loans and Acceptances is the daily or monthly average balance of loans and customers' liability under acceptances, net of the allowance for credit losses, over a one-year period.

Bail-In Debt is senior unsecured debt subject to the Canadian Bail-In Regime. Bail-in debt includes senior unsecured debt issued directly by the bank on or after September 23, 2018, which has an original term greater than 400 days and is marketable, subject to certain exceptions. Some or all of this debt may be statutorily converted into common shares of the bank under the Bail-In Regime if the bank enters resolution.

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 is one one-hundredth of a percentage point.

Collateralized Mortgage Obligations (CMOs) are debt securities with multiple tranches, issued by structured entities and collateralized by a pool of mortgages. Each tranche offers different terms, interest rates, and risks.

Common Equity Tier 1 (CET1) Capital comprises common shareholders' equity net of deductions for goodwill, intangible assets, pension assets, certain deferred tax assets and other items, which may include a portion of expected credit loss provisions.

Common Equity Tier 1 (CET1) Ratio is calculated as CET1 Capital, which comprises common shareholders' equity, net of deductions for goodwill, intangible assets, pension assets, certain deferred tax assets and other items (which may include a portion of expected credit loss provisions), divided by risk-weighted assets. The CET1 Ratio is calculated in accordance with OSFI's Capital Adequacy Requirements (CAR) Guideline.

Common Shareholders' Equity is the most permanent form of capital. For regulatory capital purposes, common shareholders' equity comprises common shareholders' equity, net of capital deductions.

Credit and Counterparty Risk is the potential for financial loss due to the failure of an obligor (i.e., a borrower, endorser, guarantor or counterparty) to repay a loan or honour another predetermined financial obligation.

Derivatives are contracts, requiring no initial or little investment, with a value that is derived from movements in underlying interest or foreign exchange rates, equity or commodity prices or other indices. Derivatives are used to transfer, modify or reduce current or expected risks from changes in rates and prices.

Dividend Payout Ratio represents common share dividends as a percentage of net income available to common shareholders. It is computed by dividing dividends per share by basic earnings per share. Adjusted dividend payout ratio is calculated in the same manner, using adjusted net income.

Dividend Yield represents dividends per common share divided by the closing share price.

Earnings per Share (EPS) is calculated by dividing net income attributable to bank shareholders, after deducting preferred share dividends and distributions on other equity instruments, by the average number of common shares outstanding. Adjusted EPS is calculated in the same manner, using adjusted net income attributable to bank shareholders. Diluted EPS, which is BMO's basis for measuring performance, adjusts for possible conversions of financial instruments into common shares if those conversions would reduce EPS, and is more fully explained in Note 23 of the consolidated financial statements.

Earnings Sensitivity is a measure of the impact of potential changes in interest rates on the projected 12-month pre-tax net income from a portfolio of assets, liabilities and off-balance sheet positions in response to prescribed parallel interest rate movements, with interest rates floored at zero.

Economic Capital is an expression of the enterprise's capital demand requirement relative to its view of the economic risks in its underlying business activities. It represents management's estimation of the likely magnitude of economic losses that could occur should severely adverse situations arise. Economic capital is calculated for various types of risk, including credit, market (trading and non-trading), operational non-financial, business and insurance, based on a one-year time horizon using a defined confidence level.

Economic Value Sensitivity is a measure of the impact of potential changes in interest rates on the market value of a portfolio of assets, liabilities and off-balance sheet positions in response to prescribed parallel interest rate movements, with interest rates floored at zero.

Effective Tax Rate is calculated as provision for income taxes divided by income before provision for income taxes.

Efficiency Ratio (or Expense-to-Revenue Ratio) is a measure of productivity. It is calculated as non-interest expense divided by total revenue (on a taxable equivalent basis in the operating groups), expressed as a percentage.

Efficiency Ratio, net of CCPB, is calculated as non-interest expense divided by total revenue, net of CCPB. Adjusted efficiency ratio, net of CCPB, is calculated in the same manner, utilizing adjusted revenue, net of CCPB, and adjusted non-interest expense.

Environmental and Social Risk is the potential for loss or harm, directly or indirectly, resulting from environmental and social factors that impact BMO or its customers, and BMO's impact on the environment and society.

GLOSSARY OF FINANCIAL TERMS

Fair Value is the amount of consideration that would be agreed upon in an arm's-length transaction between knowledgeable, willing parties who are under no compulsion to act in an orderly market transaction.

Forwards and Futures are contractual agreements to either buy or sell a specified amount of a currency, commodity, interest-rate-sensitive financial instrument or security at a specified price and date in the future. Forwards are customized contracts transacted in the over-the-counter market. Futures are transacted in standardized amounts on regulated exchanges and are subject to daily cash margin requirements.

Gross Impaired Loans and Acceptances (GIL) is calculated as the credit impaired balance of loans and customers' liability under acceptances.

Guarantees and Standby Letters of Credit represent our obligation to make payments to third parties on behalf of a customer if the customer is unable to make the required payments or meet other contractual requirements.

Hedging is a risk management technique used to neutralize, manage or offset interest rate, foreign currency, equity, commodity or credit risk exposures arising from normal banking activities.

Impaired Loans are loans for which there is no longer a reasonable assurance of the timely collection of principal or interest.

Insurance Risk is the potential for loss as a result of actual experience differing from that assumed when an insurance product was designed and priced, and comprises claims risk, policyholder behaviour risk and expense risk.

Insurance Revenue, net of CCPB, is insurance revenue, net of insurance claims, commissions and changes in policy benefit liabilities (CCPB).

Legal and Regulatory Risk is the potential for loss or harm resulting from a failure to comply with laws or satisfy contractual obligations or regulatory requirements. This includes the risk of failure to: comply with the law (in letter or in spirit) or maintain standards of care; implement legal or regulatory requirements; enforce or comply with contractual terms; assert non-contractual rights; effectively manage disputes; or act in a manner so as to maintain our reputation.

Leverage Exposures (LE) consist of on-balance sheet items and specified off-balance sheet items, net of specified adjustments.

Leverage Ratio reflects Tier 1 Capital divided by LE.

Liquidity and Funding Risk is the potential for loss if we are unable to meet our financial commitments in a timely manner at reasonable prices as they become due. Financial commitments include liabilities to depositors and suppliers, as well as lending, investment and pledging commitments.

Liquidity Coverage Ratio (LCR) is a Basel III regulatory metric calculated as the ratio of high-quality liquid assets to total net stressed cash outflows over a thirty-day period under a stress scenario prescribed by OSFI.

Market Risk is the potential for adverse changes in the value of our assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity and commodity prices and their implied volatilities, and credit spreads, and includes the risk of credit migration and default in our trading book.

Mark-to-Market represents the valuation of financial instruments at fair value (as defined above) as of the balance sheet date.

Master Netting Agreements are agreements between two parties designed to reduce the credit risk of multiple derivative transactions through the provision of a legal right to offset exposure in the event of default.

Model Risk is the potential for adverse outcomes resulting from decisions that are based on incorrect or misused model results. These adverse outcomes can include financial loss, poor business decision-making and damage to reputation.

Net Interest Income comprises earnings on assets, such as loans and securities, including interest and certain dividend income, less interest expense paid on liabilities, such as deposits. Net interest income, excluding trading, is presented on a basis that excludes trading-related interest income.

Net Interest Margin is the ratio of net interest income to average earning assets, expressed as a percentage or in basis points. Net interest margin, excluding trading, is computed in the same manner, excluding trading-related interest income and earning assets.

Net Non-Interest Revenue is non-interest revenue, net of insurance claims, commissions and changes in policy benefit liabilities (CCPB).

Net Promoter Score (NPS) is the percentage of customers surveyed who would recommend BMO to a friend or colleague. Data is gathered in a survey that uses a 0–10 point scale. "Detractors" are defined as those who provide a rating of 0–6, "Passives" are defined as those who provide a rating of 7 or 8, and "Promoters" are defined as those who provide a rating of 9 or 10. The score is calculated by subtracting the percentage of "Detractors" from the percentage of "Promoters".

Net Stable Funding Ratio (NSFR) is a regulatory liquidity measure that assesses the stability of a bank's funding profile in relation to the liquidity value of its assets and is calculated in accordance with OSFI's Liquidity Adequacy Requirements Guideline.

Notional Amount refers to the principal amount used to calculate interest and other payments under derivative contracts. The principal amount does not change hands under the terms of a derivative contract, except in the case of cross-currency swaps.

Off-Balance Sheet Financial Instruments consist of a variety of financial arrangements offered to clients, which include credit derivatives, written put options, backstop liquidity facilities, standby letters of credit, performance guarantees, credit enhancements, commitments to extend credit, securities lending, documentary and commercial letters of credit, and other indemnifications.

Office of the Superintendent of Financial Institutions (OSFI) is the government agency responsible for regulating banks, insurance companies, trust companies, loan companies and pension plans in Canada.

Operating Leverage is the difference between the growth rates of revenue and non-interest expense. Adjusted operating leverage is the difference between the growth rates of adjusted revenue and adjusted non-interest expense.

Operating Leverage, net of CCPB, is the difference between the growth rates of revenue, net of CCPB (net revenue), and non-interest expense. Adjusted net operating leverage, is the difference between the growth rates of adjusted net revenue and adjusted non-interest expense. The bank evaluates performance using adjusted revenue, net of CCPB.

Operational Non-Financial Risk (ONFR) encompasses a wide range of non-financial risks, including those related to business change, customer trust, reputation and data that can result in financial loss. These losses can stem from inadequate or failed internal processes or systems, human error or misconduct, and external events that may directly or indirectly impact the fair value of assets we hold in our credit or investment portfolios. Examples of these risks include cyber and cloud security risk, technology risk, fraud risk and business continuity risk, but exclude legal and regulatory risk, credit risk, market risk, liquidity risk and other types of financial risk.

Options are contractual agreements that convey to the purchaser the right but not the obligation to either buy or sell a specified amount of a currency, commodity, interest-rate-sensitive financial instrument or security at a fixed future date or at any time within a fixed future period.

Purchased Credit Impaired (PCI) Loans are loans for which the timely collection of interest and principal is no longer reasonably assured. These loans are credit-impaired upon initial recognition.

Pre-Provision, Pre-Tax Earnings (PPPT) is calculated as income before the provision for income taxes and provision for (recovery of) credit losses. We use PPPT on both a reported and an adjusted basis to assess our ability to generate sustained earnings growth excluding credit losses, which are impacted by the cyclical nature of a credit cycle.

Provision for Credit Losses (PCL) is a charge to income that represents an amount deemed adequate by management to fully provide for impairment in a portfolio of loans and acceptances and other credit instruments, given the composition of the portfolio, the probability of default, the economic outlook and the allowance for credit losses already established. PCL can comprise both a provision for credit losses on impaired loans and a provision for credit losses on performing loans.

Reputation Risk is the potential for loss or harm to the BMO brand. It can arise even if other risks are managed effectively.

Return on Equity or Return on Common Shareholders' Equity (ROE) is calculated as net income, less preferred dividends and distributions on other equity instruments, as a percentage of average common shareholders' equity. Common shareholders' equity comprises common share capital, contributed surplus, accumulated other comprehensive income (loss) and retained earnings. Adjusted ROE is calculated using adjusted net income rather than net income.

Return on Tangible Common Equity (ROTCE) is calculated as net income available to common shareholders, adjusted for the amortization of acquisition-related intangible assets, as a percentage of average tangible common equity. Adjusted ROTCE is calculated using adjusted net income rather than net income.

Risk-Weighted Assets (RWA) are defined as on-balance sheet and off-balance sheet exposures that are risk-weighted based on guidelines established by OSFI. The measure is used for capital management and regulatory reporting purposes.

Securities Borrowed or Purchased under Resale Agreements are low-cost, low-risk instruments, often supported by the pledge of cash collateral, which arise from transactions that involve the borrowing or purchasing of securities.

Securities Lent or Sold under Repurchase Agreements are low-cost, low-risk liabilities, often supported by cash collateral, which arise from transactions that involve the lending or selling of securities.

Securitization is the practice of selling pools of contractual debts, such as residential mortgages, auto loans and credit card debt obligations, to third parties or trusts, which then typically issue a series of asset-backed securities to investors to fund the purchase of the contractual debts.

Strategic Risk is the potential for loss due to fluctuations in the external business environment and/or failure to properly respond to these fluctuations due to inaction, ineffective strategies or poor implementation of strategies.

Stress Tests are used to determine the potential impact of low-frequency, high-severity events on the trading and underwriting portfolios. The portfolios are measured daily against a variety of hypothetical and historical event scenarios. Scenarios are continuously refined to reflect the latest market conditions and portfolio risk exposures.

Structured Entities (SEs) include entities for which voting or similar rights are not the dominant factor in determining control of the entity. BMO is required to consolidate a SE if it controls the entity by having power over the entity, exposure to variable returns as a result of its involvement and the ability to exercise power to affect the amount of those returns.

Structural (Non-Trading) Market Risk comprises interest rate risk arising from banking activities (loans and deposits) and foreign exchange risk arising from foreign currency operations and exposures.

Swaps are contractual agreements between two parties to exchange a series of cash flows. The various swap agreements that BMO enters into are as follows:

- *Commodity swaps* – counterparties generally exchange fixed-rate and floating-rate payments based on a notional value of a single commodity.
- *Credit default swaps* – one counterparty pays the other a fee in exchange for an agreement by the other counterparty to make a payment if a credit event occurs, such as bankruptcy or failure to pay.
- *Cross-currency interest rate swaps* – fixed-rate and floating-rate interest payments and principal amounts are exchanged in different currencies.
- *Cross-currency swaps* – fixed-rate interest payments and principal amounts are exchanged in different currencies.
- *Equity swaps* – counterparties exchange the return on an equity security or a group of equity securities for a return based on a fixed or floating interest rate or the return on another equity security or group of equity securities.
- *Interest rate swaps* – counterparties generally exchange fixed-rate and floating-rate interest payments based on a notional value in a single currency.
- *Total return swaps* – one counterparty agrees to pay or receive from the other cash amounts based on changes in the value of a reference 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.

Tangible Common Equity is calculated as common shareholders' equity, less goodwill and acquisition-related intangible assets, net of related deferred tax liabilities.

Taxable Equivalent Basis (teb): Operating segment revenue is presented on a taxable equivalent basis (teb). Revenue and the provision for income taxes in BMO Capital Markets and U.S. P&C are increased on tax-exempt securities to an equivalent pre-tax basis to facilitate comparisons of income between taxable and tax-exempt sources. The offset to operating segment teb adjustments is reflected in Corporate Services revenue and provision for (recovery of) income taxes.

Tier 1 Capital comprises CET1 Capital and **Additional Tier 1 (AT1) Capital.** AT1 Capital consists of preferred shares and other AT1 Capital instruments, less regulatory deductions.

Tier 1 Capital Ratio reflects Tier 1 Capital divided by risk-weighted assets.

Tier 2 Capital comprises subordinated debentures and may include certain credit loss provisions, less regulatory deductions.

Total Capital includes Tier 1 and Tier 2 Capital.

Total Capital Ratio reflects Total Capital divided by risk-weighted assets.

Total Loss Absorbing Capacity (TLAC) comprises Total Capital and senior unsecured debt subject to the Canadian Bail-In Regime, less regulatory deductions.

Total Loss Absorbing Capacity (TLAC) Ratio reflects TLAC divided by risk-weighted assets.

Total Loss Absorbing Capacity (TLAC) Leverage Ratio reflects TLAC divided by leverage exposures.

Total Shareholder Return: The annual total shareholder return (TSR) represents the average annual total return earned on an investment in BMO common shares made at the beginning of the respective period. The return includes the change in share price and assumes dividends received were reinvested in additional common shares.

Trading and Underwriting Market Risk is associated with buying and selling financial products in the course of meeting customer requirements, including market-making and related financing activities, and assisting clients to raise funds by way of securities issuance.

Trading-Related Revenue includes net interest income and non-interest revenue earned from on-balance sheet and off-balance sheet positions undertaken for trading purposes. The management of these positions typically includes marking them to market on a daily basis. Trading-related revenue also includes income (expense) and gains (losses) from both on-balance sheet instruments and interest rate, foreign exchange (including spot positions), equity, commodity and credit contracts.

Value-at-Risk (VaR) measures the maximum loss likely to be experienced in the trading and underwriting portfolios, measured at a 99% confidence level over a one-day holding period. VaR is calculated for specific classes of risk in BMO's trading and underwriting activities related to interest rates, foreign exchange rates, credit spreads, equity and commodity prices and their implied volatilities.

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Statement of Management's Responsibility for Financial Information

Management of Bank of Montreal (the bank) is responsible for the preparation and presentation of the annual consolidated financial statements, Management's Discussion and Analysis (MD&A) and all other information 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 and meet the applicable requirements of the Canadian Securities Administrators (CSA) and the Securities and Exchange Commission (SEC) in the United States. The financial statements also comply with the provisions of the *Bank Act (Canada)* and related regulations, including interpretations of IFRS by our regulator, the Office of the Superintendent of Financial Institutions Canada. The MD&A has been prepared in accordance with the requirements of securities regulators, including National Instrument 51-102 *Continuous Disclosure Obligations* of the CSA.

The consolidated financial statements and information in the MD&A necessarily include amounts based on informed judgments and estimates of the expected effects of current events and transactions with appropriate consideration given to materiality. In addition, in preparing the financial information we must interpret the requirements described above, make determinations as to the relevancy of information to be included, and make estimates and assumptions that affect reported information. The MD&A also includes information regarding the impact of current transactions and events, sources of liquidity and capital resources, operating trends, risks and uncertainties. Actual results in the future may differ materially from our present assessment of this information because events and circumstances in the future may not occur as expected.

The financial information presented in the bank's Annual Report is consistent with that in the consolidated financial statements.

In meeting our responsibility for the reliability and timeliness of financial information, we maintain and rely on a comprehensive system of internal controls, including organizational and procedural controls, disclosure controls and procedures, and internal control over financial reporting. Our system of internal controls includes written communication of our policies and procedures governing corporate conduct and risk management; comprehensive business planning; effective segregation of duties; delegation of authority and personal accountability; escalation of relevant information for decisions regarding public disclosure; careful selection and training of personnel; and accounting policies that we regularly update. Our internal controls are designed to provide reasonable assurance that transactions are authorized, assets are safeguarded and proper records are maintained, and that we are in compliance with all regulatory requirements. The system of internal controls is further supported by a compliance function, which is designed to ensure that we and our employees comply with securities legislation and conflict of interest rules, and by an internal audit staff, which conducts periodic audits of all aspects of our operations.

As of October 31, 2023, we, as the bank's Chief Executive Officer and Chief Financial Officer, have determined that the bank's internal control over financial reporting is effective. We have certified Bank of Montreal's annual filings with the CSA and with the SEC pursuant to National Instrument 52-109, *Certification of Disclosure in Issuers' Annual and Interim Filings* and the *Securities Exchange Act of 1934*.

In order to provide their audit opinions on our consolidated financial statements and on the bank's internal control over financial reporting, the Shareholders' Auditors audit our system of internal controls over financial reporting and conduct work to the extent that they consider appropriate. Their audit opinion on the bank's internal control over financial reporting as of October 31, 2023 is set forth on page 144.

The Board of Directors, based on recommendations from its Audit and Conduct Review Committee, reviews and approves the financial information contained in the Annual Report, including the MD&A. The Board of Directors and its relevant committees oversee management's responsibilities for the preparation and presentation of financial information, maintenance of appropriate internal controls, compliance with legal and regulatory requirements, management and control of major risk areas, and assessment of significant and related party transactions.

The Audit and Conduct Review Committee, which is comprised entirely of independent directors, is also responsible for selecting the Shareholders' Auditors and reviewing the qualifications, independence and performance of both the Shareholders' Auditors and internal audit. The Shareholders' Auditors and the bank's Chief Auditor have full and free access to the Board of Directors, its Audit and Conduct Review Committee and other relevant committees to discuss audit, financial reporting and related matters.

The Office of the Superintendent of Financial Institutions Canada conducts examinations and inquiries into the affairs of the bank as are deemed necessary to ensure that the provisions of the *Bank Act*, with respect to the safety of the depositors, are being duly observed and that the bank is in sound financial condition.

KPMG LLP, the independent auditors appointed by the shareholders of the bank who have audited the consolidated financial statements, have also audited the effectiveness of the bank's internal control over financial reporting as at October 31, 2023 and have issued their report below.



Darryl White
Chief Executive Officer



Tayfun Tuzun
Chief Financial Officer

Toronto, Canada
December 1, 2023

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Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Bank of Montreal

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Bank of Montreal (the Bank) as of October 31, 2023 and 2022, the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for the years then ended, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Bank as of October 31, 2023 and 2022, and its financial performance and its cash flows for the years then ended, in conformity with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Bank's internal control over financial reporting as of October 31, 2023, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated December 1, 2023 expressed an unqualified opinion on the effectiveness of the Bank's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Bank's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Bank in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the Audit and Conduct Review Committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Valuation of the Loans Acquired in the Bank of the West Acquisition

As discussed in Notes 1, 4 and 10 to the consolidated financial statements, on February 1, 2023, the Bank completed the acquisition of Bank of the West and its subsidiaries for a cash purchase price of $18.4 billion. The transaction has been accounted for as a business combination and the assets acquired and liabilities assumed from Bank of the West were recorded at fair value as of the acquisition date. As part of the transaction, the Bank acquired intangible assets of $2,883 million, goodwill of $10,582 million and recorded the assets acquired and liabilities assumed at fair value as at the date of the acquisition. The fair value of the acquired loans on the acquisition date was $76,483 million. The fair value is based on a discounted cash flow methodology that includes certain key assumptions such as expected credit losses and discount rates.

We identified the assessment of the initial measurement of the fair value of the acquired loans as part of the Bank of the West acquisition as a critical audit matter. Significant auditor judgment was required because there was a high degree of measurement uncertainty in the key assumptions used to determine fair value. Significant auditor attention and complex auditor judgment was required to evaluate the results of the audit procedures performed. Further, specialized skills and knowledge, including experience in the industry, were required to apply the audit procedures and evaluate the results of those procedures.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls over the Bank's process to determine the fair value of the acquired loan portfolio. This included controls related to the development of the assumptions for expected credit losses and discount rates. We tested the completeness and accuracy of the underlying loan data. With the involvement of valuation professionals with specialized skills, industry knowledge and relevant experience, we tested the fair value of a selection of acquired loans by developing an independent estimate of fair value using valuation assumptions that were consistent with what market participants would use in pricing the acquired loans and compared it to the fair value determined by the Bank.

Assessment of the Allowances for Credit Losses for Loans

As discussed in Notes 1 and 4 to the consolidated financial statements, the Bank's allowances for credit losses (ACL) as at October 31, 2023 were $3,807 million. The Bank's ACL consists of allowances for impaired loans and allowances for performing loans (APL), both calculated under the IFRS 9 *Financial Instruments* expected credit losses framework. APL is calculated for each exposure in the loan portfolio as a function of the key modelled inputs being probability of default (PD), exposure at default (EAD) and loss given default (LGD). In establishing APL, the Bank's methodology attaches probability weightings to three economic scenarios, which represent the Bank's judgment about a range of forecast economic variables – a base case scenario being the Bank's view of the most probable outcome, as well as benign and adverse scenarios. Where there has been a significant increase in credit risk, lifetime APL is recorded; otherwise, 12 months of APL are generally recorded. The Bank's methodology for determining significant increase in credit risk is based on the change in PD between the origination date and reporting date and is assessed using probability weighted scenarios. The Bank uses experienced credit judgment (ECJ) to reflect factors not captured in the results produced by the APL models.

We identified the assessment of the ACL for loans as a critical audit matter. Significant auditor judgment was required because there was a high degree of measurement uncertainty in the Bank's key modelled inputs, methodology and judgments and their resulting impact on the APL, as described above, including the impact of the macroeconomic environment. Assessing the APL also required significant auditor attention and complex auditor judgment to evaluate the results of audit procedures. Further, specialized skills and knowledge, including experience in the industry, were required to apply audit procedures and evaluate the results of those procedures.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls over the Bank's APL process, with the involvement of credit risk, economics, and information technology professionals with specialized skills, industry knowledge and relevant experience. This included internal controls related to (1) monitoring and periodic validation of the models used to derive the key modelled inputs, (2) monitoring of the methodology for identifying significant increase in credit risk, and (3) review of the economic variables, probability weighting of scenarios and ECJ. We also tested the controls over the Bank's APL process related to loan reviews for determination of loan risk grades for wholesale loans. We involved credit risk and economics professionals with specialized skills, industry knowledge and relevant experience, who assisted in evaluating the (1) key modelled inputs and APL methodology including the determination of significant increases in credit risk by evaluating the methodology for compliance with IFRS 9 and re-calculating model monitoring tests in respect of the key modelled inputs and thresholds used for significant increases in credit risk, (2) economic variables and probability weighting of scenarios used in the models by assessing the variables and scenarios against external economic data, and (3) ECJ overlays to the APL used by the Bank by applying our knowledge of the industry and credit judgment to assess management's judgments. For a selection of wholesale loans, we developed an independent estimate of the loan risk grades using the Bank's borrower risk rating scale and compared that to the Bank's assigned loan risk grade.

Assessment of the Measurement of the Fair Value of Certain Securities

As discussed in Notes 1, 3 and 17 to the consolidated financial statements, the Bank's securities portfolio included $204,104 million of securities as at October 31, 2023 that are measured at fair value. Included in these amounts are certain securities for which the Bank determines fair value using models that use significant unobservable inputs and third-party net asset valuations (NAVs). Unobservable inputs require the use of significant judgment. Certain of the significant unobservable inputs used in the valuation of such securities are NAVs and prepayment rates.

We identified the assessment of the measurement of the fair value of certain securities as a critical audit matter. Significant auditor judgment was required because there was a high degree of measurement uncertainty in the significant unobservable inputs. Significant auditor attention and complex auditor judgment was required to evaluate the results of audit procedures. Further, specialized skills and knowledge, including experience in the industry, were required to apply audit procedures and evaluate the results of those procedures.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls over the Bank's process to determine the fair value of certain securities with the involvement of valuation and information technology professionals with specialized skills, industry knowledge and relevant experience. This included controls related to (1) the assessment of rate sources used in independent price verification, and (2) segregation of duties and access controls. We also evaluated the design and tested the operating effectiveness of the controls related to the (1) independent price verification, and (2) review of third-party NAVs or fair value determined by model-based valuation approaches. We tested, with involvement of valuation professionals with specialized skills, industry knowledge and relevant experience, the fair value of a selection of securities, for which prepayment rates are used in valuation, by developing an independent estimate of fair value and comparing it to the fair value determined by the Bank; and for a selection of securities, we (1) compared the NAVs to external information or (2) tested management's process of estimating the fair value by testing the appropriateness of the methods used, evaluating the reasonableness of certain assumptions, and testing the mathematical accuracy of calculations.

Assessment of Income Tax Uncertainties

As discussed in Notes 1 and 22 to the consolidated financial statements, in determining the provision for income taxes, the Bank interprets tax legislation, case law and administrative positions, and, based on its judgment, records a provision for an estimate of the amount required to settle tax obligations.

We identified the assessment of income tax uncertainties as a critical audit matter. Significant auditor judgment was required because there was a high degree of subjectivity in assessing the need to record a provision, based on interpretation of tax legislation, case law and administrative positions, for these uncertainties and estimating the amount of such provision, if necessary. This required significant auditor attention and complex auditor judgment to evaluate the results of audit procedures. Further, specialized skills and knowledge, including experience in the industry, were required to apply audit procedures and evaluate the results of those audit procedures.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls over the Bank's process for evaluating income tax uncertainties with the involvement of tax professionals with specialized skills, industry knowledge and relevant experience. This included controls related to the (1) identification of tax uncertainties based on interpretation of tax legislation, case law and administrative positions, and (2) determination of the best estimate of the provision required, if any, to settle these uncertainties. We involved tax professionals with specialized skills, industry knowledge and relevant experience, who assisted in (1) evaluating, based on their knowledge and experience, the Bank's interpretations of tax legislation, case law and administrative positions and the assessment of certain tax uncertainties and expected outcomes, including, if applicable, the measurement thereof, (2) reading advice obtained by the Bank from external specialists and evaluating its impact on the Bank's provision, if necessary, and (3) reading correspondence with taxation authorities and evaluating its impact on the Bank's provision, if necessary.

Assessment of Insurance-related Liabilities

As discussed in Notes 1 and 14 to the consolidated financial statements, the Bank's insurance-related liabilities as at October 31, 2023 were $12,340 million. The Bank determines the liabilities for life insurance contracts by applying the Canadian Asset Liability Method for Insurance Contracts, which incorporates best-estimate assumptions. The significant assumptions include mortality, policy lapses and future investment yields.

We identified the assessment of insurance-related liabilities as a critical audit matter. Significant auditor judgment was required because there was a high degree of measurement uncertainty in the significant assumptions. Significant and complex auditor judgment was required to evaluate the results of audit procedures. Further, specialized skills and knowledge, including experience in the industry, were required to apply audit procedures and evaluate the results of those audit procedures.

The following are the primary procedures we performed to address this critical audit matter. With the assistance of actuarial professionals with specialized skills, industry knowledge and relevant experience, we evaluated the design and tested the operating effectiveness of internal controls over the assessment of the significant assumptions. We involved these actuarial professionals also in testing the significant assumptions by examining the Bank's internal and external experience studies for policy lapses and mortality, and examining management's calculations and comparing certain inputs into the future investment yields to externally available data.

KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants

We have served as the Bank's auditor since 2004 and as joint auditor for the prior 14 years.

Toronto, Canada
December 1, 2023

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of Bank of Montreal

Opinion on Internal Control Over Financial Reporting

We have audited Bank of Montreal's internal control over financial reporting as of October 31, 2023, based on the criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, Bank of Montreal (the "Bank") maintained, in all material respects, effective internal control over financial reporting as of October 31, 2023, based on the criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Bank as of October 31, 2023 and 2022, the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for each of the years then ended, and the related notes (collectively, the consolidated financial statements), and our report dated December 1, 2023 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Bank's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Disclosure Controls and Procedures and Internal Control over Financial Reporting, on page 125 of Management's Discussion and Analysis. Our responsibility is to express an opinion on the Bank's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Bank in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants
Toronto, Canada
December 1, 2023

Consolidated Statement of Income

For the Year Ended October 31 (Canadian $ in millions, except as noted)	2023	2022
Interest, Dividend and Fee Income		
Loans	**$ 40,169**	$ 20,464
Securities (Notes 3 and 10)(1)	**11,392**	5,590
Deposits with banks	**4,013**	843
	55,574	26,897
Interest Expense		
Deposits	**26,547**	6,711
Subordinated debt	**430**	227
Other liabilities (Note 14)	**9,916**	4,074
	36,893	11,012
Net Interest Income	**18,681**	15,885
Non-Interest Revenue		
Securities commissions and fees	**1,025**	1,082
Deposit and payment service charges	**1,517**	1,318
Trading revenues (losses) (Notes 10 and 17)	**(216)**	8,250
Lending fees	**1,548**	1,440
Card fees	**700**	548
Investment management and custodial fees	**1,851**	1,770
Mutual fund revenues	**1,244**	1,312
Underwriting and advisory fees	**1,107**	1,193
Securities gains, other than trading (Note 3)	**181**	281
Foreign exchange gains, other than trading	**235**	181
Insurance revenue (loss)	**2,498**	(157)
Share of profit in associates and joint ventures	**185**	274
Other	**643**	333
	12,518	17,825
Total Revenue	**31,199**	33,710
Provision for Credit Losses (Notes 4 and 10)	**2,178**	313
Insurance Claims, Commissions and Changes in Policy Benefit Liabilities (Note 14)	**1,939**	(683)
Non-Interest Expense		
Employee compensation (Notes 20 and 21)	**11,515**	8,795
Premises and equipment (Note 9)	**4,879**	3,635
Amortization of intangible assets (Note 11)	**1,015**	604
Advertising and business development	**814**	517
Communications	**368**	278
Professional fees	**1,147**	788
Other	**1,481**	1,577
	21,219	16,194
Income Before Provision for Income Taxes	**5,863**	17,886
Provision for income taxes (Note 22)	**1,486**	4,349
Net Income	**$ 4,377**	$ 13,537
Attributable to:		
Bank shareholders	**4,365**	13,537
Non-controlling interest in subsidiaries	**12**	–
Net Income	**$ 4,377**	$ 13,537
Earnings Per Common Share (Canadian $) (Note 23)		
Basic	**$ 5.69**	$ 20.04
Diluted	**$ 5.68**	$ 19.99
Dividends per common share	**$ 5.80**	$ 5.44

(1) Includes interest income on securities measured at fair value through other comprehensive income (FVOCI) and amortized cost, calculated using the effective interest rate method, of $6,027 million for the year ended October 31, 2023 ($1,945 million in 2022).

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



Darryl White
Chief Executive Officer



Jan Babiak
Chair, Audit and Conduct Review Committee

Consolidated Statement of Comprehensive Income

For the Year Ended October 31 (Canadian $ in millions)	2023	2022
Net Income	**$ 4,377**	$ 13,537
Other Comprehensive Income (Loss), net of taxes (Note 22)		
Items that may subsequently be reclassified to net income		
Net change in unrealized (losses) on fair value through OCI debt securities		
Unrealized (losses) on fair value through OCI debt securities arising during the year	**(74)**	(520)
Reclassification to earnings of (gains) during the year	**(31)**	(11)
	(105)	(531)
Net change in unrealized (losses) on cash flow hedges		
(Losses) on derivatives designated as cash flow hedges arising during the year (Note 8)	**(1,292)**	(4,999)
Reclassification to earnings/goodwill of (gains) losses on derivatives designated as cash flow hedges during the year (Note 10)	**973**	(315)
	(319)	(5,314)
Net gains on translation of net foreign operations		
Unrealized gains on translation of net foreign operations	**1,399**	3,202
Unrealized (losses) on hedges of net foreign operations	**(373)**	(332)
Reclassification to earnings of net losses related to divestitures (Note 10)	**–**	29
	1,026	2,899
Items that will not be reclassified to net income		
Net unrealized gains on fair value through OCI equity securities arising during the year	**–**	1
Net gains (losses) on remeasurement of pension and other employee future benefit plans (Note 21)	**(1)**	659
Net gains (losses) on remeasurement of own credit risk on financial liabilities designated at fair value	**(291)**	1,282
	(292)	1,942
Other Comprehensive Income (Loss), net of taxes (Note 22)	**310**	(1,004)
Total Comprehensive Income	**$ 4,687**	$ 12,533
Attributable to:		
Bank shareholders	**4,675**	12,533
Non-controlling interest in subsidiaries	**12**	–
Total Comprehensive Income	**$ 4,687**	$ 12,533

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

Consolidated Balance Sheet

As at October 31 (Canadian $ in millions)		2023		2022
Assets				
Cash and Cash Equivalents (Note 2)	**$**	**77,934**	$	87,466
Interest Bearing Deposits with Banks (Note 2)		**4,125**		5,734
Securities (Notes 3 and 10)				
Trading		**124,556**		108,177
Fair value through profit or loss		**16,720**		13,641
Fair value through other comprehensive income		**62,828**		43,561
Debt securities at amortized cost		**116,814**		106,590
Investments in associates and joint ventures		**1,461**		1,293
		322,379		273,262
Securities Borrowed or Purchased Under Resale Agreements (Note 4)		**115,662**		113,194
Loans (Notes 4, 6 and 10)				
Residential mortgages		**177,250**		148,880
Consumer instalment and other personal		**104,040**		86,103
Credit cards		**12,294**		9,663
Business and government		**366,701**		309,310
		660,285		553,956
Allowance for credit losses (Note 4)		**(3,807)**		(2,617)
		656,478		551,339
Other Assets				
Derivative instruments (Note 8)		**39,976**		48,160
Customers' liability under acceptances (Note 12)		**8,111**		13,235
Premises and equipment (Note 9)		**6,241**		4,841
Goodwill (Notes 10 and 11)		**16,728**		5,285
Intangible assets (Notes 10 and 11)		**5,216**		2,193
Current tax assets		**2,052**		1,421
Deferred tax assets (Note 22)		**3,081**		1,175
Other (Note 12)		**35,293**		31,894
		116,698		108,204
Total Assets	**$**	**1,293,276**	$	1,139,199
Liabilities and Equity				
Deposits (Note 13)	**$**	**909,676**	$	769,478
Other Liabilities				
Derivative instruments (Note 8)		**50,193**		59,956
Acceptances (Note 14)		**8,111**		13,235
Securities sold but not yet purchased (Note 14)		**43,781**		40,979
Securities lent or sold under repurchase agreements (Note 6)		**106,108**		103,963
Securitization and structured entities' liabilities (Notes 6 and 7)		**27,094**		27,068
Other (Note 14)		**63,048**		45,332
		298,335		290,533
Subordinated Debt (Note 15)		**8,228**		8,150
Total Liabilities		**1,216,239**		1,068,161
Equity				
Preferred shares and other equity instruments (Note 16)		**6,958**		6,308
Common shares (Note 16)		**22,941**		17,744
Contributed surplus		**328**		317
Retained earnings		**44,920**		45,117
Accumulated other comprehensive income		**1,862**		1,552
Total shareholders' equity		**77,009**		71,038
Non-controlling interest in subsidiaries (Note 16)		**28**		–
Total Equity		**77,037**		71,038
Total Liabilities and Equity	**$**	**1,293,276**	$	1,139,199

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

Consolidated Statement of Changes in Equity

For the Year Ended October 31 (Canadian $ in millions)	2023	2022
Preferred Shares and Other Equity Instruments (Note 16)		
Balance at beginning of year	**$ 6,308**	$ 5,558
Issued during the year	**650**	2,250
Redeemed during the year	**–**	(1,500)
Balance at End of Year	**6,958**	6,308
Common Shares (Note 16)		
Balance at beginning of year	**17,744**	13,599
Issued under the Shareholder Dividend Reinvestment and Share Purchase Plan	**1,609**	999
Issued under the Stock Option Plan	**61**	57
Treasury shares sold (purchased)	**14**	(17)
Issued to align capital position with increased regulatory requirements as announced by OSFI (Note 16)	**3,360**	–
Issued for acquisitions (Notes 10 and 16)	**153**	3,106
Balance at End of Year	**22,941**	17,744
Contributed Surplus		
Balance at beginning of year	**317**	313
Stock option expense, net of options exercised (Note 20)	**11**	3
Other	**–**	1
Balance at End of Year	**328**	317
Retained Earnings		
Balance at beginning of year	**45,117**	35,497
Net income attributable to bank shareholders	**4,365**	13,537
Dividends on preferred shares and distributions payable on other equity instruments (Note 16)	**(331)**	(231)
Dividends on common shares (Note 16)	**(4,148)**	(3,634)
Equity issue expense and premium paid on redemption of preferred shares	**(73)**	(52)
Net discount on sale of treasury shares	**(10)**	–
Balance at End of Year	**44,920**	45,117
Accumulated Other Comprehensive (Loss) on Fair Value through OCI Securities, net of taxes (Note 22)		
Balance at beginning of year	**(359)**	171
Unrealized (losses) on fair value through OCI debt securities arising during the year	**(74)**	(520)
Unrealized gains on fair value through OCI equity securities arising during the year	**–**	1
Reclassification to earnings of (gains) during the year	**(31)**	(11)
Balance at End of Year	**(464)**	(359)
Accumulated Other Comprehensive (Loss) on Cash Flow Hedges, net of taxes (Note 22)		
Balance at beginning of year	**(5,129)**	185
(Losses) on derivatives designated as cash flow hedges arising during the year (Note 8)	**(1,292)**	(4,999)
Reclassification to earnings/goodwill of (gains) losses on derivatives designated as cash flow hedges during the year (Note 10)	**973**	(315)
Balance at End of Year	**(5,448)**	(5,129)
Accumulated Other Comprehensive Income on Translation of Net Foreign Operations, net of taxes (Note 22)		
Balance at beginning of year	**5,168**	2,269
Unrealized gains on translation of net foreign operations	**1,399**	3,202
Unrealized (losses) on hedges of net foreign operations	**(373)**	(332)
Reclassification to earnings of net losses related to divestitures (Note 10)	**–**	29
Balance at End of Year	**6,194**	5,168
Accumulated Other Comprehensive Income on Pension and Other Employee Future Benefit Plans, net of taxes (Note 21)		
Balance at beginning of year	**944**	285
Gains (losses) on remeasurement of pension and other employee future benefit plans (Note 21)	**(1)**	659
Balance at End of Year	**943**	944
Accumulated Other Comprehensive Income on Own Credit Risk on Financial Liabilities Designated at Fair Value, net of taxes (Note 22)		
Balance at beginning of year	**928**	(354)
Gains (losses) on remeasurement of own credit risk on financial liabilities designated at fair value	**(291)**	1,282
Balance at End of Year	**637**	928
Total Accumulated Other Comprehensive Income	**1,862**	1,552
Total Shareholders' Equity	**77,009**	71,038
Non-Controlling Interest in Subsidiaries		
Balance at beginning of year	**–**	–
Acquisition (Note 10)	**16**	–
Net income attributable to non-controlling interest in subsidiaries	**12**	–
Balance at End of Year	**28**	–
Total Equity	**$ 77,037**	$ 71,038

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

Consolidated Statement of Cash Flows

For the Year Ended October 31 (Canadian $ in millions)	2023	2022
Cash Flows from Operating Activities		
Net Income	**$ 4,377**	$ 13,537
Adjustments to determine net cash flows provided by operating activities:		
Securities (gains), other than trading (Note 3)	**(181)**	(281)
Depreciation of premises and equipment (Note 9)	**1,022**	780
Depreciation of other assets	**62**	96
Amortization of intangible assets (Note 11)	**1,015**	604
Provision for credit losses (Note 4)	**2,178**	313
Deferred taxes (Note 22)	**(732)**	475
Net loss on divestitures (Note 10)	**–**	29
Changes in operating assets and liabilities:		
Trading securities	**(14,563)**	1,698
Derivative asset	**14,373**	(13,376)
Derivative liability	**(14,924)**	27,800
Current income taxes	**(990)**	484
Accrued interest receivable and payable	**1,954**	142
Other items and accruals, net	**6,713**	(6,222)
Deposits	**38,587**	45,232
Loans	**(25,382)**	(74,748)
Securities sold but not yet purchased	**2,219**	7,515
Securities lent or sold under repurchase agreements	**(5,130)**	810
Securities borrowed or purchased under resale agreements	**(885)**	(954)
Securitization and structured entities' liabilities	**(122)**	1,023
Net Cash Provided by Operating Activities	**9,591**	4,957
Cash Flows from Financing Activities		
Liabilities of subsidiaries	**2,068**	6,927
Proceeds from issuance of covered bonds (Note 13)	**8,027**	12,443
Redemption/buyback of covered bonds (Note 13)	**(10,743)**	(5,829)
Proceeds from issuance of subordinated debt (Note 15)	**1,150**	2,337
Repayment of subordinated debt (Note 15)	**(1,179)**	(850)
Proceeds from issuance of preferred shares, net of issuance costs (Note 16)	**648**	2,245
Redemption of preferred shares (Note 16)	**–**	(1,500)
Net proceeds from issuance of common shares (Note 16)	**3,339**	3,113
Net proceeds from the sale (purchase) of treasury shares (Note 16)	**14**	(17)
Cash dividends and distributions paid	**(2,703)**	(2,595)
Repayment of lease liabilities	**(353)**	(294)
Net Cash Provided by Financing Activities	**268**	15,980
Cash Flows from Investing Activities		
Interest bearing deposits with banks	**1,680**	3,316
Purchases of securities, other than trading	**(50,149)**	(96,598)
Maturities of securities, other than trading	**20,905**	21,204
Proceeds from sales of securities, other than trading	**23,186**	42,829
Premises and equipment – net (purchases) (Note 9)	**(885)**	(777)
Acquisitions (Note 10) (1)	**(15,102)**	–
Purchased and developed software – net (purchases) (Note 11)	**(792)**	(671)
Net proceeds from divestitures (Note 10)	**–**	1,226
Net Cash (Used in) Investing Activities	**(21,157)**	(29,471)
Effect of Exchange Rate Changes on Cash and Cash Equivalents	**1,766**	2,739
Net (decrease) in Cash and Cash Equivalents	**(9,532)**	(5,795)
Cash and Cash Equivalents at Beginning of Year	**87,466**	93,261
Cash and Cash Equivalents at End of Year (Note 2)	**$ 77,934**	$ 87,466
Supplemental Disclosure of Cash Flow Information		
Net cash provided by operating activities includes:		
Interest paid in the year (2)	**$ 33,747**	$ 9,557
Income taxes paid in the year	**$ 2,591**	$ 2,374
Interest received in the year	**$ 52,112**	$ 24,046
Dividends received in the year	**$ 2,349**	$ 1,823

(1) This amount is net of cash and cash equivalents of $3,646 million acquired as part of acquisitions during the year ended October 31, 2023. To mitigate changes in the Canadian dollar equivalent of the Bank of the West purchase price on closing, we entered into forward contracts, which qualified for hedge accounting.

(2) Includes dividends paid on securities sold but not yet purchased.

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

Certain comparative figures have been reclassified to conform with the current year's presentation.

Note 1: Basis of Presentation

Bank of Montreal (the bank or BMO) is a chartered bank under the *Bank Act (Canada)* and is a public company incorporated in Canada. We are a highly diversified financial services company, providing a broad range of personal and commercial banking, wealth management and investment banking products and services. The bank's head office is at 129 rue Saint-Jacques, Montreal, Quebec. Our executive offices are at 100 King Street West, 1 First Canadian Place, Toronto, Ontario. Our common shares are listed on the Toronto Stock Exchange (TSX) and the New York Stock Exchange.

We have prepared these consolidated financial statements in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB). We also comply with interpretations of IFRS by our regulator, the Office of the Superintendent of Financial Institutions (OSFI).

Our consolidated financial statements have been prepared on a historic cost basis, except for the revaluation of the following items: assets and liabilities held for trading; financial assets and liabilities measured or designated at fair value through profit or loss (FVTPL); financial assets measured or designated at FVOCI; financial assets and liabilities designated as hedged items in qualifying fair value hedge relationships; cash-settled share-based payment liabilities; defined benefit pension and other employee future benefit liabilities; and insurance-related liabilities.

These consolidated financial statements were authorized for issue by the Board of Directors on December 1, 2023.

Basis of Consolidation

These consolidated financial statements are inclusive of the financial statements of our subsidiaries as at October 31, 2023. We conduct business through a variety of corporate structures, including subsidiaries, structured entities (SEs), associates and joint ventures. Subsidiaries are those entities where we exercise control through our ownership of the majority of the voting shares. We also hold interests in SEs, which we consolidate when we control the SEs. These are more fully described in Note 7. All of the assets, liabilities, revenues and expenses of our subsidiaries and consolidated SEs are included in our consolidated financial statements. All intercompany transactions and balances are eliminated on consolidation.

We hold investments in associates, where we exert significant influence over operating and financing decisions (generally companies in which we own between 20% and 50% of the voting shares). These are accounted for using the equity method. The equity method is also applied to our investments in joint ventures, which are entities where we exercise joint control through an agreement with other shareholders. Under the equity method of accounting, investments are initially recorded at cost, and the carrying amount is increased or decreased to recognize our share of an investee's net income or loss, including other comprehensive income or loss. Additional information regarding accounting for investments in associates and joint ventures is included in Note 3.

Significant Accounting Policies

To facilitate a better understanding of our consolidated financial statements, we have disclosed our significant accounting policies throughout the following notes with the related financial disclosures by major caption:

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Translation of Foreign Currencies

We conduct business in a variety of foreign currencies and present our consolidated financial statements in Canadian dollars, which is our functional currency. Monetary assets and liabilities, as well as non-monetary assets and liabilities measured at fair value, that are denominated in foreign currencies are translated into Canadian dollars at the exchange rate in effect at the balance sheet date. Non-monetary assets and liabilities not measured at fair value are translated into Canadian dollars at historical rates. Revenues and expenses denominated in foreign currencies are translated using the average exchange rate for the year.

Unrealized gains and losses arising from translating our net investment in foreign operations into Canadian dollars, net of related hedging activities and applicable income taxes, are included in our Consolidated Statement of Comprehensive Income within net gains (losses) on translation of net foreign operations. When we dispose of a foreign operation such that control, significant influence or joint control is lost, the cumulative amount of the gain (loss) on translation and any applicable hedging activities and related income taxes is reclassified to our Consolidated Statement of Income as part of the gain or loss on disposition.

Foreign currency translation gains and losses on equity securities measured at FVOCI that are denominated in foreign currencies are included in accumulated other comprehensive income on FVOCI equity securities, net of taxes, in our Consolidated Statement of Changes in Equity. All other foreign currency translation gains and losses are included in foreign exchange gains, other than trading, in our Consolidated Statement of Income as they arise.

From time to time, we enter into foreign exchange hedge contracts to reduce our exposure to changes in the value of foreign currencies. Realized and unrealized gains and losses that arise on the mark-to-market of foreign exchange contracts related to economic hedges are included in non-interest revenue in our Consolidated Statement of Income. Changes in the fair value of derivative contracts that qualify for hedge accounting are recorded in our Consolidated Statement of Comprehensive Income within net change in unrealized gains (losses) on cash flow hedges, with the spot/forward differential (the difference between the foreign currency exchange rate at the inception of the contract and the rate at the end of the contract) recorded in interest income (expense) over the term of the hedge.

Revenue

Dividend Income
Dividend income is recognized when the right to receive payment is established. This is the ex-dividend date for listed equity securities.

Fee Income
Securities commissions and fees are earned in BMO Wealth Management (BMO WM) and BMO Capital Markets (BMO CM) on brokerage transactions executed for customers, generally as a fixed fee per share traded, and the commissions and related clearing expense are recognized on trade date. There are also fees based on a percentage of the customer's portfolio holdings that entitle them to investment advice and a certain number of trades, which are recorded over the period to which the fees relate.

Deposit and payment service charges are primarily earned in Personal and Commercial Banking (P&C) and include monthly account maintenance fees and other activity-based fees earned on deposit and cash management services. Fees are recognized over time when account maintenance and cash management services are provided, or at a point in time when an income-generating activity is performed.

Card fees are earned in P&C and primarily include interchange income, late fees and annual fees. Card fees are recorded when the related services are provided, except for annual fees, which are recorded evenly throughout the year. Interchange income is calculated as a percentage of the transaction amount and/or a fixed price per transaction, as established by the payment network, and is recognized when the card transaction is settled. Reward costs for our cards are recorded as a reduction in card fees when redeemed.

Investment management and custodial fees are earned in BMO WM and are based primarily on the balance of assets under management or assets under administration, as at the period end, for investment management, custodial, estate and trustee services provided. Fees are recorded over the period the services are performed.

Mutual fund revenues are earned in BMO WM as fees for fund management services, which are primarily calculated and recorded based on a percentage of the fund's net asset value. The fees are recorded over the period the services are performed.

Underwriting and advisory fees are earned in BMO CM and arise from securities offerings in which we act as an underwriter or agent, structuring and administering loan syndications, and fees earned from providing merger-and-acquisition services and structuring advice. Underwriting and advisory fees are generally recognized when the services are completed.

Leases

We are lessors in both financing leases and operating leases. Leases are classified as financing leases if they transfer substantially all the risks and rewards incidental to ownership of the leased asset to the lessee. Otherwise they are classified as operating leases, as we retain substantially all the risks and rewards of asset ownership.

As lessor in a financing lease, a loan is recognized equal to the investment in the lease, which is calculated as the present value of the minimum payments to be received from the lessee, discounted at the interest rate implicit in the lease, plus any unguaranteed residual value we expect to recover at the end of the lease. Finance lease income is recognized in interest, dividend and fee income, loans, in our Consolidated Statement of Income.

Assets under operating leases are recorded in other assets in our Consolidated Balance Sheet. Rental income is recognized on a straight-line basis over the term of the lease in non-interest revenue, other, in our Consolidated Statement of Income. Depreciation on these assets is recognized on a straight-line basis over the term of the lease in non-interest expense, other, in our Consolidated Statement of Income.

Refer to Note 9 for our policy on lessee accounting.

Assets Held-for-Sale

Non-current non-financial assets classified as held-for-sale are measured at the lower of their carrying amount and fair value less costs to sell and are presented within other assets in our Consolidated Balance Sheet. Subsequent to its initial classification, a non-current asset is no longer depreciated or amortized, and any subsequent write-down in fair value less costs to sell is recognized in non-interest revenue, other, in our Consolidated Statement of Income.

Interbank Offered Rate Reform – Phase 2 Amendments

Effective November 1, 2020, we early adopted the IASB's IBOR Phase 2 amendments to IFRS 9 *Financial Instruments* (IFRS 9), IAS 39 *Financial Instruments: Recognition and Measurement* (IAS 39), IFRS 7 *Financial Instruments: Disclosures* (IFRS 7) and IFRS 4 *Insurance Contracts* (IFRS 4), as well as IFRS 16 *Leases*. These amendments address issues that arise from implementation of Interbank Offered Rate (IBOR) reform, as IBORs will be replaced with alternative reference rates (ARRs). As at October 31, 2023, BMO had transitioned all exposure to sterling, euro, Swiss franc, Japanese yen and USD LIBOR settings to ARRs.

On May 16, 2022, Refinitiv Benchmark Services UK Limited announced that it will cease publication of all remaining Canadian Dollar Offered Rate (CDOR) settings immediately after June 28, 2024, using a two-stage transition approach. By the end of the first stage on June 30, 2023, all new derivative contracts and securities were expected to reference the Canadian Overnight Repo Rate Average (CORRA), with the exception of derivatives that hedge or reduce CDOR exposures from derivatives or securities that were transacted before June 30, 2023, or loan agreements entered into before June 28, 2024. All remaining CDOR exposures are to be transitioned to CORRA by June 28, 2024, marking the end of the second stage. On July 27, 2023, the Canadian Alternative Reference Rate (CARR) working group announced that lenders may not offer new CDOR and bankers' acceptance (BA) loans after November 1, 2023. The announcement does not impact our project plans.

With the transition from CDOR and BAs to ARRs well underway, and as both a holder and an issuer of CDOR-based instruments, BMO continues to be exposed to financial, operational, legal and regulatory, and reputational risks. These risks arise principally either from amending legacy contracts from CDOR to an ARR or from existing fallback clauses for new ARRs and the resulting impact on economic risk management, as well as from updating hedge designations as the new ARRs emerge. Our enterprise IBOR Transition Office (ITO) continues to coordinate and oversee the transition from CDOR to ARRs, with a focus on managing and mitigating internal risks, as well as managing our client relationships. The ITO is sponsored and supported by senior management and has a global mandate to address the bank's industry and regulatory engagement, internal and external communications, technology and operations modifications, introduction of new products, migration of existing client contracts, program strategy and governance, and to evaluate financial reporting impacts, including impacts on hedge accounting. As the market continues to develop, we have added and will continue to add ARR-based products to our suite of offerings. We continue to incorporate contractual fallback provisions in new CDOR-based cash products in order to ensure there is an ARR at the time of the relevant CDOR cessation.

The following table presents quantitative information as at October 31, 2023, which includes financial instruments that referenced remaining CDOR and BA rate settings, or are demand facilities that will be subject to remediation to amend the benchmark interest rate. The quantitative information as at October 31, 2022, which includes financial instruments that referenced remaining USD LIBOR settings due to mature after June 30, 2023, or after June 28, 2024 for remaining CDOR and BA rate settings, or are demand facilities that will be subject to remediation to amend the benchmark interest rate. Changes in our holdings of financial instruments during fiscal 2023 reduced our exposure to transition risks since adoption of these Phase 2 amendments. In the ordinary course of business, our exposures may continue to fluctuate with no significant impact expected on our IBOR conversion plans.

(Canadian $ in millions)	**CDOR**	CDOR	USD LIBOR (7)
	2023	2022	2022
Non-derivative assets (1)	**44,370**	37,101	48,162
Non-derivative liabilities (1)	**4,584**	4,583	3,335
Derivative notional amounts (2)(3)	**1,779,140**	1,554,518	1,870,472
Authorized and committed loan commitments (4)(5)(6)	**55,548**	26,106	90,797

(1) All amounts are presented based on contractual amounts outstanding with the exception of securities, recorded innon-derivative assets, which are presented based on carrying value.
(2) Notional amounts represent the amount to which a rate or price is applied in order to calculate the amount of cash that must be exchanged under the contract. Notional amounts do not represent assets or liabilities and therefore are not recorded in our Consolidated Balance Sheet.
(3) Includes certain cross-currency swap positions where both the pay and receive legs currently reference an IBOR. For those derivatives, the table above includes the notional amounts for both the pay and receive legs in the relevant columns aligning with the IBOR exposure.
(4) Excludes personal lines of credit and credit cards that are unconditionally cancellable at our discretion. A large majority of these commitments expire without being drawn upon. As a result, the total contractual amounts may not be representative of the funding likely to be required for these commitments.
(5) Includes loan commitments where our customers have the option to draw from their facility in multiple currencies. Amounts drawn will be subject to prevailing IBORs for the foreign currency, including those that are in scope of IBOR reform.
(6) Commitments also include backstop liquidity facilities provided by the bank to external parties.
(7) As at October 31, 2023, BMO had transitioned all exposure to USD LIBOR settings to ARRs

Use of Estimates and Judgments

The preparation of the consolidated financial statements requires management to make estimates and assumptions that affect the carrying amounts of certain assets and liabilities, certain amounts reported in net income and other related disclosures.

The most significant assets and liabilities for which we must make estimates and judgments include the allowance for credit losses (ACL); financial instruments measured at fair value; pension and other employee future benefits; impairment of securities; income taxes and deferred tax assets; goodwill and intangible assets; insurance-related liabilities; provisions, including legal proceedings and restructuring charges; transfers of financial assets; consolidation of SEs; and the valuation of the assets and liabilities related to our acquisition of Bank of the West. We make judgments in assessing the business model for financial assets, as well as whether substantially all risks and rewards have been transferred in respect of transfers of financial assets and whether we control SEs, as discussed in Notes 6 and 7, respectively. If actual results were to differ from the estimates, the impact would be recorded in future periods.

The economic outlook is subject to several risks that could lead to a more severe contraction of the North American economy, including elevated inflation leading to possible further increases in interest rates, an escalation of geopolitical risks including wars in Ukraine and the Middle East, an increase in trade tensions between the United States and China and a further deterioration in diplomatic relations between Canada and India. The impacts on our business, results of operations, reputation, financial performance and condition, including the potential for credit, counterparty and mark-to-market losses, and on our credit ratings and regulatory capital and liquidity ratios, as well as impacts on our customers and competitors, will depend on future developments, which remain uncertain. By their very nature, the judgments and estimates we make for the purposes of preparing our consolidated financial statements relate to matters that are inherently uncertain. However, we have detailed policies and internal controls that are intended to ensure the judgments made in estimating these amounts are well controlled and independently reviewed, and that our policies are consistently applied from period to period. We believe that our estimates of the value of our assets and liabilities are appropriate as at October 31, 2023.

Allowance for Credit Losses
The expected credit loss (ECL) model requires the recognition of credit losses generally based on 12 months of expected losses for performing loans and the recognition of lifetime losses on performing loans that have experienced a significant increase in credit risk since origination.

The determination of a significant increase in credit risk takes into account many different factors and varies by product and risk segment. The bank's methodology for determining significant increase in credit risk is based on the change in probability of default (PD) between origination and reporting date, assessed using probability-weighted scenarios, as well as certain other criteria, such as 30-day past due and watchlist status. The assessment of a significant increase in credit risk requires experienced credit judgment.

In determining whether there has been a significant increase in credit risk and in calculating the amount of ECL, we must rely on estimates and exercise judgment regarding matters for which the ultimate outcome is unknown. These judgments include changes in circumstances that may cause future assessments of credit risk to be materially different from current assessments, which could require an increase or decrease in the ACL. The calculation of ECLs includes the explicit incorporation of forecasts of future economic conditions. We have developed models incorporating specific macroeconomic variables that are relevant to each portfolio. Key economic variables for our retail portfolios include primary operating markets of Canada, the United States and regional markets where considered significant. Forecasts are developed internally by our Economics group, considering external data and our view of future economic conditions. We exercise experienced credit judgment to incorporate multiple economic forecasts, which are probability-weighted in the determination of the final ECL. The allowance is sensitive to changes in both economic forecasts and the probability weight assigned to each forecast scenario.

Additional information regarding the ACL is included in Note 4.

Financial Instruments Measured at Fair Value
Fair value measurement techniques are used to value various financial assets and financial liabilities, and are also used in performing impairment testing on certain non-financial assets.

Additional information regarding our fair value measurement techniques is included in Note 17.

Pension and Other Employee Future Benefits
Our pension and other employee future benefit expense is calculated by our independent actuaries using assumptions determined by management. If actual experience were to differ from the assumptions used, we would recognize this difference in other comprehensive income.

Pension and other employee future benefit expense, plan assets and defined benefit obligations are also sensitive to changes in discount rates. We determine discount rates for all of our plans using high-quality AA rated corporate bond yields with terms matching the plans' specific cash flows.

Additional information regarding our accounting for pension and other employee future benefits is included in Note 21.

Impairment of Securities
We review investments in associates and joint ventures at each quarter-end reporting period to identify and evaluate investments that show indications of possible impairment. For these equity securities, a significant or prolonged decline in the fair value of a security below its cost is objective evidence of impairment.

Debt securities measured at amortized cost or FVOCI are assessed for impairment using the ECL model. For securities determined to have low credit risk, the ACL is measured at a 12-month ECL.

Additional information regarding our accounting for debt securities measured at amortized cost or FVOCI and investments in associates and joint ventures, ACL and the determination of fair value is included in Notes 3 and 17.

Income Taxes and Deferred Tax Assets
The provision for income taxes is calculated based on the expected tax treatment of transactions recorded in either our Consolidated Statement of Income or Consolidated Statement of Changes in Equity. In determining the provision for income taxes, we interpret tax legislation, case law and administrative positions in numerous jurisdictions and, based on our judgment, record our estimate of the amount required to settle tax obligations. We also make assumptions about the expected timing of the reversal of deferred tax assets and liabilities. If our interpretations and assumptions differ from those of tax authorities, or if the timing of reversals is not as expected, our provision for income taxes could increase or decrease in future periods. The amount of any such increase or decrease cannot be reasonably estimated.

Deferred tax assets are recognized only when it is probable that sufficient taxable profit will be available in future periods against which deductible temporary differences or unused tax losses and tax credits may be utilized. We are required to assess whether it is probable that our deferred tax assets will be realized. The factors used to assess the probability of realization are our past experience of income and capital gains, our forecast of future net income before taxes, and the remaining expiration period of tax loss carryforwards and tax credits. Changes in our assessment of these factors could increase or decrease our provision for income taxes in future periods.

Additional information regarding our accounting for income taxes is included in Note 22.

Goodwill and Intangible Assets
For the purpose of impairment testing, goodwill is allocated to our groups of cash-generating units (CGUs), which represent the lowest level within the bank at which goodwill is monitored for internal management purposes. Impairment testing is performed at least annually, by comparing the carrying values and the recoverable amounts of the CGUs to which goodwill has been allocated to determine whether the recoverable amount of each group is greater than its carrying value. If the carrying value of the group were to exceed its recoverable amount, an impairment calculation would be performed. The recoverable amount of a CGU is the higher of its fair value less costs to sell and value in use.

In determining fair value less costs to sell, we employ a discounted cash flow model consistent with those we use when we acquire a business. This model is dependent on assumptions related to revenue growth, discount rates, synergies achieved on acquisition and the availability of comparable acquisition data. Changes in any of these assumptions would affect the determination of fair value for each CGU in a different manner. Management must exercise judgment and make assumptions in determining fair value less costs to sell, and differences in judgment and assumptions could affect the determination of fair value and any resulting impairment write-down.

Intangible assets with a definite life are amortized to income on either a straight-line or an accelerated basis over a period not exceeding 15 years, depending on the nature of the asset. We test definite-life intangible assets for impairment when circumstances indicate the carrying value may not be recoverable. Indefinite-life intangible assets are tested annually for impairment. If any intangible assets are determined to be impaired, we write them down to their recoverable amount, the higher of value in use and fair value less costs to sell, when this is less than the carrying value.

Additional information regarding goodwill and intangible assets is included in Note 11.

Insurance-Related Liabilities

Insurance claims and policy benefit liabilities represent current claims and estimates of future insurance policy benefit liabilities. Liabilities for life insurance contracts are determined using the Canadian Asset Liability Method, which incorporates best-estimate assumptions for mortality, morbidity, policy lapses, surrenders, future investment yields, policy dividends, administration costs and margins for adverse deviation. These assumptions are reviewed at least annually and updated to reflect actual experience and market conditions. The most significant impact on the valuation of a liability would result from a change in the assumption for future investment yields.

Additional information regarding insurance-related liabilities is included in Note 14.

Provisions

A provision, including provisions for legal proceedings and restructuring charges, is recognized if, as a result of a past event, the bank has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. A provision is recorded at the best estimate of the amount required to settle an obligation as at the balance sheet date, taking into account the risks and uncertainties associated with the obligation. Management and external experts are involved in estimating any provision, as necessary. The actual costs of settling some obligations may be substantially higher or lower than the amounts of the provisions.

Additional information regarding provisions is included in Note 24.

Transfer of Financial Assets

We enter into transactions in which we transfer financial assets, typically mortgage loans, mortgage-backed securities and credit card loans, to a structured entity or third party to obtain alternate sources of funding or as part of our trading activities. We assess whether substantially all of the risks and rewards of, or control over, the assets have been transferred in order to determine whether they qualify for derecognition. Where we continue to be exposed to substantially all of the repayment, interest rate and/or credit risk associated with the securitized assets, they do not qualify for derecognition. We continue to recognize the assets and the related cash proceeds as secured financings in our Consolidated Balance Sheet.

Additional information regarding transferred financial assets is included in Note 6.

Consolidation of Structured Entities

Securitization vehicles sponsored by the bank typically have limited decision-making authority. The structure of these vehicles limits the activities they can undertake, the types of assets they can hold and the funding of their activities. We control and consolidate these vehicles when we have the key decision-making powers necessary to obtain the majority of the benefits from their activities.

For certain investments in limited partnerships, we exercise judgment in determining whether we control an entity. Based on an assessment of our interests and rights, we have determined that we do not control certain entities, even though we may have an ownership interest greater than 50%. This may be the case when we are not the general partner in an arrangement and the general partner's rights most significantly affect the returns of the entity. Additionally, we have determined that we control certain entities despite having an ownership interest of less than 50%. This may be the case when we are the general partner in an arrangement and the general partner's rights most significantly affect the returns of the entity.

Additional information regarding SEs is included in Notes 7 and 20.

Acquisition of Bank of the West – Valuation of Assets and Liabilities

Significant judgments and assumptions were used to determine the fair value of the Bank of the West assets acquired and liabilities assumed, including the loan portfolio, core-deposit and other relationship intangible assets, and fixed maturity deposits.

For loans, the determination of fair value involved estimating the cash flows which are expected to be received on all purchased loans and discounting these back to their present value. We estimated expected cash flows based on models that incorporate management's best estimate of current key assumptions such as default rates, loss severity, timing of prepayments and collateral. In determining the discount rate, we considered various factors, including our cost to raise funds in the current market, the risk premium associated with the loans and the cost to service the portfolios.

For core-deposit intangible assets, fair value was determined using a discounted cash flow approach, comparing the present value of the cost to maintain the acquired deposits to the cost of alternative funding. The present value of the cost to maintain the acquired deposits includes an estimate of future interest costs and operating expenses for the core deposits acquired. Core deposits are those that we considered to be stable, below-market sources of funding. Deposit run-off was estimated using historical attrition data, comparing this to market sources at the date of acquisition.

We calculated the fair value of wealth management and credit card customer relationships acquired based on the excess of estimated future cash inflows (i.e. revenue from the acquired relationships) over the related estimated cash outflows (i.e. operating costs and contributory asset charges) over the estimated life of the customer base.

The determination of the fair value of fixed maturity deposits involved estimating the cash flows to be paid and discounting these back to their present value. The timing and amount of cash flows include significant management judgment regarding the likelihood of early redemption and the timing of withdrawal by the customer. Discount rates were based on the prevailing rates we were paying on similar deposits at the date of acquisition.

The fair value of all other assets and liabilities, including real estate properties, was calculated using market data where possible, as well as management judgment, to determine the price that would be obtained in an arms-length transaction between knowledgeable, willing parties.

Additional information regarding our accounting for the acquisition is included in Notes 4 and 10.

Future Changes in IFRS and Accounting Policies

IFRS 17 Insurance Contracts

In May 2017, the IASB issued IFRS 17 *Insurance Contracts* (IFRS 17), which provides a comprehensive approach to accounting for all types of insurance contracts and will replace existing IFRS 4 *Insurance Contracts* (IFRS 4). The standard was subsequently amended in June 2020 with additional narrow-scope amendments in December 2021. IFRS 17 will be effective for our fiscal year beginning November 1, 2023. We established an enterprise-wide project in order to meet the requirements of IFRS 17.

IFRS 17 will change the fundamental principles used to recognize and measure insurance contracts, including life insurance contracts, reinsurance contracts held and investment contracts with discretionary participation features.

Key differences from IFRS 4 are as follows:

IFRS 17 requires us to measure groups of contracts based on our estimates of the present value of future cash flows that are expected to arise as we fulfill the contracts, an explicit risk adjustment for insurance-specific risk and a contractual service margin (CSM) that represents unearned profits. The CSM component of the insurance contract liability will be amortized into income as services/insurance coverage is provided. For groups of onerous contracts that are expected to experience losses, we are required to record these losses in income immediately. Under IFRS 4, there is no similar grouping requirement and gains/losses on new business are recognized in income immediately.

The discount rate we use under IFRS 4 is connected to the net yield of the assets held to support insurance contract liabilities. Under IFRS 17, the rate used to discount our insurance contract liabilities will reflect the characteristics of those insurance contract liabilities. We have elected the accounting policy choice under IFRS 17 to recognize changes in the discount rate and financial assumptions on insurance contract liabilities, through the Consolidated Statement of Income.

On transition, we are required to apply a full retrospective approach where we restate prior periods as if we had always applied IFRS 17, unless impracticable, in which case we will apply either the modified retrospective approach where we apply specific modifications to the full retrospective approach, or the fair value approach where we determine a fair value for the CSM by taking the difference between discounted fulfilment cash flows and risk adjustment using market participant assumptions versus using our own IFRS 17 assumptions. We have completed our assessment of IFRS 17 and will apply the full retrospective approach to our creditor business and the fair value approach to all other products written prior to November 1, 2022.

The estimated impact of adopting IFRS 17 as at November 1, 2022 is an increase in assets of approximately $1,050 million, an increase in liabilities of approximately $2,090 million and a decrease in shareholders' equity of approximately $1,435 million ($1,040 million after-tax). The CSM will qualify as Tier 1 Capital.

IAS 40 Investment Property

On transition to IFRS 17, we plan to voluntarily change our accounting policy for the measurement of investment properties, recorded in insurance-related assets in other assets in our Consolidated Balance Sheet, from cost to fair value in order to better align returns on our investment properties with gains and losses from our insurance business. IAS 40 *Investment Property* permits either measurement approach. We will apply the change retrospectively, as if we had always accounted for investment properties at fair value. This change is expected to increase assets by approximately $135 million and increase shareholders' equity by approximately $185 million ($135 million after-tax) as at November 1, 2022.

The impact of these combined changes on our Common Equity Tier 1 (CET1) Ratio is not expected to be material.

IAS 12 Income Taxes

In May 2021, the IASB issued an amendment to IAS 12 *Income Taxes* (IAS 12), which will be effective for our fiscal year beginning November 1, 2023. The amendment narrows the IAS 12 exemption to exclude transactions that give rise to equal and offsetting temporary differences (e.g. leases and asset retirement obligations). Upon adoption of the amendment, we will record separate deferred tax assets and liabilities related to the assets and liabilities that give rise to these temporary differences. There will be no impact on our Consolidated Balance Sheet, as the balances are eligible for offset when levied by the same tax authority. This change will impact note disclosure only.

In May 2023, the IASB issued an additional amendment to IAS 12. The amendment addresses concerns around accounting for the global minimum top-up tax as outlined in the two-pillar plan for international tax reform developed by members of the Organisation for Economic Co-operation and Development/G20 Inclusive Framework on Base Erosion and Profit Shifting. The objective of the tax reform is to ensure that large multinational groups are subject to a minimum tax rate of 15% on income earned in each jurisdiction that they carry on business. We will be impacted by the tax reform once the Canadian federal government, or a foreign government of a country in which we operate, passes into law the global minimum tax. The amendment to IAS 12 includes temporary mandatory relief from recognizing and disclosing deferred taxes for the top-up tax, that will be applicable once the measures are substantively enacted.

Note 2: Cash and Interest Bearing Deposits with Banks

Cash and Cash Equivalents

(Canadian $ in millions)	2023	2022
Cash and deposits with banks (1)	**75,528**	85,234
Cheques and other items in transit, net	**2,406**	2,232
Total cash and cash equivalents	**77,934**	87,466

(1) Includes deposits with the Bank of Canada, the U.S. Federal Reserve and other central banks.

Cheques and Other Items in Transit, Net
Cheques and other items in transit are recorded at cost and represent the net position of the uncleared cheques and other items in transit between us and other banks.

Cash Restrictions
We are required to maintain reserves or minimum balances with certain central banks, regulatory bodies and counterparties, totalling $125 million as at October 31, 2023 ($87 million as at October 31, 2022).

Interest Bearing Deposits with Banks

Deposits with banks are recorded at amortized cost and include acceptances we have purchased that were issued by other banks. Interest income earned on these deposits is recorded on an accrual basis.

Note 3: Securities

Securities are divided into six types, each with a different purpose and accounting treatment. The types of securities we hold are as follows:

Trading securities are securities purchased for resale over a short period of time. Trading securities are recorded at FVTPL. Transaction costs and changes in fair value are recorded in our Consolidated Statement of Income in trading revenues (losses).

Fair value through profit or loss securities are measured at fair value, with changes in fair value and related transaction costs recorded in our Consolidated Statement of Income in securities gains, other than trading, except as noted below. This category includes the following:

Securities Designated at FVTPL
In order to qualify for this designation, the security must have a reliably measurable fair value, and the designation eliminates or significantly reduces the inconsistent treatment that would otherwise arise from measuring the gains and losses on a different basis. Securities must be designated on initial recognition, and the designation is irrevocable. If these securities were not designated at FVTPL, they would be accounted for at either FVOCI or amortized cost.

We designate certain securities held by our insurance subsidiaries that support our insurance liabilities at FVTPL, since the actuarial calculation of insurance liabilities is based on the fair value of the investments supporting them. This designation aligns the accounting result with the way the portfolio is managed on a fair value basis. The change in fair value of the securities is recorded in non-interest revenue, insurance revenue (loss), and the change in fair value of the liabilities is recorded in insurance claims, commissions and changes in policy benefit liabilities. The fair value of these investments of $9,991 million as at October 31, 2023 ($9,231 million as at October 31, 2022) is recorded in securities in our Consolidated Balance Sheet.

Securities Mandatorily Measured at FVTPL
Securities managed on a fair value basis, but not held for trading, or debt securities with cash flows that do not represent solely payments of principal and interest, and equity securities not held for trading or designated at FVOCI, are classified as FVTPL. The fair value of these investments of $6,729 million as at October 31, 2023 ($4,410 million as at October 31, 2022) is recorded in securities in our Consolidated Balance Sheet.

Investments in Low Income Housing Tax Credit (LIHTC) entities are included in this balance as they are classified as FVTPL, with both changes in fair value of the investments and the benefit of tax credits received recorded in non-interest revenue, securities gains, other than trading. The fair value of these investments was $808 million as at October 31, 2023 ($244 million as at October 31, 2022).

Debt securities at FVOCI are debt securities purchased with the objective of both collecting contractual cash flows and selling the securities. The securities' cash flows represent solely payments of principal and interest. These securities may be sold in response to, or in anticipation of, changes in interest rates and any resulting prepayment risk, changes in credit risk, changes in foreign currency risk or changes in funding sources or terms, or in order to meet liquidity needs.

Debt securities measured at FVOCI are initially recorded at fair value plus transaction costs. They are subsequently measured at fair value, with unrealized gains and losses recorded in our Consolidated Statement of Comprehensive Income until the security is sold or impaired. Gains and losses on disposal and impairment losses (recoveries) are recorded in our Consolidated Statement of Income in non-interest revenue, securities gains, other than trading. Interest income earned is recorded in our Consolidated Statement of Income in interest, dividend and fee income, securities, using the effective interest method.

Equity securities at FVOCI are equity securities for which we have elected to record changes in the fair value of the instrument in other comprehensive income as opposed to FVTPL. Gains or losses recorded on these instruments will never be recognized in profit or loss. Equity securities measured at FVOCI are not subject to an impairment assessment.

Debt securities at amortized cost are debt securities purchased with the objective of collecting contractual cash flows, and those cash flows represent solely payments of principal and interest. These securities are initially recorded at fair value plus transaction costs and are subsequently measured at amortized cost, using the effective interest method. Impairment losses (recoveries) are recorded in our Consolidated Statement of Income in non-interest revenue, securities gains, other than trading. Interest income earned and amortization of premiums, discounts and transaction costs are recorded in our Consolidated Statement of Income in interest, dividend and fee income, securities.

Investments in associates and joint ventures are accounted for using the equity method of accounting. Investments in associates are those in which we exert significant influence over operating and financing decisions; generally companies in which we own between 20% and 50% of the voting shares. Investments in joint ventures are those in which we have joint control. Our share of the net income or loss, including any impairment losses, is recorded in our Consolidated Statement of Income in non-interest revenue, share of profit in associates and joint ventures. Any other comprehensive income amounts are reflected in the relevant sections of our Consolidated Statement of Comprehensive Income.

We account for all of our securities transactions using settlement date accounting in our Consolidated Balance Sheet.

Impairment Review

Debt securities at amortized cost or FVOCI are assessed for impairment using the ECL model, with the exception of those determined to have low credit risk, where the ACL is measured at a 12-month ECL. A debt security is considered to have low credit risk if it has a low risk of default, and if the borrower has a strong capacity to meet its contractual cash flow obligations in the near term and adverse changes in economic and business conditions in the longer term may, but will not necessarily, reduce the ability of the borrower to fulfill its contractual cash flow obligations.

Debt securities at amortized cost totalling $116,814 million as at October 31, 2023 ($106,590 million as at October 31, 2022) are net of allowances for credit losses of $3 million as at October 31, 2023 ($3 million as at October 31, 2022).

Debt securities at FVOCI totalling $62,668 million as at October 31, 2023 ($43,408 million as at October 31, 2022) are net of allowances for credit losses of $3 million as at October 31, 2023 ($3 million as at October 31, 2022).

Fair Value Measurement

For traded securities, quoted market value is considered to be fair value. Quoted market value is based on bid or ask prices, depending on which is the most appropriate to measure fair value. Where market quotes are not available, we use estimation techniques to determine fair value. Additional information regarding fair value measurement techniques is included in Note 17.

Remaining Term to Maturity of Securities

The following table shows the remaining terms to maturity of securities:

(Canadian $ in millions, except as noted)	Term to maturity						2023	2022
	Within 1 year	1 to 3 years	3 to 5 years	5 to 10 years	Over 10 years	No maturity	Total	Total
Trading Securities								
Issued or guaranteed by:								
Canadian federal government	2,499	2,198	1,675	2,002	2,252	–	10,626	10,936
Canadian provincial and municipal governments	1,847	454	296	942	3,491	–	7,030	6,110
U.S. federal government	2,950	7,376	2,474	4,713	2,819	–	20,332	16,699
U.S. states, municipalities and agencies	5	11	2	109	152	–	279	139
Other governments	525	822	767	412	49	–	2,575	3,970
NHA MBS, U.S. agency MBS and CMO (1)	39	504	667	1,080	21,579	–	23,869	14,312
Corporate debt	2,193	2,886	3,388	2,061	1,206	–	11,734	9,592
Trading loans	–	57	228	165	–	–	450	346
Corporate equity	–	–	–	–	–	47,661	47,661	46,073
Total trading securities	10,058	14,308	9,497	11,484	31,548	47,661	124,556	108,177
FVTPL Securities								
Issued or guaranteed by:								
Canadian federal government	147	–	–	4	65	–	216	493
Canadian provincial and municipal governments	20	10	17	119	1,001	–	1,167	1,080
U.S. federal government	7	–	–	–	2,081	–	2,088	4
Other governments	24	24	–	–	–	–	48	87
NHA MBS, U.S. agency MBS and CMO (1)	–	–	12	7	–	–	19	8
Corporate debt	58	287	348	958	5,709	–	7,360	6,479
Corporate equity	–	–	–	–	–	5,822	5,822	5,490
Total FVTPL securities	256	321	377	1,088	8,856	5,822	16,720	13,641
FVOCI Securities								
Issued or guaranteed by:								
Canadian federal government								
Amortized cost	6,366	2,878	9,325	2,055	–	–	20,624	12,498
Fair value	6,367	2,851	8,993	1,936	–	–	20,147	12,301
Yield (%)	3.70	2.84	2.59	3.44	–	–	3.05	2.14
Canadian provincial and municipal governments								
Amortized cost	1,328	420	1,165	2,351	17	–	5,281	4,724
Fair value	1,326	403	1,119	2,193	14	–	5,055	4,571
Yield (%)	3.53	2.18	3.12	3.28	5.04	–	3.23	2.70
U.S. federal government								
Amortized cost	713	636	837	3,884	175	–	6,245	3,403
Fair value	711	602	775	3,641	151	–	5,880	3,110
Yield (%)	5.03	3.72	2.93	3.71	4.31	–	3.77	2.13
U.S. states, municipalities and agencies								
Amortized cost	565	767	427	2,603	1,124	–	5,486	3,863
Fair value	559	735	399	2,517	1,091	–	5,301	3,714
Yield (%)	2.33	2.16	2.61	5.00	5.38	–	4.22	2.30
Other governments								
Amortized cost	4,124	955	1,784	201	–	–	7,064	6,532
Fair value	4,107	938	1,723	201	–	–	6,969	6,411
Yield (%)	2.82	3.48	3.54	3.27	–	–	3.11	1.62
NHA MBS, U.S. agency MBS and CMO (1)								
Amortized cost	33	1,009	2,686	2,928	9,765	–	16,421	9,572
Fair value	33	999	2,654	2,776	9,303	–	15,765	9,268
Yield (%)	4.56	4.44	4.02	3.67	5.32	–	4.76	2.35
Corporate debt								
Amortized cost	1,842	507	507	659	123	–	3,638	4,203
Fair value	1,820	489	488	637	117	–	3,551	4,033
Yield (%)	6.50	4.21	4.04	4.41	5.76	–	5.43	2.29
Corporate equity								
Cost	–	–	–	–	–	129	129	122
Fair value	–	–	–	–	–	160	160	153
Total cost or amortized cost	14,971	7,172	16,731	14,681	11,204	129	64,888	44,917
Total fair value	14,923	7,017	16,151	13,901	10,676	160	62,828	43,561
Yield (%)	3.80	3.22	3.02	3.85	5.32	–	3.80	2.19
Amortized Cost Securities (2)								
Issued or guaranteed by:								
Canadian federal government								
Amortized cost	2,491	1,985	400	32	–	–	4,908	7,136
Fair value	2,549	1,924	401	31	–	–	4,905	7,129
Yield (%)	1.92	1.58	2.47	2.87	–	–	1.83	1.55
Canadian provincial and municipal governments								
Amortized cost	554	2,216	1,035	808	–	–	4,613	5,588
Fair value	573	2,251	1,025	756	–	–	4,605	5,583
Yield (%)	2.31	1.90	2.67	2.70	–	–	2.26	2.35
U.S. federal government								
Amortized cost	2,928	13,919	17,018	20,514	2,499	–	56,878	59,245
Fair value	2,317	13,198	15,477	17,391	2,680	–	51,063	51,717
Yield (%)	1.73	1.42	1.34	1.57	2.19	–	1.50	1.49
U.S. states, municipalities and agencies								
Amortized cost	–	–	–	190	–	–	190	109
Fair value	–	–	–	179	–	–	179	105
Yield (%)	–	–	–	4.66	–	–	4.66	4.26
Other governments								
Amortized cost	289	478	181	–	–	–	948	1,387
Fair value	261	456	62	–	–	–	779	1,377
Yield (%)	1.72	1.40	3.07	–	–	–	1.82	1.66
NHA MBS, U.S. agency MBS and CMO (1)								
Amortized cost	632	2,500	4,276	1,557	38,625	–	47,590	31,013
Fair value	618	2,354	3,849	1,318	32,995	–	41,134	26,864
Yield (%)	2.46	1.46	1.84	1.97	2.80	–	2.61	1.59
Corporate debt								
Amortized cost	216	645	651	123	52	–	1,687	2,112
Fair value	212	656	469	122	47	–	1,506	2,057
Yield (%)	1.70	1.31	2.45	1.77	0.25	–	1.80	1.82
Total carrying value	7,110	21,743	23,561	23,224	41,176	–	116,814	106,590
Total fair value	6,530	20,839	21,283	19,797	35,722	–	104,171	94,832
Yield (%)	1.90	1.48	1.55	1.66	2.76	–	2.01	1.58
Investments in Associates and Joint Ventures								
Carrying value	–	–	–	–	–	1,461	1,461	1,293
Total carrying value of securities	32,347	43,389	49,586	49,697	92,256	55,104	322,379	273,262
Total by Currency (Canadian $ equivalent)								
Canadian dollar	17,927	13,079	17,877	10,038	13,331	25,868	98,120	87,636
U.S. dollar	10,719	29,719	31,385	39,504	78,874	27,473	217,674	177,371
Other currencies	3,701	591	324	155	51	1,763	6,585	8,255
Total securities	32,347	43,389	49,586	49,697	92,256	55,104	322,379	273,262

(1) These amounts are either supported by insured mortgages or issued by U.S. agencies and government-sponsored enterprises. NHA refers to the National Housing Act, MBS refers to mortgage-backed securities and CMO refers to collateralized mortgage obligations.

(2) The carrying values of securities that are part of fair value hedging relationships are adjusted for related gains (losses) on hedge contracts.

The carrying values of securities that are part of fair value hedging relationships are adjusted for related gains (losses) on hedge contracts.

Yields in the table above are calculated using the cost of the security and the contractual interest rate associated with each security, adjusted for any amortization of premiums and discounts. Tax effects are not taken into consideration. The terms to maturity included in the table above are based on the contractual maturity dates of the securities. Actual maturities could differ, as issuers may have the right to call or prepay obligations.

Unrealized Gains and Losses on FVOCI Securities

The following table summarizes unrealized gains and losses:

(Canadian $ in millions)	2023				2022			
	Cost or amortized cost	**Gross unrealized gains**	**Gross unrealized losses**	**Fair value**	Cost or amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Issued or guaranteed by:								
Canadian federal government	**20,624**	**14**	**491**	**20,147**	12,498	11	208	12,301
Canadian provincial and municipal governments	**5,281**	**2**	**228**	**5,055**	4,724	6	159	4,571
U.S. federal government	**6,245**	**–**	**365**	**5,880**	3,403	–	293	3,110
U.S. states, municipalities and agencies	**5,486**	**5**	**190**	**5,301**	3,863	5	154	3,714
Other governments	**7,064**	**13**	**108**	**6,969**	6,532	4	125	6,411
NHA MBS, U.S. agency MBS and CMO	**16,421**	**12**	**668**	**15,765**	9,572	13	317	9,268
Corporate debt	**3,638**	**3**	**90**	**3,551**	4,203	25	195	4,033
Corporate equity	**129**	**31**	**–**	**160**	122	31	–	153
Total	**64,888**	**80**	**2,140**	**62,828**	44,917	95	1,451	43,561

Unrealized gains (losses) may be offset by related (losses) gains on hedge contracts.

Interest, Dividend and Fee Income

Interest, dividend and fee income has been included in our Consolidated Statement of Income as follows, excluding our share of profit in associates and joint ventures and trading securities. Related income for trading securities is included under trading-related revenue in Note 17.

(Canadian $ in millions)	**2023**	2022
FVTPL securities	**66**	28
FVOCI securities	**2,517**	650
Amortized cost securities	**3,510**	1,295
Total	**6,093**	1,973

Non-Interest Revenue

Net gains and losses from securities, excluding gains and losses on trading securities, have been included in our Consolidated Statement of Income as follows:

(Canadian $ in millions)	**2023**	2022
FVTPL securities	**144**	268
FVOCI securities – realized gains (1)	**37**	14
Impairment loss	**–**	(1)
Securities gains, other than trading	**181**	281

(1) Gains are net of (losses) on hedge contracts.

Gains and losses on trading securities are included under trading-related revenue in Note 17.

Interest and dividend income and gains (losses) on securities held in our insurance business are recorded in non-interest revenue, insurance revenue (loss), in our Consolidated Statement of Income. These include:

- Interest and dividend income of $454 million for the year ended October 31, 2023 ($397 million for the year ended October 31, 2022). Interest income is calculated using the effective interest method;
- Losses on securities designated at FVTPL of $282 million for the year ended October 31, 2023 (losses of $1,954 million for the year ended October 31, 2022); and
- Realized gains (losses) on FVOCI securities of $nil million for the year ended October 31, 2023 ($nil million for the year ended October 31, 2022).

Note 4: Loans and Allowance for Credit Losses

Loans

Loans are initially measured at fair value plus directly attributable costs, and are subsequently measured at amortized cost using the effective interest method where the cash flows of those loans represent solely payments of principal and interest; otherwise, the loans are measured at FVTPL. Where the loans are held with the objective of both collecting contractual cash flows and selling the loans, and the cash flows represent solely payments of principal and interest, the loans are measured at FVOCI. The effective interest method allocates interest income over the expected term of the loan by applying the effective interest rate to the carrying amount of the loan. The effective interest rate is defined as the rate that exactly discounts estimated future cash receipts through the expected term of the loan to the net carrying amount of the loan. Under the effective interest method, the amount recognized in interest, dividend and fee income, loans, varies over the term of the loan based on the principal outstanding. The treatment of interest income for impaired loans is described below.

Purchased Loans

Purchased loans are initially measured at fair value and identified as either purchased performing loans (those for which timely principal and interest payments continue to be made), or purchased credit impaired (PCI) loans (those for which the timely collection of interest and principal is no longer reasonably assured). These loans are subsequently measured at amortized cost or fair value, depending on the business model.

Purchased Performing Loans

For loans with fixed terms, the fair value/par value difference, referred to as the fair value mark, is amortized into interest income over the expected life of the loan using the effective interest method. For loans with revolving terms, the fair value mark is amortized into net interest income on a straight-line basis over the contractual term of the loan. As loans are repaid, the remaining unamortized fair value mark related to the loan is recorded in interest income in the period the loan is repaid. All purchased performing loans were initially recorded in Stage 1 for purposes of determining ECLs.

Following our acquisition of Bank of the West on February 1, 2023, we recognized purchased performing loans with a fair value of $76,068 million. Fair value reflected estimates of expected future credit losses at the acquisition date of $1,047 million, as well as interest rate premiums or discounts relative to prevailing market rates. Gross contractual receivables amounted to $78,931 million. As at October 31, 2023, purchased performing loans recorded in our Consolidated Balance Sheet totalled $68,025 million, including a remaining fair value mark of $(2,317) million.

Purchased Credit Impaired Loans

We regularly re-evaluate the amounts we expect to collect on PCI loans. Increases in expected cash flows result in a recovery of the provision for credit losses (PCL) and either a reduction in any previously recorded ACL or, if no ACL exists, an increase in the current carrying value of the purchased loans. Decreases in expected cash flows result in a charge to the PCL and an increase in the ACL. We record interest income using the effective interest method over the effective life of the loan. PCI loans are presented within Stage 3.

On February 1, 2023, we recognized PCI loans with a total fair value of $415 million, including a fair value mark of $(168) million.

The following table provides further details of the acquired Bank of the West PCI loans:

(Canadian $ in millions)	October 31, 2023
Unpaid principal balance (1)	**280**
Fair value adjustment	**(61)**
Carrying value	**219**
Stage 3 allowance	**(1)**
Carrying value net of related allowance	**218**

(1) Excludes loans that were fully written off prior to the acquisition date.

Commitments and Letters of Credit Acquired

As part of our acquisition of Bank of the West, we recorded a liability related to unfunded commitments and letters of credit. The total fair value mark associated with unfunded commitments and letters of credit is amortized into net interest income on a straight-line basis over the contractual term of the acquired commitments. All purchased commitments and letters of credit are included in Stage 1 for purposes of determining ECLs. ECLs are recorded on these commitments in normal course.

On February 1, 2023, we recorded a fair value mark on unfunded commitments and letters of credit of $(37) million in other liabilities in our Consolidated Balance Sheet. As at October 31, 2023, the remaining fair value mark of these commitments was $(30) million.

Securities Borrowed or Purchased Under Resale Agreements

Securities borrowed or purchased under resale agreements represent the amounts we will receive as a result of our commitment to return or resell securities that we have borrowed or purchased, back to the original lender or seller, on a specified date at a specified price. We account for these instruments as if they were loans.

Lending Fees

Lending fees primarily arise in P&C and BMO CM. The accounting treatment for lending fees varies depending on the transaction. Certain loan origination, restructuring and renegotiation fees are recorded as interest income over the term of the loan, while other lending fees are taken into income at the time of loan origination. Commitment fees are calculated as a percentage of the facility balance at the end of each period. The fees are recorded as interest income over the term of the loan, unless we believe the loan commitment will not be used. In the latter case, commitment fees are recorded as lending fees earned over the commitment period. Loan syndication fees are payable and included in lending fees at the time the syndication is completed, unless the yield on any loans we retain is less than that of other comparable lenders involved in the financing. In the latter case, an appropriate portion of the syndication fee is recorded as interest income over the term of the loan.

Impaired Loans

We classify a loan as impaired (Stage 3) when one or more loss events have occurred, such as bankruptcy or payment default, or when collection of the full amount of principal and interest is no longer reasonably assured. Loans are in default when the borrower is unlikely to pay its credit obligations in full without recourse by the bank, such as realizing security, or when the borrower's payments are more than a defined number of days past due.

Generally, consumer loans in both Canada and the United States are classified as impaired when payment is contractually 90 days past due, or one year past due for residential mortgages if guaranteed by the Government of Canada. Credit card loans are immediately written off when principal or interest payments are 180 days past due, and are not reported as impaired. In Canada, consumer instalment loans, other personal loans and some small business loans are normally written off when payment is one year past due. In the United States, all consumer loans are generally written off when payment is 180 days past due, except for non-real estate term loans, which are generally written off when payment is 120 days past due. For the purpose of measuring the amount to be written off, the determination of the recoverable amount includes an estimate of future recoveries.

Corporate and commercial loans are classified as impaired when we determine there is no longer reasonable assurance that principal or interest will be collected in their entirety on a timely basis. Generally, we consider corporate and commercial loans to be impaired when payments are 90 days past due. Corporate and commercial loans are written off following a review on an individual loan basis that confirms all reasonable recovery attempts have been exhausted.

Overdrafts are considered to be past due once the customer has breached an advised limit or has been advised of a limit lower than currently outstanding or, in the case of retail overdrafts, has not brought the overdraft down to a $nil balance within a specified time period.

A loan will be reclassified to performing status when we determine that there is reasonable assurance of full and timely repayment of interest and principal in accordance with the terms and conditions of the loan, and that none of the criteria for classification of the loan as impaired continues to apply.

Once a loan has been identified as impaired, we continue to recognize interest income based on the original effective interest rate on the loan amount net of its related allowance. In the periods following the recognition of impairment, adjustments to the allowance for these loans reflecting the time value of money are recognized as interest income. Interest income on impaired loans of $161 million was recognized for the year ended October 31, 2023 ($55 million in 2022).

Allowance for Credit Losses

The ACL recorded in our Consolidated Balance Sheet is maintained at a level that we consider adequate to absorb credit-related losses on our loans and other credit instruments. The ACL amounted to $4,267 million as at October 31, 2023 ($2,998 million as at October 31, 2022), of which $3,807 million ($2,617 million as at October 31, 2022) was recorded in loans and $460 million ($381 million as at October 31, 2022) was recorded in other liabilities in our Consolidated Balance Sheet.

Significant changes in the gross balances, including originations, maturities and repayments in the normal course of operations, impact the ACL. In addition, ECL on the purchased performing loans we acquired in the Bank of the West acquisition was recorded on the acquisition date, consistent with the process we follow for loans that we originate. An initial PCL of $705 million was recorded in our Consolidated Statement of Income.

Allowance on Performing Loans

We maintain an allowance in order to cover impairment in the existing portfolio for loans that have not yet been individually identified as impaired. Our approach to establishing and maintaining the allowance on performing loans is based on the requirements of IFRS, considering guidelines issued by OSFI.

Under the IFRS 9 ECL methodology, an allowance is recorded for ECL on financial assets regardless of whether there has been an actual impairment. We recognize an ACL at an amount generally equal to 12-month ECLs, if the credit risk at the reporting date has not increased significantly since initial recognition (Stage 1). We will record ECLs over the remaining life of performing financial assets that are considered to have experienced a significant increase in credit risk (Stage 2).

The determination of a significant increase in credit risk takes into account many different factors and varies by product and risk segment. The bank's methodology for determining a significant increase in credit risk is based on the change in PD between origination and reporting date, assessed using probability-weighted scenarios, as well as certain other criteria, such as 30-day past due and watchlist status.

For each exposure, ECL is a function of PD, exposure at default (EAD) and loss given default (LGD), with the timing of the loss also considered, and is estimated by incorporating forward-looking economic information and using experienced credit judgment to reflect factors not captured in ECL models.

PD represents the likelihood that a loan will not be repaid and will go into default in either a12-month horizon for Stage 1 or a lifetime horizon for Stage 2. PD for each individual instrument is modelled based on historical data and is estimated based on current market conditions and reasonable and supportable information about future economic conditions.

EAD is modelled based on historical data and represents an estimate of the amount of credit exposure outstanding at the time a default may occur. For off-balance sheet and undrawn amounts, EAD includes an estimate of any further amounts to be drawn at the time of default.

LGD is the amount that may not be recovered in the event of default and is modelled based on historical data and reasonable and supportable information about future economic conditions, where appropriate. LGD takes into consideration the amount and quality of any collateral held.

We consider past events, current market conditions and reasonable and supportable forward-looking information about future economic conditions in determining the amount of expected losses. In assessing information about possible future economic conditions, we utilize multiple economic scenarios, including our base case scenario, which in our view represents the most probable outcome, as well as benign and adverse scenarios, all of which are developed by our Economics group. Key economic variables used in the determination of the ACL reflect the geographic diversity of our portfolios, where appropriate.

In considering the lifetime of a loan, the contractual period of the loan, including prepayment, extension and other options, is generally used. For revolving instruments, such as credit cards, which may not have a defined contractual period, the lifetime is based on historical behaviour.

Our ECL methodology also requires the use of experienced credit judgment to incorporate the estimated impact of factors that are not captured in the modelled ECL results. We applied experienced credit judgment to reflect the continuing impact of the uncertain environment on credit conditions and the economy.

Allowance on Impaired Loans

We review our loans on an ongoing basis to assess whether any loans should be classified as impaired and whether an allowance orwrite-off should be recorded (excluding credit card loans, which are written off when principal or interest payments are 180 days past due). The review of individually significant problem loans is conducted at least quarterly by the account managers, each of whom assesses the ultimate collectability and estimated recoveries for a specific loan based on all events and conditions that are relevant to the loan. This assessment is then reviewed and approved by an independent credit officer.

Individually Significant Impaired Loans
To determine the amount we expect to recover from an individually significant impaired loan, we use the value of the estimated future cash flows discounted at the loan's original effective interest rate. The determination of estimated future cash flows of a collateralized impaired loan reflects the expected realization of the underlying security, net of expected costs and any amounts legally required to be paid to the borrower. Security can vary by type of loan and may include cash, securities, real estate properties, accounts receivable, guarantees, inventory or other capital assets.

Individually Insignificant Impaired Loans
Residential mortgages, consumer instalment loans, other personal loans and some small business loans are individually insignificant and may be assessed individually or collectively for losses at the time of impairment, taking into account historical loss experience and expectations of future economic conditions.

Collectively assessed loans are grouped together by similar risk characteristics, such as type of instrument, geographic location, industry, type of collateral and term to maturity.

Credit Risk Exposure

The following table sets out our credit risk exposure for all loans carried at amortized cost, FVOCI or FVTPL as at October 31, 2023 and 2022.
Stage 1 includes performing loans carried with up to a 12-month ECL, Stage 2 includes performing loans carried with a lifetime ECL, and Stage 3 includes loans with a lifetime ECL that are credit impaired.

(Canadian $ in millions)	2023				2022			
	Stage 1	**Stage 2**	**Stage 3** (1)(7)	**Total**	Stage 1	Stage 2	Stage 3 (7)	Total
Loans: Residential mortgages								
Exceptionally low	**2**	**–**	**–**	**2**	7	–	–	7
Very low	**85,423**	**171**	**–**	**85,594**	94,743	81	–	94,824
Low	**51,366**	**10,820**	**–**	**62,186**	31,617	3,134	–	34,751
Medium	**5,289**	**5,434**	**–**	**10,723**	13,474	3,871	–	17,345
High	**282**	**2,015**	**–**	**2,297**	138	341	–	479
Not rated (2)	**15,906**	**118**	**–**	**16,024**	1,126	53	–	1,179
Impaired	**–**	**–**	**424**	**424**	–	–	295	295
Gross residential mortgages	**158,268**	**18,558**	**424**	**177,250**	141,105	7,480	295	148,880
ACL	**73**	**146**	**5**	**224**	59	66	10	135
Carrying amount	**158,195**	**18,412**	**419**	**177,026**	141,046	7,414	285	148,745
Loans: Consumer instalment and other personal								
Exceptionally low	**1,545**	**4**	**–**	**1,549**	1,792	35	–	1,827
Very low	**37,924**	**180**	**–**	**38,104**	33,554	83	–	33,637
Low	**21,406**	**1,052**	**–**	**22,458**	24,369	1,307	–	25,676
Medium	**7,971**	**5,686**	**–**	**13,657**	13,536	4,633	–	18,169
High	**759**	**2,127**	**–**	**2,886**	873	1,525	–	2,398
Not rated (2)	**24,426**	**411**	**–**	**24,837**	4,052	32	–	4,084
Impaired	**–**	**–**	**549**	**549**	–	–	312	312
Gross consumer instalment and other personal	**94,031**	**9,460**	**549**	**104,040**	78,176	7,615	312	86,103
ACL	**208**	**415**	**152**	**775**	101	288	102	491
Carrying amount	**93,823**	**9,045**	**397**	**103,265**	78,075	7,327	210	85,612
Loans: Credit cards (3)								
Exceptionally low	**1,605**	**–**	**–**	**1,605**	2,920	–	–	2,920
Very low	**1,946**	**1**	**–**	**1,947**	442	1	–	443
Low	**1,884**	**70**	**–**	**1,954**	1,569	51	–	1,620
Medium	**3,860**	**890**	**–**	**4,750**	2,918	792	–	3,710
High	**533**	**763**	**–**	**1,296**	316	563	–	879
Not rated (2)	**651**	**91**	**–**	**742**	90	1	–	91
Impaired	**–**	**–**	**–**	**–**	–	–	–	–
Gross credit cards	**10,479**	**1,815**	**–**	**12,294**	8,255	1,408	–	9,663
ACL	**134**	**267**	**–**	**401**	69	207	–	276
Carrying amount	**10,345**	**1,548**	**–**	**11,893**	8,186	1,201	–	9,387
Loans: Business and government (4)								
Acceptable								
Investment grade	**202,731**	**3,886**	**–**	**206,617**	187,245	6,765	–	194,010
Sub-investment grade	**126,350**	**26,260**	**–**	**152,610**	98,451	22,390	–	120,841
Watchlist	**1,078**	**11,520**	**–**	**12,598**	–	6,310	–	6,310
Impaired	**–**	**–**	**2,987**	**2,987**	–	–	1,384	1,384
Gross business and government	**330,159**	**41,666**	**2,987**	**374,812**	285,696	35,465	1,384	322,545
ACL	**849**	**1,031**	**527**	**2,407**	608	675	432	1,715
Carrying amount	**329,310**	**40,635**	**2,460**	**372,405**	285,088	34,790	952	320,830
Total gross loans and acceptances	**592,937**	**71,499**	**3,960**	**668,396**	513,232	51,968	1,991	567,191
Total net loans and acceptances	**591,673**	**69,640**	**3,276**	**664,589**	512,395	50,732	1,447	564,574
Commitments and financial guarantee contracts								
Acceptable								
Investment grade	**195,149**	**1,721**	**–**	**196,870**	182,153	5,134	–	187,287
Sub-investment grade	**54,148**	**14,158**	**–**	**68,306**	45,920	14,047	–	59,967
Watchlist	**254**	**4,137**	**–**	**4,391**	2	2,176	–	2,178
Impaired	**–**	**–**	**687**	**687**	–	–	292	292
Gross commitments and financial guarantee contracts	**249,551**	**20,016**	**687**	**270,254**	228,075	21,357	292	249,724
ACL	**260**	**189**	**11**	**460**	194	174	13	381
Carrying amount (5)(6)	**249,291**	**19,827**	**676**	**269,794**	227,881	21,183	279	249,343

(1) Includes Bank of the West PCI loans. As at October 31, 2023, PCI loan gross carrying amounts were $34 million in residential mortgages, $48 million in consumer instalment and other personal loans and $137 million in business and government loans.
(2) Includes purchased portfolios and certain cases where an internal risk rating is not assigned. Alternative credit risk assessments, rating methodologies, policies and tools are used to manage credit risk for these portfolios.
(3) Credit card loans are immediately written off when principal or interest payments are 180 days past due, and as a result are not reported as impaired in Stage 3.
(4) Includes customers' liability under acceptances.
(5) Represents the total contractual amounts of undrawn credit facilities and otheroff-balance sheet exposures, excluding personal lines of credit and credit cards that are unconditionally cancellable at our discretion.
(6) Certain commercial borrower commitments are conditional and may include recourse to counterparties.
(7) 93% of Stage 3 loans were either fully or partially collateralized as at October 31, 2023 (92% as at October 31, 2022).

The following table shows the continuity in the loss allowance, by product type, for the years ended October 31, 2023 and 2022. Transfers represent the amount of ECL that moved between stages during the year, for example, moving from a 12-month (Stage 1) to a lifetime (Stage 2) ECL measurement basis. Net remeasurement represents the ECL impact due to transfers between stages, as well as changes in economic forecasts and credit quality. Model changes include new calculation models or methodologies.

(Canadian $ in millions)	2023				2022			
	Stage 1	**Stage 2**	**Stage 3** (1)	**Total**	Stage 1	Stage 2	Stage 3	Total
Loans: Residential mortgages								
Balance as at beginning of year	**59**	**67**	**16**	**142**	46	40	19	105
Transfer to Stage 1	**92**	**(92)**	**–**	**–**	39	(37)	(2)	–
Transfer to Stage 2	**(18)**	**27**	**(9)**	**–**	(4)	10	(6)	–
Transfer to Stage 3	**(1)**	**(12)**	**13**	**–**	–	(7)	7	–
Net remeasurement of loss allowance	**(94)**	**106**	**15**	**27**	(52)	61	8	17
Loan originations	**26**	**–**	**–**	**26**	34	–	–	34
Loan purchases	**31**	**–**	**–**	**31**	–	–	–	–
Derecognitions and maturities	**(4)**	**(9)**	**–**	**(13)**	(5)	(7)	–	(12)
Model changes	**(19)**	**63**	**–**	**44**	2	5	–	7
Total PCL (2)	**13**	**83**	**19**	**115**	14	25	7	46
Write-offs (3)	**–**	**–**	**(10)**	**(10)**	–	–	(5)	(5)
Recoveries of previous write-offs	**–**	**–**	**7**	**7**	–	–	7	7
Foreign exchange and other	**1**	**1**	**(22)**	**(20)**	(1)	2	(12)	(11)
Balance as at end of year	**73**	**151**	**10**	**234**	59	67	16	142
Loans: Consumer instalment and other personal								
Balance as at beginning of year	**111**	**304**	**102**	**517**	128	357	91	576
Transfer to Stage 1	**265**	**(254)**	**(11)**	**–**	230	(221)	(9)	–
Transfer to Stage 2	**(52)**	**93**	**(41)**	**–**	(41)	71	(30)	–
Transfer to Stage 3	**(18)**	**(104)**	**122**	**–**	(5)	(82)	87	–
Net remeasurement of loss allowance	**(264)**	**438**	**309**	**483**	(263)	226	103	66
Loan originations	**58**	**6**	**–**	**64**	92	–	–	92
Loan purchases	**179**	**–**	**–**	**179**	–	–	–	–
Derecognitions and maturities	**(34)**	**(43)**	**–**	**(77)**	(22)	(39)	–	(61)
Model changes	**(26)**	**(8)**	**–**	**(34)**	(9)	(13)	–	(22)
Total PCL (2)	**108**	**128**	**379**	**615**	(18)	(58)	151	75
Write-offs (3)	**–**	**–**	**(371)**	**(371)**	–	–	(205)	(205)
Recoveries of previous write-offs	**–**	**–**	**74**	**74**	–	–	80	80
Foreign exchange and other	**1**	**2**	**(32)**	**(29)**	1	5	(15)	(9)
Balance as at end of year	**220**	**434**	**152**	**806**	111	304	102	517
Loans: Credit cards								
Balance as at beginning of year	**115**	**250**	**–**	**365**	114	245	–	359
Transfer to Stage 1	**172**	**(172)**	**–**	**–**	149	(149)	–	–
Transfer to Stage 2	**(45)**	**45**	**–**	**–**	(34)	34	–	–
Transfer to Stage 3	**(3)**	**(147)**	**150**	**–**	(2)	(114)	116	–
Net remeasurement of loss allowance	**(146)**	**366**	**216**	**436**	(156)	236	74	154
Loan originations	**77**	**1**	**–**	**78**	54	–	–	54
Loan purchases	**25**	**–**	**–**	**25**	–	–	–	–
Derecognitions and maturities	**(7)**	**(36)**	**–**	**(43)**	(5)	(23)	–	(28)
Model changes	**–**	**–**	**–**	**–**	(6)	18	–	12
Total PCL (2)	**73**	**57**	**366**	**496**	–	2	190	192
Write-offs (3)	**–**	**–**	**(436)**	**(436)**	–	–	(249)	(249)
Recoveries of previous write-offs	**–**	**–**	**103**	**103**	–	–	78	78
Foreign exchange and other	**–**	**1**	**(33)**	**(32)**	1	3	(19)	(15)
Balance as at end of year	**188**	**308**	**–**	**496**	115	250	–	365
Loans: Business and government								
Balance as at beginning of year	**746**	**789**	**439**	**1,974**	662	855	401	1,918
Transfer to Stage 1	**306**	**(291)**	**(15)**	**–**	313	(267)	(46)	–
Transfer to Stage 2	**(173)**	**236**	**(63)**	**–**	(166)	243	(77)	–
Transfer to Stage 3	**(25)**	**(161)**	**186**	**–**	(1)	(52)	53	–
Net remeasurement of loss allowance	**(446)**	**735**	**308**	**597**	(437)	127	224	(86)
Loan originations	**276**	**4**	**–**	**280**	488	–	–	488
Loan purchases	**470**	**–**	**–**	**470**	–	–	–	–
Derecognitions and maturities	**(126)**	**(193)**	**–**	**(319)**	(223)	(168)	–	(391)
Model changes	**(17)**	**(51)**	**–**	**(68)**	19	(32)	–	(13)
Total PCL (2)	**265**	**279**	**416**	**960**	(7)	(149)	154	(2)
Write-offs (3)	**–**	**–**	**(372)**	**(372)**	–	–	(153)	(153)
Recoveries of previous write-offs	**–**	**–**	**81**	**81**	–	–	50	50
Foreign exchange and other	**32**	**87**	**(31)**	**88**	91	83	(13)	161
Balance as at end of year	**1,043**	**1,155**	**533**	**2,731**	746	789	439	1,974
Total as at end of year	**1,524**	**2,048**	**695**	**4,267**	1,031	1,410	557	2,998
Comprised of: Loans	**1,264**	**1,859**	**684**	**3,807**	837	1,236	544	2,617
Other credit instruments (4)	**260**	**189**	**11**	**460**	194	174	13	381

(1) Includes changes in allowance for PCI loans of $3 million for the year ended October 31, 2023. The total amount of ECLs at initial recognition on PCI loans was $79 million.
(2) Excludes PCL on other assets of $(8) million for the year ended October 31, 2023 ($2 million for the year ended October 31, 2022).
(3) Generally, we continue to seek recovery on amounts that were written off during the year, unless the loan is sold, we no longer have the right to collect or we have exhausted all reasonable efforts to collect.
(4) Other credit instruments, including off-balance sheet items, are recorded in other liabilities in our Consolidated Balance Sheet.

Loans and ACL by geographic region as at October 31, 2023 and 2022 are as follows:

(Canadian $ in millions)	2023				2022			
	Gross amount	**ACL on impaired loans** (2)	**ACL on performing loans** (3)	**Net amount**	Gross amount	ACL on impaired loans (2)	ACL on performing loans (3)	Net amount
By geographic region (1)								
Canada	**365,268**	**457**	**1,272**	**363,539**	342,430	363	1,102	340,965
United States	**283,355**	**227**	**1,833**	**281,295**	200,439	176	959	199,304
Other countries	**11,662**	**–**	**18**	**11,644**	11,087	5	12	11,070
Total	**660,285**	**684**	**3,123**	**656,478**	553,956	544	2,073	551,339

(1) Geographic region is based upon the country of ultimate risk.
(2) Excludes ACL on impaired loans of $11 million for other credit instruments, which is included in other liabilities ($13 million as at October 31, 2022).
(3) Excludes ACL on performing loans of $449 million for other credit instruments, which is included in other liabilities ($368 million as at October 31, 2022).

Impaired (Stage 3) loans, including the related allowances, as at October 31, 2023 and 2022 are as follows:

(Canadian $ in millions)	2023			2022		
	Gross impaired amount	**ACL on impaired loans** (3)	**Net impaired amount**	Gross impaired amount	ACL on impaired loans (3)	Net impaired amount
Residential mortgages	**424**	**5**	**419**	295	10	285
Consumer instalment and other personal	**549**	**152**	**397**	312	102	210
Business and government (1)	**2,987**	**527**	**2,460**	1,384	432	952
Total	**3,960**	**684**	**3,276**	1,991	544	1,447
By geographic region (2)						
Canada	**1,629**	**457**	**1,172**	1,158	363	795
United States	**2,331**	**227**	**2,104**	820	176	644
Other countries	**–**	**–**	**–**	13	5	8
Total	**3,960**	**684**	**3,276**	1,991	544	1,447

(1) Includes customers' liability under acceptances.
(2) Geographic region is based upon the country of ultimate risk.
(3) Excludes ACL on impaired loans of $11 million for other credit instruments, which is included in other liabilities ($13 million as at October 31, 2022).

Loans Past Due Not Impaired

Loans that are past due but not classified as impaired are loans for which customers have failed to make payments when contractually due but for which we expect the full amount of principal and interest payments to be collected, or loans that are held at fair value. The following table presents loans that are past due but not classified as impaired as at October 31, 2023 and 2022. Loans for which payment is less than 30 days past due have been excluded, as they are not generally representative of the borrowers' ability to meet their payment obligations.

(Canadian $ in millions)	2023			2022		
	30 to 89 days	**90 days or more** (1)	**Total**	30 to 89 days	90 days or more (1)	Total
Residential mortgages	**707**	**9**	**716**	411	19	430
Credit card, consumer instalment and other personal	**1,003**	**129**	**1,132**	392	84	476
Business and government	**826**	**18**	**844**	198	38	236
Total	**2,536**	**156**	**2,692**	1,001	141	1,142

(1) Fully secured loans with amounts between 90 and 180 days past due that we have not classified as impaired totalled $0 million as at October 31, 2023 ($43 million as at October 31, 2022).

ECL Sensitivity and Key Economic Variables

The allowance for performing loans is sensitive to changes in both economic forecasts and the probability weight assigned to each forecast scenario. Many of the factors have a high degree of interdependency, although there is no single factor to which loan impairment allowances as a whole are sensitive.

As at October 31, 2023, our benign scenario involves a materially stronger economic environment than the base case forecast with a considerably lower unemployment rate.

As at October 31, 2023, our base case scenario depicts a period of economic stagnation in the near term, largely in response to higher interest rates and tighter lending conditions, and a moderate economic recovery over the medium term as inflation is expected to ease and lead to lower interest rates in the second half of 2024. Our base case economic forecast as at October 31, 2022 depicted a slightly weaker economic environment in the projection period.

If we assumed a 100% base case economic forecast and included the impact of loan migration by restaging, with other assumptions held constant including the application of experienced credit judgment, the allowance for performing loans would be approximately $2,625 million as at October 31, 2023 ($1,900 million as at October 31, 2022) compared to the reported allowance for performing loans of $3,572 million ($2,441 million as at October 31, 2022).

As at October 31, 2023, our adverse scenario depicts a sizeable contraction in the Canadian and U.S. economy in the near term followed by a moderate recovery over the medium term. The adverse case as at October 31, 2022 depicted a broadly similar economic environment over the projection period. If we assumed a 100% adverse economic forecast and included the impact of loan migration by restaging, with other assumptions held constant including the application of experienced credit judgment, the allowance for performing loans would be approximately $6,025 million as at October 31, 2023 ($3,250 million as at October 31, 2022) compared to the reported allowance for performing loans of $3,572 million ($2,441 million as at October 31, 2022).

Actual results in a recession will differ, as our loan portfolio will change through time due to migration, growth, risk mitigation actions and other factors. In addition, our allowance will reflect the three economic scenarios used in assessing the allowance, with weightings attached to adverse and benign scenarios often unequally weighted, and the weightings will change through time.

The following table shows the key economic variables used to estimate the allowance on performing loans forecast over the next 12 months or lifetime measurement period. While the values disclosed below are national variables, we use regional variables in the underlying models and consider factors impacting particular industries where appropriate.

	As at October 31, 2023						As at October 31, 2022					
All figures are average annual values	**Benign scenario**		**Base scenario**		**Adverse scenario**		Benign scenario		Base scenario		Adverse scenario	
	First 12 months	**Remaining horizon** (1)	**First 12 months**	**Remaining horizon** (1)	**First 12 months**	**Remaining horizon** (1)	First 12 months	Remaining horizon (1)	First 12 months	Remaining horizon (1)	First 12 months	Remaining horizon (1)
Real GDP growth rates (2)												
Canada	**3.2%**	**2.6%**	**0.4%**	**1.9%**	**(3.9)%**	**1.2%**	3.7%	2.2%	1.5%	1.1%	(2.3)%	0.4%
United States	**4.1%**	**2.5%**	**1.4%**	**2.0%**	**(3.5)%**	**1.4%**	2.4%	2.1%	0.2%	1.3%	(3.3)%	0.6%
Corporate BBB 10-year spread												
Canada	**1.7%**	**1.8%**	**2.4%**	**2.0%**	**4.2%**	**3.5%**	1.9%	1.9%	2.4%	2.2%	3.7%	3.9%
United States	**1.4%**	**1.7%**	**2.2%**	**2.1%**	**4.6%**	**3.5%**	1.8%	1.9%	2.2%	2.2%	4.2%	3.9%
Unemployment rates												
Canada	**4.2%**	**3.7%**	**5.9%**	**5.7%**	**9.3%**	**10.1%**	4.3%	3.6%	5.9%	6.5%	8.0%	9.9%
United States	**2.9%**	**2.5%**	**4.2%**	**4.1%**	**7.5%**	**8.3%**	3.2%	2.6%	4.2%	4.8%	6.5%	8.4%
Housing Price Index (2)												
Canada (3)	**9.9%**	**6.9%**	**5.5%**	**4.5%**	**(20.2)%**	**(5.0)%**	(6.7)%	2.1%	(10.0)%	(1.0)%	(13.6)%	(8.0)%
United States (4)	**2.7%**	**3.7%**	**(0.5)%**	**2.3%**	**(19.2)%**	**(4.3)%**	1.6%	(0.7)%	(0.9)%	(2.6)%	(7.5)%	(8.4)%

(1) The remaining forecast period is two years.
(2) Real gross domestic product (GDP) and housing price index are averages of quarterly year-over-year growth rates.
(3) In Canada, we use the Housing Price Index Benchmark Composite.
(4) In the United States, we use the National Case-Shiller House Price Index.

The ECL approach requires the recognition of credit losses generally based on 12 months of expected losses for performing loans (Stage 1) and the recognition of lifetime expected losses on performing loans that have experienced a significant increase in credit risk since origination (Stage 2). Under our current probability-weighted scenarios, if all our performing loans were in Stage 1, our models would generate an allowance for performing loans of approximately $2,800 million ($1,850 million as at
October 31, 2022) compared to the reported allowance for performing loans of $3,572 million as at October 31, 2023 ($2,441 million as at October 31, 2022).

Renegotiated Loans

From time to time we modify the contractual terms of a loan due to the poor financial condition of the borrower. Modifications may include reductions in interest rates, maturity date extensions, payment holidays or payment forgiveness. We assess renegotiated loans for impairment in line with our existing policies for impairment. When an impaired loan is renegotiated, it will return to performing status when none of the criteria for classification as impaired continue to apply and the borrower has demonstrated good payment behaviour on the restructured terms over a period of time.

The carrying value of loans with lifetime ACL modified during the year ended October 31, 2023 was $1,005 million ($91 million in 2022). As at October 31, 2023, $26 million ($13 million as at October 31, 2022) of loans previously modified saw their loss allowance during the year change from lifetime to 12-month ECL.

Foreclosed Assets

Property or other assets that we receive from borrowers to satisfy their loan commitments are classified as either held for own use or held-for-sale according to management's intention, recorded initially at fair value for assets held for own use and at the lower of carrying value or fair value less costs to sell for any assets held-for-sale. Assets held for own use are subsequently accounted for in accordance with the relevant asset classification and assets held-for-sale are assessed for impairment.

During the year ended October 31, 2023, we foreclosed on impaired loans and received $35 million of real estate properties that we classified as held-for-sale ($24 million in 2022). As at October 31, 2023, real estate properties held-for-sale totalled $18 million ($13 million as at October 31, 2022). These properties are disposed of when considered appropriate.

Collateral

Collateral is used to manage credit risk related to securities borrowed or purchased under resale agreements, residential mortgages, consumer instalment and other personal loans, and business and government loans. Additional information on our collateral requirements is included in Notes 14 and 24, as well as in the blue-tinted font in the Enterprise-Wide Risk Management section of Management's Discussion and Analysis within this report.

Note 5: Risk Management

We have an enterprise-wide approach to the identification, assessment, management (including mitigation), monitoring and reporting of risks faced across our organization. The key risks related to our financial instruments are classified as credit and counterparty, market, and liquidity and funding risk. The economic headwinds, including rising interest rates and inflation, impact certain risks as outlined in the Enterprise-Wide Risk Management section of our Management's Discussion and Analysis, and where those risks are related to financial instruments, they have been included in the blue-tinted font as referenced below.

Credit and Counterparty Risk

Credit and counterparty risk is the potential for loss due to the failure of a borrower, endorser, guarantor or counterparty to repay a loan or honour another predetermined financial obligation. Credit risk arises predominantly with respect to loans, over-the-counter and centrally cleared derivatives and other credit instruments. This is the most significant measurable risk that we face.

Our risk management practices and key measures are disclosed in the blue-tinted font in the Enterprise-Wide Risk Management section of Management's Discussion and Analysis within this report. Additional information on credit risk related to loans and derivatives is included in Notes 4 and 8, respectively.

Market Risk

Market risk is the potential for adverse changes in the value of our assets and liabilities resulting from changes in market variables such as interest rates, credit spreads, foreign exchange rates, equity and commodity prices and their implied volatilities, and includes the risk of credit migration and default in our trading book. We incur market risk in our trading and underwriting activities, as well as in our structural banking activities.

Our market risk management practices and key measures are disclosed in the blue-tinted font in the Enterprise-Wide Risk Management section of Management's Discussion and Analysis within this report.

Liquidity and Funding Risk

Liquidity and funding risk is the potential for loss if we are unable to meet our financial commitments in a timely manner at reasonable prices as they become due. It is our policy to ensure that sufficient liquid assets and funding capacity are available to meet financial commitments, including liabilities to depositors and suppliers, as well as lending, investment and pledging commitments, even in times of stress. Managing liquidity and funding risk is essential to maintaining enterprise soundness and safety, depositor confidence and earnings stability.

Our liquidity and funding risk management practices and key measures are disclosed in the blue-tinted font in the Enterprise-Wide Risk Management section of Management's Discussion and Analysis within this report.

Note 6: Transfers of Financial Assets

Transfers of Financial Assets that do not Qualify for Derecognition

Loan Securitization

We sell Canadian residential mortgages to third-party Canadian securitization programs, including the Canada Mortgage Bond program, and directly to third-party investors under the National Housing Act Mortgage-Backed Securities (NHA MBS) program. We assess whether substantially all of the risks and rewards of, or control over, the loans have been transferred in order to determine whether they qualify for derecognition. Under these programs, we are entitled to payment over time of the excess of the sum of interest and fees collected from customers, in connection with the mortgages that were sold, over the yield paid to investors, less credit losses and other costs. We also act as counterparty in interest rate swap agreements, where we pay the interest due to Canada Mortgage Bond holders and receive the interest on the underlying mortgages, which are converted into MBS through the NHA MBS program and sold to Canada Housing Trust.

For some of these sales, we continue to be exposed to substantially all the prepayment, interest rate and credit risk associated with the securitized mortgages, so they did not qualify for derecognition. We continue to recognize the mortgages in our Consolidated Balance Sheet and the related cash proceeds are recognized as secured financing as part of securitization and structured entities' liabilities in our Consolidated Balance Sheet. The interest and fees collected, net of the yield paid to investors, are recorded in net interest income using the effective interest method over the term of the securitization. Credit losses associated with the mortgages are recorded in the PCL. During the year ended October 31, 2023, we sold $4,950 million of mortgages to these programs ($5,495 million in 2022).

Securities Lent or Sold Under Repurchase Agreements

Securities lent or sold under repurchase agreements represent short-term funding transactions in which we sell securities that we own and simultaneously commit to repurchase the same securities at a specified price on a specified date in the future. We retain substantially all the risks and rewards associated with the securities and we continue to recognize them in our Consolidated Balance Sheet, with the obligation to repurchase these securities recorded as secured borrowing transactions at the amount owing. The carrying value of these securities approximates the carrying value of the associated liabilities due to their short-term nature. As at October 31, 2023, the carrying values of securities lent and securities sold under repurchase agreements were $13,559 million and $92,549 million, respectively ($13,473 million and $90,490 million, respectively, as at October 31, 2022). The interest expense related to these liabilities is recorded on an accrual basis in interest expense, other liabilities, in our Consolidated Statement of Income.

The following table presents the carrying values and fair values of transferred assets that did not qualify for derecognition and the associated liabilities relating to loan securitizations:

(Canadian $ in millions)	2023		2022	
	Carrying value (1)	**Fair value**	Carrying value (1)	Fair value
Assets				
Trading securities (2)	**277**	**–**	1,062	–
Residential mortgages	**7,317**	**–**	7,503	–
Other related assets (3)	**8,430**	**–**	10,012	–
Total	**16,024**	**15,266**	18,577	17,764
Associated liabilities (4)	**14,937**	**14,244**	17,471	16,846

(1) Carrying value of loans is net of allowance for credit losses, where applicable.
(2) Trading securities represent CMO issued by third-party sponsored vehicles, where we do not substantially transfer all the risks and rewards of ownership to third-party investors.
(3) Other related assets represent payments received on account of mortgages pledged under securitization programs that have not yet been applied against the associated liabilities. The payments received are held in permitted instruments on behalf of the investors in the securitization vehicles until principal payments are required to be made on the associated liabilities. In order to compare all assets supporting the associated liabilities, this amount is added to the carrying value of the securitized assets in the table above.
(4) Associated liabilities are recognized in securitization and structured entities' liabilities in our Consolidated Balance Sheet.

Continuing Involvement in Transferred Financial Assets that Qualify for Derecognition

We retain the mortgage servicing rights, representing our continuing involvement, for certain mortgage loans purchased or originated in the United States that have been sold and derecognized. During the year ended October 31, 2023, we sold and derecognized $364 million of these loans ($556 million in 2022) and recognized a gain of $10 million ($17 million in 2022) in non-interest revenue, other. As at October 31, 2023, the carrying value of the mortgage servicing rights was $94 million ($39 million as at October 31, 2022) and the fair value was $120 million ($54 million as at October 31, 2022).

We retain residual interests, representing our continuing involvement, for certain commercial mortgage loans purchased or originated in the United States that have been sold and derecognized. During the year ended October 31, 2023, we sold and derecognized $1,302 million of these loans ($4,014 million in 2022) and recognized a gain of $28 million upon transfer ($7 million in 2022). The carrying values of our retained interests classified as debt securities at amortized cost and loans carried at amortized cost were $8 million and $38 million, respectively, as at October 31, 2023 ($8 million and $37 million, respectively, as at October 31, 2022). Fair value was equal to carrying value on these dates.

In addition, we hold U.S. government agency CMO issued by third-party sponsored vehicles, which we may further securitize by packaging them into new CMO prior to selling to third-party investors. If we have not substantially transferred all of the risks and rewards of ownership to third-party investors, we continue to recognize these CMO and the related cash proceeds as secured financing in our Consolidated Balance Sheet. During the year, we sold CMO that qualified for derecognition, where retained interests represent our continuing involvement and are managed as part of larger portfolios held for trading, liquidity or hedging purposes. Where we sold these CMO, associated gains and losses are recognized in non-interest revenue, trading revenues (losses). As at October 31, 2023, the fair value of our retained interests in these CMO was $9 million, classified as trading securities in our Consolidated Balance Sheet ($10 million as at October 31, 2022). Refer to Note 3 for further information.

As noted above, we sell Canadian residential mortgages to third-party Canadian securitization programs, including the Canada Mortgage Bond program, and directly to third-party investors under the NHA MBS program. Some of these sales qualified for derecognition as we have transferred substantially all of the risks and rewards associated with the securitized mortgages. During the year ended October 31, 2023, we sold and derecognized $1,186 million of these loans ($67 million in 2022) and recognized a gain of $53 million ($3 million in 2022) in non-interest revenue, other. We retain some residual interests associated with the loans, representing our continuing involvement. The carrying value of our retained interests, classified as loans carried at fair value, was $56 million as at October 31, 2023 ($3 million as at October 31, 2022).

Note 7: Structured Entities

We enter into certain transactions in the ordinary course of business which involve the establishment of SEs to facilitate or secure customer transactions and to obtain alternate sources of funding. We are required to consolidate a SE if we control the entity. We control a SE when we have power over the SE, exposure to variable returns as a result of our involvement, and the ability to exercise power to affect the amount of our returns.

In assessing whether we control a SE, we consider the entire arrangement to determine the purpose and design of the SE, the nature of any rights held through contractual arrangements, and whether we are acting as principal or agent.

We perform a reassessment of consolidation if facts and circumstances indicate that there have been changes to one or more of the elements of control over the SE. If the reassessment determines that we no longer control the SE, we will derecognize the related assets (including goodwill), liabilities and non-controlling interest at their carrying amounts and recognize any consideration received or retained interest at fair value, with any difference recognized as a gain or loss in our Consolidated Statement of Income. Information regarding our basis of consolidation is included in Note 1.

Consolidated Structured Entities

Bank Securitization Vehicles

We use securitization vehicles to securitize our Canadian credit card loans, Canadian real estate lines of credit, Canadian auto loans and U.S. equipment loans in order to obtain alternate sources of funding. The structure of these vehicles limits the activities they can undertake and the types of assets they can hold, and the vehicles have limited decision-making authority. The vehicles issue term asset-backed securities (ABS) to fund their activities. We control and consolidate these vehicles, as we have the key decision-making powers necessary to obtain the majority of the benefits of their activities.

The following table presents the carrying values and fair values of assets and liabilities related to these consolidated securitization vehicles:

(Canadian $ in millions)	2023		2022	
	Carrying value (1)	**Fair value**	Carrying value (1)	Fair value
Assets				
Credit cards	**9,506**	**9,506**	8,223	8,223
Consumer instalment and other personal (2)	**4,695**	**4,670**	4,769	4,738
Business and government	**–**	**–**	125	124
Total	**14,201**	**14,176**	13,117	13,085
Associated liabilities (3)	**10,376**	**10,177**	9,274	9,072

(1) Carrying value of loans is net of ACL.
(2) Includes real estate lines of credit and auto loans.
(3) Associated liabilities are recognized in securitization and structured entities' liabilities in our Consolidated Balance Sheet.

Capital and Funding Vehicles

We sponsor the Trust established in connection with the issuance of $1,250 million 4.3% Limited Recourse Capital Notes, Series 1 (Series 1 LRCNs), $750 million 5.625% Limited Recourse Capital Notes, Series 2 (Series 2 LRCNs) and $1,000 million 7.325% Limited Recourse Capital Notes, Series 3 (Series 3 LRCNs), which holds $1,250 million of BMO issued Non-Cumulative, 5-Year Rate Reset Class B Preferred Shares, Series 48 (Non-Viability Contingent Capital (NVCC)), $750 million of BMO issued Non-Cumulative, 5-Year Rate Reset Class B Preferred Shares, Series 49 (NVCC) and $1,000 million of BMO issued Non-Cumulative 5-Year Rate Reset Class B Preferred Shares, Series 51 (NVCC), issued concurrently with the Series 1, Series 2 and Series 3 LRCNs, respectively. We determined that we control and therefore consolidate this vehicle as we are exposed to its variable returns and have key decision-making powers over its activities. Refer to Note 16 for further information.

We have a funding vehicle, created under the covered bond program, that was established to guarantee payments due to the holders of bonds issued by us. We sell assets to this funding vehicle in exchange for an intercompany loan. Refer to Note 13 for further information on our covered bond deposit liabilities.

We have established a funding vehicle that issues commercial paper to third parties. We pledge collateral to secure the commercial paper in exchange for an intercompany loan. The amount of commercial paper issued by the vehicle totalled $6,054 million as at October 31, 2023 ($nil million as at October 31, 2022). Refer to Note 13 for further information on our commercial paper deposit liabilities.

For those vehicles that purchase assets from us or are designed to pass on our credit risk, we have determined that, based on either the rights of the arrangements or through our equity interest, we have significant exposure to the variable returns of the vehicles, and we control and therefore consolidate these vehicles. Additional information related to notes issued by, and assets sold to, these vehicles is provided in Notes 13 and 24, respectively.

Other

We have other consolidated SEs, created to meet the needs of the bank and its customers. Aside from the exposure resulting from our involvement as a sponsor, we do not have other contractual or non-contractual arrangements that require us to provide financial support to these consolidated SEs.

Unconsolidated Structured Entities

The table below presents amounts related to our interests in unconsolidated SEs:

(Canadian $ in millions)	2023			2022		
	Customer securitization vehicles (1)	**Capital vehicles**	**Other securitization vehicles**	Customer securitization vehicles (1)	Capital vehicles	Other securitization vehicles
Interests recorded in our Consolidated Balance Sheet						
Financial Assets						
Cash and cash equivalents	**184**	**5,182**	**–**	68	3,483	–
Trading securities	**518**	**–**	**3,346**	573	–	1,795
FVTPL securities	**23**	**–**	**–**	119	–	–
FVOCI securities	**1,393**	**–**	**–**	1,079	–	–
Derivatives	**23**	**–**	**–**	–	–	–
Other	**9**	**–**	**100**	11	–	80
Total	**2,150**	**5,182**	**3,446**	1,850	3,483	1,875
Financial Liabilities						
Deposits	**184**	**5,182**	**–**	68	3,483	–
Derivatives	**–**	**–**	**–**	17	–	–
Other	**–**	**79**	**–**	–	48	–
Total	**184**	**5,261**	**–**	85	3,531	–
Maximum exposure to loss (2)	**21,740**	**1**	**3,446**	20,141	1	1,875
Total assets of the entities	**13,936**	**5,260**	**30,877**	12,364	3,531	11,845

(1) Securities held that are issued by our Canadian and U.S. customer securitization vehicles are comprised of asset-backed commercial paper (ABCP) and are classified as either trading securities, FVTPL securities or FVOCI securities.
(2) Maximum exposure to loss represents securities held, undrawn liquidity facilities, any remaining unfunded committed amounts to the BMO funded vehicle, derivative assets and other assets.

Customer Securitization Vehicles
We sponsor customer securitization vehicles (also referred to as bank-sponsored multi-seller conduits) that provide our customers with alternate sources of funding through the securitization of their assets. These vehicles provide clients with access to financing either from BMO or in the ABCP markets by allowing them to either sell their assets directly into the vehicle or indirectly by selling an interest in the securitized assets into the vehicle, which then issues ABCP to either investors or BMO to fund the purchases. The sellers remain responsible for servicing the transferred assets and are first to absorb any losses realized on those assets. We are not responsible for servicing or absorbing the first loss and none of the sellers are affiliated with BMO. We earn fees for providing services related to the securitizations, including liquidity, distribution and financial arrangement fees for supporting the ongoing operations of the vehicles. We have determined that we act as agent on behalf of the sellers and therefore do not control these vehicles.

We provide liquidity facilities to the market-funded vehicles, which may require that we provide them with additional financing if certain events occur. The total committed and undrawn amounts under these liquidity facilities, as well as the undrawn amount under the liquidity facility related to BMO funded vehicles, as at October 31, 2023 was $19,775 million ($18,359 million as at October 31, 2022). This is included within commitments outlined in Note 24. Our interests in these vehicles as at October 31, 2023 and 2022 have been included in the Unconsolidated Structured Entities table above.

Capital Vehicles
We also use capital vehicles to pass our credit risk to security holders of the vehicles. In these situations, we are not exposed to significant default or credit risk. Our remaining exposure to variable returns is less than that of the note holders in these vehicles, who are exposed to our default and credit risk. We are not required to consolidate these vehicles.

Other Securitization Vehicles
Other securitization vehicles involve holdings in asset-backed securitizations. Where we sponsor SEs that securitize MBS into CMO, we may have interests through our holdings of CMO but we do not consolidate the SEs, as we do not have power to direct their relevant activities. These include government-sponsored agency securities such as U.S. government agency issuances. In determining whether we are a sponsor of a SE, we consider both qualitative and quantitative factors, including the purpose and nature of the entity, and our initial and continuing involvement. Subsequent to the securitization, we sell the CMO to third parties. Our maximum exposure to loss is limited to our on-balance sheet investments in these entities, included in the Unconsolidated Structured Entities table above.

Where the asset-backed instruments in these securitizations are transferred to third parties, but we do not substantially transfer all risks and rewards of ownership to the third-party investors, we continue to recognize the transferred assets with the related cash proceeds recorded as secured financing in our Consolidated Balance Sheet in securitization and structured entities' liabilities. As at October 31, 2023, these transferred assets were carried at fair value totalling $3,127 million ($1,385 million as at October 31, 2022), with $1,781 million ($323 million as at October 31, 2022) recognized in securitization and structured entities' liabilities, also carried at fair value.

Where the asset-backed instruments in these securitizations are transferred to third parties and qualify for derecognition, we record the related gains or losses in non-interest revenue, trading revenues (losses). We may also retain an interest in the CMO sold, which represents our continuing involvement. As at October 31, 2023, we held retained interests of $219 million ($410 million as at October 31, 2022) carried at fair value in our Consolidated Balance Sheet in securities, trading.

During the year ended October 31, 2023, we sold $11,779 million of MBS to these sponsored securitization vehicles ($8,342 million in 2022) and divested all interests in the securitized MBS, with any gains and losses recorded in non-interest revenue, trading revenues (losses).

We retain residual interests in certain commercial mortgage loans that have been either purchased or originated in the United States and then sold and derecognized through bank-sponsored SEs, which securitize these loans into MBS. During the year ended October 31, 2023, we sold and derecognized $1,170 million of these loans ($2,142 million in 2022) and recognized a gain of $25 million ($3 million in 2022). The carrying values of our retained interests classified as loans carried at amortized cost were $100 million as at October 31, 2023 ($80 million as at October 31, 2022). Fair value was equal to carrying value on these dates.

BMO Managed Funds
We have established a number of funds that we also manage. We assess whether or not we control these funds based on the economic interest we have in the funds, including investments in the funds and management fees earned from the funds, and any investors' rights to remove us as investment manager. We consolidate only those funds that we control. Our total interest in unconsolidated BMO managed funds was $870 million as at October 31, 2023 ($948 million as at October 31, 2022), with $181 million included in FVTPL securities and $689 million included in trading securities in our Consolidated Balance Sheet as at October 31, 2023 ($185 million and $763 million, respectively, as at October 31, 2022).

Other Structured Entities
We purchase and hold investments in a variety of third-party SEs, including exchange-traded funds, mutual funds, limited partnerships, investment trusts, LIHTC entities, and government-sponsored ABS vehicles, which are recorded in securities in our Consolidated Balance Sheet. We are considered to have an interest in these entities through our holdings and because we may act as a counterparty in certain derivatives contracts. We are not the investment manager or the sponsor of any of these entities. We are generally a passive investor and do not have power over the key decision-making activities of these entities. Our maximum exposure to loss from our investments is limited to the carrying amounts of our investments in these entities and any unutilized commitment we have provided.

Sponsored Structured Entities
We may be deemed to be the sponsor of a SE if we are involved in its design, legalset-up or marketing. We may also be deemed to be the sponsor of a SE if market participants would reasonably associate the entity with us. Any interests in securitization vehicles we have sponsored are disclosed in the Unconsolidated Structured Entities table above.

Financial Support Provided to Structured Entities

During the years ended October 31, 2023 and 2022, we did not provide any financial or non-financial support to any consolidated or unconsolidated SEs when we were not contractually obligated to do so. Furthermore, we have no intention of providing such support in the future.

Note 8: Derivative Instruments

Derivative instruments are financial contracts that derive their value from underlying changes in interest rates, foreign exchange rates or other financial or commodity prices or indices.

Derivative instruments can be either regulated exchange-traded contracts or negotiated over-the-counter contracts. We use these instruments for trading purposes, as well as to manage our exposures, mainly to foreign currency and interest rate fluctuations, as part of our asset/liability management program.

Types of Derivatives

Swaps

Swaps are contractual agreements between two parties to exchange a series of cash flows. The various swap agreements that we enter into are as follows:

- Interest rate swaps – counterparties generally exchange fixed and floating rate interest payments based on a notional value in a single currency.
- Cross-currency swaps – counterparties exchange fixed rate interest payments and principal amounts in different currencies.
- Cross-currency interest rate swaps – counterparties exchange fixed and/or floating rate interest payments and principal amounts in different currencies.
- Commodity swaps – counterparties generally exchange fixed and floating rate payments based on a notional value of a single commodity.
- Equity swaps – counterparties exchange the return on an equity security or a group of equity securities for the return based on a fixed or floating interest rate or the return on another equity security or group of equity securities.
- Credit default swaps – one counterparty pays the other a fee in exchange for that other counterparty agreeing to make a payment if a credit event occurs, such as bankruptcy or failure to pay.
- Total return swaps – one counterparty agrees to pay or receive from the other cash amounts based on changes in the value of a reference asset or group of assets, including returns such as interest earned on these assets, in exchange for amounts that are based on prevailing market funding rates.

Forwards and Futures

Forwards and futures are contractual agreements to either buy or sell a specified amount of a currency, commodity, interest rate-sensitive financial instrument or security at a specified price and date in the future.

Forwards are customized contracts transacted in the over-the-counter market. Futures are transacted in standardized amounts on regulated exchanges and are subject to daily cash margining.

Options

Options are contractual agreements that convey to the purchaser the right but not the obligation to either buy or sell a specified amount of a currency, commodity, interest rate financial instrument or security at a fixed future date or at any time within a fixed future period.

For options written by us, we receive a premium from the purchaser for accepting market risk.

For options purchased by us, we pay a premium for the right to exercise the option. Since we have no obligation to exercise the option, our primary exposure to risk is the potential credit risk if the writer of an over-the-counter contract fails to meet the terms of the contract.

Caps, collars and floors are specialized types of written and purchased options. They are contractual agreements in which the writer agrees to pay the purchaser, based on a specified notional amount, the difference between the market rate and the prescribed rate of the cap, collar or floor. The writer receives a premium for selling this instrument.

A swaption is an option granting its owner the right but not the obligation to enter into an underlying swap.

A futures option is an option contract in which the underlying instrument is a single futures contract.

The main risks associated with these derivative instruments are related to exposure to movements in interest rates, foreign exchange rates, credit quality, value of the underlying financial instrument or commodity, as applicable, and the possible inability of counterparties to meet the terms of the contracts.

Embedded Derivatives

From time to time, we purchase or issue financial instruments containing embedded derivatives. The embedded derivative in a financial liability is separated from the host contract and carried at fair value if the economic characteristics of the derivative are not closely related to those of the host contract, the terms of the embedded derivative are the same as those of a stand-alone derivative, and the combined contract is not measured at fair value. To the extent that we cannot reliably identify and measure the embedded derivative, the entire contract is carried at fair value, with changes in fair value reflected in our Consolidated Statement of Income. Embedded derivatives in certain of our guaranteed investment certificate deposits are accounted for separately from the host instrument and presented within deposits in our Consolidated Balance Sheet.

Contingent Features

Certain over-the-counter derivative instruments contain provisions that link the amount of collateral we are required to post or pay to our credit ratings, as determined by the major credit rating agencies. If our credit ratings were to be downgraded, certain counterparties to these derivative instruments could demand immediate and ongoing collateralization on derivative liability positions or request immediate payment. The aggregate fair value of all derivative instruments with collateral posting requirements that were in a liability position as at October 31, 2023 was $10,323 million ($12,413 million as at October 31, 2022), for which we have posted collateral of $9,084 million ($10,464 million as at October 31, 2022).

Risks Hedged

Interest Rate Risk

We manage interest rate risk through interest rate futures, interest rate swaps and options, which are linked to and adjust the interest rate sensitivity of a specific asset, liability, forecasted transaction or firm commitment, or a specific pool of transactions with similar risk characteristics.

Foreign Currency Risk

We manage foreign currency risk through currency futures, foreign currency options, cross-currency swaps, foreign exchange spot transactions, forward contracts and deposits denominated in foreign currencies.

Equity Price Risk

We manage equity price risk through total return swaps.

Trading Derivatives

Trading derivatives include derivatives entered into with customers to accommodate their risk management needs, market-making to facilitate customer-driven demand for derivatives, derivatives transacted on a limited basis to generate trading income from our principal trading positions, and certain derivatives entered into as part of our risk management strategy that do not qualify as hedges for accounting purposes (economic hedges).

We structure and market derivative products to enable customers to transfer, modify or reduce current or expected exposure to risks.

Principal trading activities include market-making and positioning activities. Market-making involves quoting bid and offer prices to other market participants with the intention of generating revenues based on spread and volume. Positioning activities involve managing market risk positions with the expectation of profiting from favourable movements in prices, rates or indices.

We may also economically hedge a portion of our U.S. dollar earnings through forward foreign exchange contracts and/or options to minimize fluctuations in our consolidated net income due to the translation of our U.S. dollar earnings. These contracts are recorded at fair value, with changes in fair value recorded in non-interest revenue, trading revenues (losses), in our Consolidated Statement of Income. We entered into economic hedges in relation to the definitive agreement with BNP Paribas to acquire Bank of the West and its subsidiaries, which were then settled upon completion of the acquisition. Refer to Note 10 for further details.

Trading derivatives are recorded at fair value. Realized and unrealized gains and losses are generally recorded in non-interest revenue, trading revenues (losses), in our Consolidated Statement of Income. Unrealized gains and losses on derivatives used to economically hedge certain exposures may be recorded in our Consolidated Statement of Income in the same line as the unrealized gains and losses arising from the exposures. Unrealized gains on trading derivatives are recorded as derivative instrument assets and unrealized losses are recorded as derivative instrument liabilities in our Consolidated Balance Sheet.

Fair Value of Trading and Hedging Derivatives

Fair value represents point-in-time estimates that may change in subsequent reporting periods due to market conditions or other factors. A discussion of the fair value measurement of derivatives is included in Note 17.

Fair values of our derivative instruments are as follows:

(Canadian $ in millions)	2023			2022		
	Gross assets	**Gross liabilities**	**Net**	Gross assets	Gross liabilities	Net
Trading						
Interest Rate Contracts						
Swaps (1)	**4,193**	**(9,393)**	**(5,200)**	7,176	(4,249)	2,927
Forward rate agreements	**360**	**(84)**	**276**	437	(120)	317
Purchased options	**3,221**	**–**	**3,221**	3,157	–	3,157
Written options	**–**	**(3,129)**	**(3,129)**	–	(2,391)	(2,391)
Futures	**6**	**(21)**	**(15)**	16	(27)	(11)
Foreign Exchange Contracts (2)						
Cross-currency swaps	**1,887**	**(1,397)**	**490**	1,688	(2,096)	(408)
Cross-currency interest rate swaps	**10,340**	**(10,081)**	**259**	10,722	(11,254)	(532)
Forward foreign exchange contracts	**6,685**	**(5,469)**	**1,216**	8,387	(7,267)	1,120
Purchased options	**575**	**–**	**575**	1,096	–	1,096
Written options	**–**	**(448)**	**(448)**	–	(1,151)	(1,151)
Commodity Contracts						
Swaps	**1,029**	**(743)**	**286**	4,198	(1,725)	2,473
Purchased options	**850**	**–**	**850**	1,851	–	1,851
Written options	**–**	**(787)**	**(787)**	–	(1,627)	(1,627)
Futures	**143**	**(127)**	**16**	275	(237)	38
Equity Contracts	**4,690**	**(11,460)**	**(6,770)**	6,473	(14,584)	(8,111)
Credit Contracts						
Purchased	**13**	**(18)**	**(5)**	27	(3)	24
Written	**12**	**(9)**	**3**	34	(72)	(38)
Total fair value – trading derivatives	**34,004**	**(43,166)**	**(9,162)**	45,537	(46,803)	(1,266)
Hedging						
Interest Rate Contracts (3)						
Cash flow hedges – swaps	**693**	**(3,784)**	**(3,091)**	41	(6,824)	(6,783)
Fair value hedges – swaps	**4,877**	**(1,390)**	**3,487**	1,935	(2,987)	(1,052)
Total swaps	**5,570**	**(5,174)**	**396**	1,976	(9,811)	(7,835)
Foreign Exchange Contracts						
Cash flow hedges (1)	**333**	**(1,801)**	**(1,468)**	629	(3,342)	(2,713)
Fair value hedges	**69**	**(1)**	**68**	–	–	–
Net investment hedges	**–**	**(8)**	**(8)**	–	–	–
Total foreign exchange contracts	**402**	**(1,810)**	**(1,408)**	629	(3,342)	(2,713)
Equity Contracts						
Cash flow hedges	**–**	**(43)**	**(43)**	18	–	18
Total equity contracts	**–**	**(43)**	**(43)**	18	–	18
Total fair value – hedging derivatives (4)	**5,972**	**(7,027)**	**(1,055)**	2,623	(13,153)	(10,530)
Total fair value – trading and hedging derivatives	**39,976**	**(50,193)**	**(10,217)**	48,160	(59,956)	(11,796)
Less: impact of master netting agreements	**(26,674)**	**26,674**	**–**	(31,878)	31,878	–
Total	**13,302**	**(23,519)**	**(10,217)**	16,282	(28,078)	(11,796)

(1) Includes derivatives entered into in relation to our acquisition of Bank of the West and its subsidiaries, which were settled upon completion of the transaction. Refer to Note 10 for further details.
(2) Gold contracts are included in foreign exchange contracts.
(3) Includes the fair value of bond futures in fair value hedges rounded down to $nil million as at October 31, 2023 ($nil million as at October 31, 2022).
(4) The fair values of hedging derivatives wholly or partially offset the changes in fair values of the related on-balance sheet financial instruments.

Assets are presented net of liabilities to customers where we have a legally enforceable right to offset amounts and we intend to settle contracts on a net basis.

Notional Amounts of Trading Derivatives

The notional amounts of our derivatives represent the amount to which a rate or price is applied in order to calculate the amount of cash that must be exchanged under the contract. Notional amounts do not represent assets or liabilities and therefore are not recorded in our Consolidated Balance Sheet.

(Canadian $ in millions)	2023			2022		
	Exchange-traded	**Over-the-counter**	**Total**	Exchange-traded	Over-the-counter	Total
Interest Rate Contracts						
Swaps (1)	**–**	**9,254,984**	**9,254,984**	–	5,683,145	5,683,145
Forward rate agreements	**–**	**132,653**	**132,653**	–	22,397	22,397
Purchased options	**37,264**	**130,000**	**167,264**	23,854	98,113	121,967
Written options	**38,256**	**118,524**	**156,780**	11,073	87,941	99,014
Futures	**1,367,959**	**–**	**1,367,959**	401,965	–	401,965
Total interest rate contracts	**1,443,479**	**9,636,161**	**11,079,640**	436,892	5,891,596	6,328,488
Foreign Exchange Contracts (2)						
Cross-currency swaps	**–**	**54,169**	**54,169**	–	53,837	53,837
Cross-currency interest rate swaps	**–**	**677,765**	**677,765**	–	578,685	578,685
Forward foreign exchange contracts	**–**	**563,716**	**563,716**	–	481,773	481,773
Purchased options	**1,851**	**51,143**	**52,994**	1,127	72,733	73,860
Written options	**2,282**	**55,370**	**57,652**	5,421	74,041	79,462
Futures	**4,035**	**–**	**4,035**	1,032	–	1,032
Total foreign exchange contracts	**8,168**	**1,402,163**	**1,410,331**	7,580	1,261,069	1,268,649
Commodity Contracts						
Swaps	**–**	**18,574**	**18,574**	–	24,525	24,525
Purchased options	**30,397**	**5,319**	**35,716**	34,177	5,686	39,863
Written options	**31,351**	**4,218**	**35,569**	34,245	5,011	39,256
Futures	**35,285**	**–**	**35,285**	44,836	–	44,836
Total commodity contracts	**97,033**	**28,111**	**125,144**	113,258	35,222	148,480
Equity Contracts	**189,112**	**115,689**	**304,801**	162,102	104,825	266,927
Credit Contracts						
Purchased	**–**	**16,927**	**16,927**	–	16,771	16,771
Written	**–**	**10,010**	**10,010**	–	11,099	11,099
Total credit contracts	**–**	**26,937**	**26,937**	–	27,870	27,870
Total	**1,737,792**	**11,209,061**	**12,946,853**	719,832	7,320,582	8,040,414

(1) Includes derivatives entered into in relation to our acquisition of Bank of the West and its subsidiaries, which were settled upon completion of the transaction. Refer to Note 10 for further details.
(2) Gold contracts are included in foreign exchange contracts.

Table excludes loan commitment derivatives with a notional amount of $8,805 million ($4,183 million as at October 31, 2022).

Derivatives Used in Hedge Accounting

The bank applies the requirements of IAS 39 *Financial Instruments: Recognition and Measurement* for hedge accounting purposes. In accordance with our risk management strategy, we enter into various derivative contracts to hedge our interest rate, foreign currency and equity price exposures. We also use deposits, cross-currency swaps, foreign exchange forwards and options to hedge foreign currency exposure in our net investment in foreign operations.

When the hedged item is accounted for at FVTPL, there is a natural offset within the income statement with the related derivative. However, when we manage risks incumbent in instruments that are accounted for at amortized cost, including loans and deposits, or FVOCI debt securities, we use hedge accounting in order to eliminate the mismatch between the hedged item and the mark-to-market derivative.

To the extent these instruments used to manage risk qualify for hedge accounting, we designate them in accounting hedge relationships. Our structural market risk strategies, including our approach to managing interest rate and foreign exchange risk, are included in the blue-tinted font in the Structural (Non-Trading) Market Risk section of Management's Discussion and Analysis within this report. In addition, our exposure to foreign exchange rate risk is discussed in the Non-Trading Foreign Exchange Risk section of Management's Discussion and Analysis. Our exposure to equity price risk and our approach to managing it are discussed in the Other Share-Based Compensation, Mid-Term Incentive Plans section of Note 20.

By using derivatives to hedge exposures to changes in interest rates, foreign exchange rates and equity prices, we are also exposed to the credit risk of the derivative counterparty. We mitigate credit risk by entering into transactions with high-quality counterparties, requiring the counterparties to post collateral, entering into master netting agreements, or settling through centrally cleared counterparties.

To qualify as an accounting hedge, the hedging relationship must be designated and formally documented at its inception, detailing the particular risk management objective and strategy for the hedge and the specific asset, liability or cash flow being hedged, as well as how effectiveness is to be assessed. Changes in the fair value of the derivative must be highly effective in offsetting changes in the fair value or changes in the amount of future cash flows of the hedged item. We evaluate hedge effectiveness at the inception of the hedging relationship and on an ongoing basis, retrospectively and prospectively, primarily using a quantitative statistical regression analysis. We consider a hedging relationship highly effective when all of the following criteria are met: correlation between the variables in the regression is at least 0.8; the slope of the regression is within a range of 0.8 to 1.25; and the confidence level of the slope is at least 95%. The practice is different for our net investment hedge, which is discussed in the Net Investment Hedges section below.

Any ineffectiveness in a hedging relationship is recognized as it arises in non-interest revenue, other, in our Consolidated Statement of Income.

Under the IASB's Phase 1 Amendments to IAS 39 and IFRS 7, certain hedge accounting requirements were modified to provide relief from the uncertainty arising from IBOR reform during the period prior to replacement of IBORs. These amendments allow us to assume the interest rate benchmarks that are the basis for cash flows of the hedged item and hedging instrument are not altered as a result of IBOR reform, thereby allowing hedge accounting to continue. They also provide an exception from the requirement to discontinue hedge accounting if a hedging relationship does not meet the effectiveness requirements solely as a result of IBOR reform. We continued to apply these amendments at October 31, 2023, and application will end at the earlier of the discontinuation of the impacted hedge relationship and the time at which there is no longer uncertainty arising from IBOR reform over the timing and amount of IBOR-based cash flows. Effective November 1, 2020, we early adopted the IASB's Phase 2 amendments to IAS 39 and IFRS 7, which require us to amend hedge relationship documentation to reflect the changes required by IBOR reform when Phase 1 comes to an end, without discontinuing the existing hedge relationships.

The following table outlines the notional amounts and average rates of derivatives and the carrying amounts of deposits designated as hedging instruments, by term to maturity, hedge type and risk type, where applicable.

(Canadian $ in millions, except as noted)		Remaining term to maturity					2023	2022
		Within 1 year	1 to 3 years	3 to 5 years	5 to 10 years	Over 10 years	Total	Total
Cash Flow Hedges								
Interest rate risk – Interest rate swaps								
Notional amount (1)		**69,605**	**39,250**	**38,041**	**34,962**	**4,821**	**186,679**	167,945
Average fixed interest rate		**4.85%**	**4.33%**	**3.50%**	**3.57%**	**3.69%**	**4.20%**	3.06%
Foreign exchange risk – Cross-currency swaps and foreign exchange forwards (2)								
CAD-USD pair (3)	Notional amount	**8,897**	**15,121**	**12,977**	**6,300**	**327**	**43,622**	62,703
	Average fixed interest rate	**2.47%**	**3.04%**	**3.17%**	**1.67%**	**3.42%**	**2.77%**	1.31%
	Average exchange rate: CAD-USD	**1.3340**	**1.3130**	**1.3118**	**1.3474**	**1.3076**	**1.3218**	1.3196
CAD-EUR pair	Notional amount	**1,924**	**7,449**	**4,973**	**1,839**	**201**	**16,386**	19,429
	Average fixed interest rate	**2.41%**	**3.90%**	**2.79%**	**1.89%**	**2.97%**	**3.15%**	2.47%
	Average exchange rate: CAD-EUR	**1.5395**	**1.4205**	**1.4015**	**1.4711**	**1.4870**	**1.4352**	1.4489
Other currency pairs (4)	Notional amount	**1,155**	**6,141**	**1,901**	**514**	**76**	**9,787**	7,718
	Average fixed interest rate	**2.21%**	**2.62%**	**4.20%**	**4.45%**	**5.24%**	**2.99%**	2.42%
	Average exchange rate: CAD-Non USD/EUR	**1.1310**	**1.6699**	**1.5040**	**0.7940**	**0.9038**	**1.5221**	1.3956
Equity price risk – Total return swap (5)								
Notional amount		**–**	**451**	**–**	**–**	**–**	**451**	455
Fair Value Hedges								
Interest rate risk – Interest rate swaps								
Notional amount (6)		**42,073**	**24,340**	**46,219**	**27,242**	**29,494**	**169,368**	103,671
Average fixed interest rate		**4.97%**	**3.79%**	**3.61%**	**3.48%**	**3.35%**	**3.91%**	2.42%
Interest rate risk – Bond futures (exchange-traded derivatives)								
Notional amount		**2,825**	**–**	**–**	**–**	**–**	**2,825**	109
Average price in dollars		**105**	**–**	**–**	**–**	**–**	**105**	104
Foreign exchange risk – Cross-currency swaps (7)								
USD-EUR pair	Notional amount	**–**	**21**	**–**	**–**	**–**	**21**	19
	Average fixed interest rate	**–**	**3.25%**	**–**	**–**	**–**	**3.25%**	3.25%
	Average exchange rate: USD-EUR	**–**	**0.9706**	**–**	**–**	**–**	**0.9706**	0.9706
USD-JPY pair	Notional amount	**476**	**–**	**–**	**–**	**–**	**476**	–
	Average fixed interest rate	**(0.08)%**	**–**	**–**	**–**	**–**	**(0.08)%**	–
	Average exchange rate: USD-JPY	**0.0076**	**–**	**–**	**–**	**–**	**0.0076**	–
Net Investment Hedges								
Foreign exchange risk – Cross-currency swaps and foreign exchange forwards								
CAD-CNH pair	Notional amount	**650**	**–**	**–**	**–**	**–**	**650**	–
Foreign exchange risk – Deposit liabilities								
USD denominated deposit – carrying amount		**13,154**	**–**	**–**	**–**	**–**	**13,154**	1,251
GBP denominated deposit – carrying amount		**157**	**–**	**–**	**–**	**–**	**157**	–

(1) The notional amount of the interest rate swaps likely subject to IBOR reform was $21,718 million of CDOR maturing after June 28, 2024, as at October 31, 2023 ($22,689 million of USD LIBOR maturing after June 30, 2023, and $49,560 million of CDOR maturing after June 28, 2024, as at October 31, 2022).

(2) Under certain hedge strategies using cross-currency swaps, a CAD leg is inserted to create two swaps designated as separate hedges (for example, a EUR-USD cross-currency swap split into EUR-CAD and CAD-USD cross-currency swaps). The relevant notional amount is grossed up in this table, as the cross-currency swaps are disclosed by CAD-foreign currency pair.

(3) As at October 31, 2022, amounts include derivatives entered into in relation to our acquisition of Bank of the West and its subsidiaries. Refer to Note 10 for further details.

(4) Includes CAD-AUD, CAD-CHF, CAD-CNH, CAD-GBP, CAD-HKD, CAD-JPY, or CAD-NOK cross-currency swaps where applicable. The notional amount of the cross-currency swaps likely subject to IBOR reform was $nil million of CDOR maturing after June 28, 2024 as at October 31, 2023 ($nil million of USD LIBOR maturing after June 30, 2023, and $nil million of CDOR maturing after June 28, 2024, as at October 31, 2022).

(5) The notional amount of the total return swaps likely subject to IBOR reform was $451 million of CDOR maturing after June 28, 2024 as at October 31, 2023 ($455 million as at October 31, 2022).

(6) The notional amount of the interest rate swaps likely subject to IBOR reform was $22,328 million of CDOR maturing after June 28, 2024 as at October 31, 2023 ($31,455 million of USD LIBOR maturing after June 30, 2023, and $21,043 million of CDOR maturing after June 28, 2024, as at October 31, 2022).

(7) The notional amount of the cross-currency swaps likely subject to IBOR reform was $nil million of CDOR maturing after June 28, 2024 as at October 31, 2023 ($nil million of USD LIBOR maturing after June 30, 2023, and $nil million of CDOR maturing after June 28, 2024, as at October 31, 2022).

Cash Flow Hedges

Cash flow hedges modify exposure to variability in cash flows for variable interest rate bearing instruments, foreign currency denominated assets and liabilities and certain cash-settled share-based payment grants subject to equity price risk. We use interest rate swaps with or without embedded options, cross-currency swaps, forwards and total return swaps to hedge this variability. We hedge the full amount of foreign exchange risk, but interest rate risk is hedged only to the extent of benchmark interest rates. The benchmark interest rate is a component of interest rate risk that is observable in the relevant financial markets, for example, Secured Overnight Financing Rate or CORRA.

We determine the amount of the exposure to which hedge accounting is applied by assessing the potential impact of changes in interest rates, foreign exchange rates and equity prices on the future cash flows of floating rate loans and deposits, foreign currency denominated assets and liabilities and certain cash-settled share-based payments. This assessment is performed using analytical techniques, such as simulation, sensitivity analysis, stress testing and gap analysis.

We record interest that we pay or receive on derivatives that hedge interest rate risk or foreign exchange risk in net interest income in our Consolidated Statement of Income over the life of the hedge. Interest paid on derivatives that hedge equity price risk on certain share-based payments is recorded in employee compensation expense.

The accounting mismatch that would otherwise occur is eliminated by recording changes in the fair value of the derivative that offset changes in the fair value of the hedged item for the designated hedged risk in other comprehensive income. Hedge ineffectiveness, the portion of the change in fair value of the derivative that does not offset changes in the fair value of the hedged item, is recorded directly in non-interest revenue, other, in our Consolidated Statement of Income as it arises.

For cash flow hedges that are discontinued before the end of the original hedge term, the cumulative unrealized gain or loss recorded in other comprehensive income is amortized to our Consolidated Statement of Income in net interest income for interest rate swaps and in employee compensation for total return swaps as the hedged item is recorded in earnings. If the hedged item is sold or settled, the entire unrealized gain or loss is recognized immediately in net interest income in our Consolidated Statement of Income. In general, we do not terminate our foreign exchange hedges before maturity.

For cash flow hedges, we use a hypothetical derivative to measure the hedged risk of floating rate loans, deposits, foreign currency denominated assets and liabilities, or share-based payment grants. This hypothetical derivative matches the critical terms of the hedged items identically, and it perfectly offsets the hedged cash flow.

In our cash flow hedge relationships, the main sources of ineffectiveness are differences in interest rate indices, tenor and reset or settlement frequencies between hedging instruments and hedged items, and using hedging instruments without a floor in relationships for hedged items with a floor.

Net Investment Hedges

Net investment hedges mitigate our exposure to foreign exchange rate fluctuations related to our net investment in foreign operations.

Deposits denominated in foreign currencies, cross-currency swaps and foreign exchange forwards are designated as a hedging instrument for a portion of our net investment in foreign operations. We designate the spot rate component of our hedging instrument in net investment hedges. The foreign currency translation of our net investment in foreign operations and the effective portion of the corresponding hedging instrument are recorded in unrealized gains (losses) on translation of net foreign operations in other comprehensive income, instead of through the income statement in the case of the hedging instrument if hedge accounting had not been elected.

The effectiveness of our net investment hedge is determined using either the dollar offset method with spot foreign currency rates or a quantitative statistical regression analysis. As the notional amount of the hedging instruments and the hedged net investment in foreign operations are the same, there are no significant sources of ineffectiveness in these hedging relationships.

For cash flow hedges and net investment hedges, the following table contains information related to items designated as hedging instruments, hedged items and hedge ineffectiveness for the years ended October 31, 2023 and 2022.

(Canadian $ in millions)

	2023				
	Carrying amount of hedging instruments (1)		Hedge ineffectiveness		
	Asset	Liability	Gains (losses) on hedging derivatives used to calculate hedge ineffectiveness (2)	Gains (losses) on hypothetical derivatives used to calculate hedge ineffectiveness (2)	Ineffectiveness recorded in non-interest revenue – other
Cash Flow Hedges					
Interest rate risk – Interest rate swaps	**693**	**(3,784)**	**(1,543)**	**1,511**	**–**
Foreign exchange risk – Cross-currency swaps and foreign exchange forwards (3)	**333**	**(1,801)**	**(245)**	**245**	**–**
Equity price risk – Total return swaps	**–**	**(43)**	**(80)**	**80**	**–**
	1,026	**(5,628)**	**(1,868)**	**1,836**	**–**
Net Investment Hedges					
Foreign exchange risk – Cross-currency swaps and foreign exchange forwards	**–**	**(8)**	**23**	**(22)**	**1**
Foreign exchange risk – Deposit liabilities	**–**	**(13,311)**	**(485)**	**485**	**–**
Total	**1,026**	**(18,947)**	**(2,330)**	**2,299**	**1**

	2022				
Cash Flow Hedges					
Interest rate risk – Interest rate swaps	41	(6,824)	(8,481)	8,588	(33)
Foreign exchange risk – Cross-currency swaps and foreign exchange forwards (3)	629	(3,342)	1,684	(1,684)	–
Equity price risk – Total return swaps	18	–	(29)	29	–
	688	(10,166)	(6,826)	6,933	(33)
Net Investment Hedges					
Foreign exchange risk – Cross-currency swaps and foreign exchange forwards	–	–	429	(429)	–
Foreign exchange risk – Deposit liabilities	–	(1,251)	(886)	886	–
Total	688	(11,417)	(7,283)	7,390	(33)

(1) Represents unrealized gains (losses) recorded as part of the derivative instruments in assets and liabilities, respectively, in our Consolidated Balance Sheet.
(2) Represents life to date amounts.
(3) Includes derivatives entered into in relation to our acquisition of Bank of the West and its subsidiaries, which were settled upon completion of the transaction. Refer to Note 10 for further details.

The following tables provide a reconciliation related to the impacts of our cash flow hedges and net investment hedges in our Consolidated Statement of Other Comprehensive Income, on a pre-tax basis for the years ended October 31, 2023 and 2022.

(Canadian $ in millions)

	2023					
					Balance in cash flow hedge AOCI / net foreign operations AOCI	
	Balance October 31, 2022	Gains / (losses) recognized in OCI	Amount reclassified to net income/goodwill as the hedged item affects net income/goodwill	Balance October 31, 2023 (1)(2)	Active hedges	Discontinued hedges
Cash Flow Hedges						
Interest rate risk	(8,204)	**(1,543)**	**1,732**	**(8,015)**	**(2,720)**	**(5,295)**
Foreign exchange risk (3)	1,223	**(245)**	**(368)**	**610**	**610**	**–**
Equity price risk	33	**(80)**	**(25)**	**(72)**	**(72)**	**–**
	(6,948)	**(1,868)**	**1,339**	**(7,477)**	**(2,182)**	**(5,295)**
Net Investment Hedges						
Foreign exchange risk	(1,723)	**(463)**	**–**	**(2,186)**	**(2,186)**	**–**
Total	(8,671)	**(2,331)**	**1,339**	**(9,663)**	**(4,368)**	**(5,295)**

	2022					
					Balance in cash flow hedge AOCI / net foreign operations AOCI	
	Balance October 31, 2021	Gains / (losses) recognized in OCI	Amount reclassified to net income as the hedged item affects net income	Balance October 31, 2022 (1)(2)	Active hedges	Discontinued hedges
Cash Flow Hedges						
Interest rate risk	578	(8,448)	(334)	(8,204)	(6,713)	(1,491)
Foreign exchange risk	(483)	1,684	22	1,223	1,168	55
Equity price risk	179	(29)	(117)	33	33	–
	274	(6,793)	(429)	(6,948)	(5,512)	(1,436)
Net Investment Hedges						
Foreign exchange risk	(1,263)	(457)	(3)	(1,723)	(1,723)	–
Total	(989)	(7,250)	(432)	(8,671)	(7,235)	(1,436)

(1) Tax balance related to cash flow hedges accumulated other comprehensive income was $2,029 million as at October 31, 2023 ($1,819 million as at October 31, 2022).
(2) Tax balance related to net investment hedges accumulated other comprehensive income was $55 million as at October 31, 2023 ($466 million as at October 31, 2022).
(3) On closing our acquisition of Bank of the West on February 1, 2023, we settled the foreign exchange forward contracts entered to mitigate foreign exchange risk of the purchase price of Bank of the West and reclassified gain of $269 million after-tax to goodwill. Refer to Note 10 for further details.

Fair Value Hedges

Fair value hedges modify exposure to changes in a fixed rate instrument's fair value caused by changes in interest rates. These hedges economically convert fixed rate assets and liabilities to floating rate. We use cross-currency swaps, interest rate swaps and bond futures to hedge foreign exchange risk and interest rate risk, including benchmark interest rates, inherent in fixed rate securities, a portfolio of mortgages, deposits and subordinated debt and other liabilities.

The carrying value of fixed rate assets or liabilities that are part of a hedging relationship is adjusted for the change in value of the risk being hedged. To the extent that the change in the fair value of the derivative does not offset changes in the fair value of the hedged item for the risk being hedged, the net amount (hedge ineffectiveness) is recorded directly in non-interest revenue, other, in our Consolidated Statement of Income.

For fair value hedges that are discontinued, we cease adjusting the hedged item. The cumulative fair value adjustment of the hedged item is then amortized to net interest income over the hedged item's remaining term to maturity. If the hedged item is sold or settled, the cumulative fair value adjustment is included in the gain or loss on sale or settlement.

In our fair value hedge relationships, the main sources of ineffectiveness are our own credit risk on the fair value of the swap, and differences in terms such as fixed interest rate or reset/settlement frequency between the swap and the hedged item.

The amounts related to derivatives designated as fair value hedging instruments, hedged items and hedge ineffectiveness for the years ended October 31, 2023 and 2022 are as follows:

(Canadian $ in millions)

	2023							
	Carrying amount of hedging derivatives (1)		Hedge ineffectiveness				Accumulated amount of fair value hedge gains (losses) on hedged items	
	Asset	Liability	Gains (losses) on hedging derivatives used to calculate hedge ineffectiveness	Gains (losses) on hedged item used to calculate hedge ineffectiveness	Ineffectiveness recorded in non-interest revenue – other	Carrying amount of the hedged item (2)	Active hedges	Discontinued hedges
Fair Value Hedge (3)								
Interest rate swaps	**4,877**	**(1,390)**	**–**	**–**	**–**	**–**	**–**	**–**
Cross-currency swaps	**69**	**(1)**	**–**	**–**	**–**	**–**	**–**	**–**
Securities and loans	**–**	**–**	**4,071**	**(3,955)**	**116**	**87,043**	**(4,373)**	**(404)**
Deposits, subordinated debt and other liabilities	**–**	**–**	**(1,078)**	**1,139**	**61**	**(77,358)**	**1,015**	**1,867**
Total	**4,946**	**(1,391)**	**2,993**	**(2,816)**	**177**	**9,685**	**(3,358)**	**1,463**

	2022							
Fair Value Hedge (3)								
Interest rate swaps	1,935	(2,987)	–	–	–	–	–	–
Cross-currency swaps	–	–	–	–	–	–	–	–
Securities and loans	–	–	2,633	(2,625)	8	36,394	(2,603)	122
Deposits, subordinated debt and other liabilities	–	–	(3,113)	3,128	15	(61,307)	2,841	425
Total	1,935	(2,987)	(480)	503	23	(24,913)	238	547

(1) Represents the unrealized gains (losses) within derivative instruments in assets and liabilities, respectively, in the Consolidated Balance Sheet.
(2) Represents the carrying value in our Consolidated Balance Sheet and includes amortized cost, before ACL, plus fair value hedge adjustments, except for FVOCI securities that are carried at fair value.
(3) Includes the fair value of bond futures rounded down to $nil million as at October 31, 2023 ($nil million as at October 31, 2022).

Derivative-Related Market Risk

Derivative instruments are subject to market risk arising from the potential for a negative impact on the balance sheet and/or statement of income due to adverse changes in the value of derivative instruments as a result of changes in certain market variables. These variables include interest rates, credit spreads, foreign exchange rates, equity and commodity prices and their implied volatilities, credit migration and default. We strive to limit our exposure to market risk by employing comprehensive governance and management processes for all market risk-taking activities.

Derivative-Related Credit Risk

Derivative instruments are subject to credit risk arising from the possibility that counterparties may default on their obligations. The credit risk associated with a derivative normally represents an amount that is a small fraction of the notional amount of the derivative instrument. Derivative contracts generally expose us to potential credit loss if changes in market rates affect the counterparty's position unfavourably and the counterparty defaults on payment. Credit risk is represented by the positive fair value of the derivative instrument. We strive to limit our exposure to credit risk by dealing with counterparties that we believe are creditworthy, and we manage our credit risk for derivatives using the same credit risk process that we apply to loans and other credit assets.

We also pursue opportunities to reduce our exposure to credit losses on derivative instruments, by securing collateral and by entering into master netting agreements with counterparties. The credit risk associated with favourable contracts is mitigated by legally enforceable master netting agreements to the extent that unfavourable contracts with the same counterparty must be settled concurrently with favourable contracts.

Exchange-traded derivatives have limited potential for credit risk exposure, as they are settled net daily with each exchange.

Terms used in the credit risk tables below are as follows:

Replacement cost captures the loss that would occur if a counterparty were to default in the present or at a future time, assuming that the closeout and replacement of transactions occur instantaneously, and assuming no recovery on the value of those transactions in bankruptcy.
Credit risk equivalent represents the total replacement cost plus an amount representing the potential future credit risk exposure adjusted by a multiplier of 1.4, as outlined in OSFI's Capital Adequacy Requirements (CAR) Guideline.
Risk-weighted assets represent the credit risk equivalent, weighted on the basis of the creditworthiness of the counterparty, and considering collateral, netting and other credit risk mitigants, as prescribed by OSFI.

(Canadian $ in millions)	2023			2022		
	Replacement cost (1)	**Credit risk equivalent** (1)	**Risk-weighted assets**	Replacement cost (1)	Credit risk equivalent (1)	Risk-weighted assets
Interest Rate Contracts						
Over-the-counter						
Swaps	**1,265**	**5,133**	**1,006**	4,133	8,718	764
Forward rate agreements	**571**	**2,219**	**471**	943	1,773	430
Purchased options	**45**	**174**	**61**	48	170	46
Written options	**1**	**140**	**77**	4	131	67
	1,882	**7,666**	**1,615**	5,128	10,792	1,307
Exchange-traded						
Futures	**171**	**296**	**6**	231	359	7
Purchased options	**3**	**4**	**–**	159	227	5
Written options	**–**	**–**	**–**	7	11	–
	174	**300**	**6**	397	597	12
Total interest rate contracts	**2,056**	**7,966**	**1,621**	5,525	11,389	1,319
Foreign Exchange Contracts (2)						
Over-the-counter						
Swaps	**1,921**	**6,517**	**1,313**	1,645	5,535	880
Forward foreign exchange contracts	**2,300**	**9,296**	**1,908**	2,250	8,339	1,237
Purchased options	**149**	**448**	**129**	321	681	183
Written options	**2**	**118**	**39**	2	88	30
	4,372	**16,379**	**3,389**	4,218	14,643	2,330
Exchange-traded						
Futures	**–**	**–**	**–**	–	2	–
Purchased options	**3**	**8**	**–**	–	2	–
Written options	**–**	**–**	**–**	7	10	–
	3	**8**	**–**	7	14	–
Total foreign exchange contracts	**4,375**	**16,387**	**3,389**	4,225	14,657	2,330
Commodity Contracts						
Over-the-counter						
Swaps	**468**	**1,957**	**683**	3,160	6,107	1,281
Purchased options	**4**	**280**	**110**	435	936	194
Written options	**47**	**331**	**106**	126	403	107
	519	**2,568**	**899**	3,721	7,446	1,582
Exchange-traded						
Futures	**243**	**869**	**17**	1,122	2,055	41
Purchased options	**329**	**535**	**11**	356	552	11
Written options	**3**	**83**	**2**	303	471	9
	575	**1,487**	**30**	1,781	3,078	61
Total commodity contracts	**1,094**	**4,055**	**929**	5,502	10,524	1,643
Equity Contracts						
Over-the-counter	**684**	**8,274**	**2,123**	582	9,076	2,406
Exchange-traded	**1,640**	**4,635**	**93**	1,580	3,888	78
Total equity contracts	**2,324**	**12,909**	**2,216**	2,162	12,964	2,484
Credit Contracts	**446**	**1,093**	**81**	97	562	103
Total	**10,295**	**42,410**	**8,236**	17,511	50,096	7,879

(1) Replacement cost and credit risk equivalent are presented after the impact of master netting agreements and calculated using the Standardized Approach for Counterparty Credit Risk (SA-CCR) in accordance with the CAR Guideline issued by OSFI. The table therefore excludes loan commitment derivatives.
(2) Gold contracts are included in foreign exchange contracts.

Term to Maturity

Our derivative contracts have varying maturity dates. The remaining contractual terms to maturity for the notional amounts of our derivative contracts are set out below:

(Canadian $ in millions)	Term to maturity					2023	2022
	Within 1 year	1 to 3 years	3 to 5 years	5 to 10 years	Over 10 years	Total notional amounts	Total notional amounts
Interest Rate Contracts							
Swaps (1)	**3,738,351**	**2,297,285**	**1,587,033**	**1,410,529**	**577,832**	**9,611,030**	5,954,761
Forward rate agreements, futures and options	**1,352,524**	**360,014**	**87,506**	**23,438**	**4,000**	**1,827,482**	645,452
Total interest rate contracts	**5,090,875**	**2,657,299**	**1,674,539**	**1,433,967**	**581,832**	**11,438,512**	6,600,213
Foreign Exchange Contracts (2)							
Swaps	**175,365**	**266,699**	**164,341**	**133,125**	**41,424**	**780,954**	702,068
Forward foreign exchange contracts (1)	**539,912**	**19,531**	**3,449**	**1,457**	**17**	**564,366**	481,773
Futures	**4,021**	**14**	**–**	**–**	**–**	**4,035**	1,032
Options	**96,332**	**13,086**	**1,228**	**–**	**–**	**110,646**	153,322
Total foreign exchange contracts	**815,630**	**299,330**	**169,018**	**134,582**	**41,441**	**1,460,001**	1,338,195
Commodity Contracts							
Swaps	**9,823**	**7,777**	**549**	**425**	**–**	**18,574**	24,525
Futures	**18,182**	**15,634**	**1,372**	**97**	**–**	**35,285**	44,836
Options	**33,856**	**36,444**	**879**	**106**	**–**	**71,285**	79,119
Total commodity contracts	**61,861**	**59,855**	**2,800**	**628**	**–**	**125,144**	148,480
Equity Contracts	**220,096**	**67,747**	**15,097**	**1,557**	**755**	**305,252**	267,382
Credit Contracts	**453**	**925**	**16,749**	**6,877**	**1,933**	**26,937**	27,870
Total notional amount	**6,188,915**	**3,085,156**	**1,878,203**	**1,577,611**	**625,961**	**13,355,846**	8,382,140

(1) Includes derivatives entered into in relation to our acquisition of Bank of the West and its subsidiaries, which were settled upon close of the transaction. Refer to Note 10 for further details.
(2) Gold contracts are included in foreign exchange contracts.

Under the SA-CCR, this table excludes loan commitment derivatives.

Note 9: Premises and Equipment

We record all owned premises and equipment at cost less accumulated depreciation, and less any accumulated impairment, except land, which is recorded at cost. Buildings, computer equipment and operating system software, other equipment and leasehold improvements are depreciated on a straight-line basis over their estimated useful lives. When the major components of a building have different useful lives, they are accounted for separately and depreciated over each component's estimated useful life. The maximum estimated useful lives we use to depreciate our assets are as follows:

Buildings	10 to 40 years
Computer equipment and operating system software	5 to 7 years
Other equipment	10 years
Leasehold improvements	Lease term to a maximum of 10 years

Depreciation methods, useful lives and the residual values of premises and equipment are reviewed annually for any change in circumstances and are adjusted if appropriate. At each reporting period, we review whether there are any indications that premises and equipment need to be tested for impairment. If there is an indication that an asset may be impaired, we test for impairment by comparing the asset's carrying value to its recoverable amount. The recoverable amount is calculated as the higher of value in use and fair value less costs to sell. Value in use is the present value of the future cash flows expected to be derived from the asset. An impairment charge is recorded when the recoverable amount is less than the carrying value. There were no write-downs of premises and equipment during the years ended October 31, 2023
and 2022. Gains and losses on disposal are included in non-interest expense, premises and equipment, in our Consolidated Statement of Income.

Leases

When we enter into a new arrangement as a lessee, a right-of-use asset is recognized equal to the lease liability, which is calculated based on the future lease payments discounted at our incremental borrowing rate over the lease term. In calculating our lease liability and corresponding right-of-use asset, we assess whether a contract is a lease by determining if we have the right to control the asset based on our ability to make decisions or direct how and for what purpose the asset is used.

The right-of-use asset is depreciated on a straight-line basis, based on the shorter of the useful life of the underlying asset or the lease term, and is adjusted for impairment losses, if any. Impairment is assessed when there is a change in use. We recorded impairment in our right-of-use assets of $40 million during the year ended October 31, 2023 ($6 million in 2022).

The lease liability accretes interest over the lease term, using the effective interest method, with the associated interest expense recognized in interest expense, other liabilities, in our Consolidated Statement of Income. We make estimates in determining the incremental borrowing rate that is used to discount lease liabilities, based on our expected costs of secured borrowing for the lease term. The lease term is based on the non-cancellable period and includes any options to extend or terminate which we are reasonably certain to exercise. The lease liability is remeasured when decisions are made to exercise options under the lease arrangement or when the likelihood of exercising an option within the lease changes. Refer to Note 14 for further information.

Amounts related to leases of low value are expensed when incurred in non-interest expense, premises and equipment, in our Consolidated Statement of Income.

The total cost and associated accumulated depreciation for premises and equipment that we own or lease are set out below:

(Canadian $ in millions)	2023							2022						
	Land	Buildings	Computer equipment	Other equipment	Leasehold improvements	Right-of-use assets	Total	Land	Buildings	Computer equipment	Other equipment	Leasehold improvements	Right-of-use assets	Total
Cost														
Balance at beginning of year	**119**	**1,688**	**2,671**	**945**	**2,054**	**3,435**	**10,912**	99	1,354	2,292	685	1,941	3,201	9,572
Additions/lease modifications	**13**	**91**	**280**	**125**	**413**	**406**	**1,328**	18	59	319	105	281	329	1,111
Acquisitions	**213**	**276**	**63**	**12**	**25**	**523**	**1,112**	–	–	–	–	–	–	–
Disposals (1)	**(28)**	**(26)**	**(109)**	**(30)**	**(97)**	**(60)**	**(350)**	(8)	(44)	(53)	(29)	(246)	(235)	(615)
Foreign exchange and other	**6**	**18**	**18**	**8**	**18**	**53**	**121**	10	319	113	184	78	140	844
Balance at end of year	**323**	**2,047**	**2,923**	**1,060**	**2,413**	**4,357**	**13,123**	119	1,688	2,671	945	2,054	3,435	10,912
Accumulated Depreciation and Impairment														
Balance at beginning of year	**–**	**1,188**	**2,007**	**667**	**1,270**	**939**	**6,071**	–	867	1,724	471	1,338	718	5,118
Disposals (1)	**–**	**(25)**	**(106)**	**(29)**	**(94)**	**(50)**	**(304)**	–	(35)	(48)	(25)	(243)	(153)	(504)
Depreciation	**–**	**70**	**306**	**65**	**169**	**412**	**1,022**	–	50	225	53	116	336	780
Foreign exchange and other (2)	**–**	**5**	**21**	**1**	**11**	**55**	**93**	–	306	106	168	59	38	677
Balance at end of year	**–**	**1,238**	**2,228**	**704**	**1,356**	**1,356**	**6,882**	–	1,188	2,007	667	1,270	939	6,071
Net carrying value	**323**	**809**	**695**	**356**	**1,057**	**3,001**	**6,241**	119	500	664	278	784	2,496	4,841

(1) Includes fully depreciated assets written off and assets sold as part of divestitures in 2022. Refer to Note 10.
(2) Includes impairment charges.

Note 10: Acquisitions and Divestitures

Acquisitions

The cost of an acquisition is measured at the fair value of the consideration transferred, including contingent consideration. Acquisition-related costs are recognized as an expense in the period in which they are incurred. The identifiable assets acquired and liabilities assumed and contingent consideration are measured at their fair values at the date of acquisition. Goodwill is measured as the excess of the aggregate of the consideration transferred over the net of the fair value of identifiable assets acquired and liabilities assumed. The results of operations of acquired businesses are included in our consolidated financial statements beginning on the date of acquisition.

AIR MILES Reward Program

On June 1, 2023, we completed the acquisition of the AIR MILES Reward Program (AIR MILES) business of LoyaltyOne Co., a subsidiary of Loyalty Ventures Inc., pursuant to a process under the *Companies' Creditors Arrangement Act* for a cash purchase price of US$157 million (CAD$213 million). The AIR MILES business operates as a wholly-owned subsidiary of BMO. The acquisition was accounted for as a business combination, and the acquired business and corresponding goodwill are included in our Canadian Personal and Commercial Banking (Canadian P&C) reporting segment.

We acquired intangible assets of $151 million and goodwill of $233 million. Customer relationship and software intangible assets are amortized to income over 5 to 14 years. The trade name intangible asset has an indefinite life and is not amortized to income. A portion of the goodwill related to this acquisition is deductible for tax purposes.

The fair values of the assets acquired and liabilities assumed at the date of acquisition are as follows:

(Canadian $ in millions)	June 1, 2023
Securities	**668**
Goodwill and intangible assets	**384**
Other assets	**141**
Total assets	**1,193**
Deferred revenue (1)	**916**
Other liabilities	**64**
Total liabilities	**980**
Purchase price	**213**

(1) Deferred revenue reflects our obligation to fulfill the redemption of miles that were outstanding at the acquisition date and is included in other liabilities in our Consolidated Balance Sheet.

The purchase price allocation for AIR MILES is subject to refinement as we complete the valuation of the assets acquired and liabilities assumed.

Bank of the West

On February 1, 2023, we completed the acquisition of Bank of the West, including its subsidiaries, from BNP Paribas for a cash purchase price of US$13.8 billion (CAD$18.4 billion). Bank of the West provides a broad range of banking products and services primarily in the Western and Midwestern regions of the United States. The merger enables BMO's market extension in Bank of the West's primary markets, including California, and accelerates BMO's commercial banking expansion. The acquisition has been reflected in our results as a business combination, primarily in the U.S. Personal and Commercial Banking (U.S. P&C) and BMO WM reporting segments.

As part of the acquisition, we acquired a 51% interest in Bank of the West's subsidiary, CLAAS Financial Services, LLC, which provides lease and loan financing to commercial entities acquiring agricultural equipment. We control this LLC and its results are included in our consolidated financial statements. We have recorded the ownership interests of the other partners in CLAAS Financial Services, LLC as non-controlling interest in our Consolidated Balance Sheet.

We acquired intangible assets of $2,883 million and goodwill of $10,582 million. Core-deposit and customer relationship intangible assets are being amortized to income over the period during which we believe the assets will benefit us, on an accelerated basis, over a period not to exceed 15 years. Goodwill consists largely of the synergy and economies of scale expected from the combined operations of BMO and Bank of the West. Goodwill related to this acquisition is not deductible for tax purposes.

We recorded the assets acquired and liabilities assumed at fair value as at the date of acquisition, as shown in the table below.

(Canadian $ in millions)	February 1, 2023
Purchase consideration	**18,382**
Impact of forward contracts (1)	**(269)**
Net purchase consideration	**18,113**
Fair value of identifiable assets acquired	
Securities	**28,437**
Loans	
Residential mortgages	**11,912**
Consumer installment and other personal	**20,268**
Credit cards	**885**
Business and government	**43,418**
Total loans	**76,483**
Other assets (2)	**9,152**
Intangible assets	**2,883**
Total fair value of identifiable assets acquired	**116,955**
Fair value of identifiable liabilities assumed	
Deposits	**91,711**
Other liabilities (2)	**17,697**
Total fair value of identifiable liabilities assumed	**109,408**
Non-controlling interest	**16**
Goodwill	**10,582**
Net purchase consideration	**18,113**

(1) To mitigate changes in the Canadian dollar equivalent of the purchase price between our announcement of the acquisition and its closing, we entered into forward contracts, which qualified for hedge accounting. Changes in the fair value of these forward contracts of $269 million (after-tax) was accounted for as a reduction of the Canadian dollar equivalent of the purchase price.

(2) The net deferred tax asset recorded in the opening balance sheet is $1,273 million.

The purchase price allocation for Bank of the West is subject to refinement as we complete the valuation of the assets acquired and liabilities assumed.

The accounting for purchased loans, including the initial PCL, is discussed in Note 4.

Since the acquisition date, Bank of the West has contributed revenue of $3,143 million and net income of $361 million to our consolidated results. Net income of $361 million excludes the initial PCL of $705 million ($517 million after-tax) and integration and acquisition-related costs of $1,792 million ($1,342 million after-tax). If we assume the acquisition had occurred on November 1, 2022 and the same fair values were applied, we estimate that our combined consolidated year-to-date revenue and net income would have been $32 billion and $4.5 billion, respectively.

Impact of Fair Value Management Actions

The fair value of fixed rate loans, securities and deposits is largely dependent on interest rates. As interest rates increased between our announcement of the acquisition and close, the fair value of the acquired fixed rate instruments (in particular, loans, securities and deposits) decreased, resulting in goodwill on closing that was higher than our estimates on the announcement date. Conversely, the fair value of floating rate assets (liabilities) and non-maturity deposits approximates par. Changes in goodwill relative to our original assumptions announced on December 20, 2021 impacted capital ratios on close because goodwill is treated as a deduction from capital under OSFI Basel III rules.

Upon announcement of the agreement to acquire Bank of the West, we entered into pay fixed/receive float interest rate swaps and purchased a portfolio of matched duration U.S. Treasuries and other balance sheet instruments to economically hedge the impact of changes in interest rates on our capital ratios at close. We recorded net interest income and mark-to-market gains of $5.7 billion on these instruments in interest income and non-interest revenue between December 20, 2021 and February 1, 2023, at which time the interest rate swaps were neutralized. The gains provided additional capital to offset the impact of higher goodwill on close.

On close, we placed the majority of these U.S. Treasuries and other balance sheet instruments, which were in an unrealized loss position, in fair value hedge relationships with new pay fixed/receive float interest rate swaps. The fair value hedges, coupled with other actions taken to manage our interest rate risk profile to its target position, crystallized a $5.7 billion loss on these instruments, which will be recognized as a reduction in interest income over their remaining life through accounting for the new fair value hedges. We recorded an $877 million reduction in interest, dividend and fee income – securities related to the fair value hedge in our Consolidated Statement of Income for the year ended October 31, 2023.

The fair values of the loans, securities and deposits we acquired are below par. This discount will accrete to interest income in our Consolidated Statement of Income over the remaining terms of these instruments. We recorded $725 million related to these purchased loans and $383 million related to these purchased securities in our Consolidated Statement of Income in net interest income for the year ended October 31, 2023. More information on the purchased loans is included in Note 4.

Leasing Solutions Canada Inc.

On February 1, 2023, we acquired Leasing Solutions Canada Inc. from BNP Paribas. The acquisition was reflected in our results beginning in the second quarter of 2023 as a business combination, in the Canadian P&C reporting segment and was not material to the bank.

Radicle Group Inc.
On December 1, 2022, we completed the acquisition of Radicle Group Inc. (Radicle), a Calgary-based leader in sustainability advisory services and solutions, and technology-driven emissions measurement and management, for 1.2 million BMO common shares with a total value of $153 million plus cash consideration of $42 million. The acquisition was accounted for as a business combination, and the acquired business and corresponding goodwill are included in our BMO CM reporting segment.

We acquired intangible assets of $60 million and goodwill of $85 million. The intangible assets are being amortized over 3 to 15 years. Goodwill related to this acquisition is not deductible for tax purposes.

The fair values of the assets acquired and liabilities assumed at the date of acquisition are as follows:

(Canadian $ in millions)	December 1, 2022
Goodwill and intangible assets	**145**
Other assets	**85**
Total assets	**230**
Liabilities	**35**
Purchase price	**195**

The purchase price allocation for Radicle is subject to refinement as we complete the valuation of the assets acquired and liabilities assumed.

Divestitures

Non-current non-financial assets (and disposal groups) are classified as held-for-sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use. These assets meet the criteria for classification as held-for-sale if they are available for immediate sale in their present condition and their sale is considered highly probable to occur within one year. Non-current non-financial assets classified as held-for-sale are measured at the lower of their carrying amount and fair value less costs to sell. Any subsequent write-down to fair value less costs to sell is recognized in non-interest expense in our Consolidated Statement of Income. Any subsequent increase in the fair value less costs to sell, to the extent this does not exceed the cumulative write-down or impact the impairment previously allocated to goodwill, is also recognized in non-interest expense. Gains on disposals are recognized in non-interest revenue.

EMEA and U.S. Asset Management
On November 8, 2021, we completed the sale of our EMEA Asset Management business, part of our BMO WM operating segment, to Ameriprise Financial Inc. (Ameriprise) for £615 million (CAD$1,038 million) in an all-cash transaction. On the date of sale, assets and liabilities of approximately $1,779 million and $527 million, respectively, were derecognized. In connection with the completion of the EMEA portion of the sale, we recognized a before and after-tax loss of $29 million related to foreign currency translation reclassified from accumulated other comprehensive income to non-interest revenue, foreign exchange gains, other than trading, in our Consolidated Statement of Income in 2022. The transaction also included the opportunity for certain BMO asset management clients in the United States to move to Ameriprise. These transfers were completed in 2022, resulting in tax expense of $22 million. Further transfers of certain other U.S. asset management clients were completed in 2022 with no material impact to the bank.

Taplin, Canida & Habacht, LLC
On January 27, 2022, we completed the sale of Taplin, Canida & Habacht, LLC, part of our U.S. asset management business, to Loop Capital. The business was not considered material to the bank.

Note 11: Goodwill and Intangible Assets

Goodwill

When we complete an acquisition, we allocate the purchase price to the assets acquired, including identifiable intangible assets, and the liabilities assumed. Any portion of the consideration transferred that is in excess of the fair value of those net assets is considered to be goodwill. Goodwill is not amortized and is instead tested for impairment annually.

In performing the impairment test, we utilize the fair value less costs to sell for each group of CGUs based on discounted cash flow projections. Cash flows were projected for the first 10 years based on actual operating results, expected future business performance and past experience. Beyond 10 years, cash flows were assumed to grow at perpetual annual rates of up to 2.0% (3.0% in 2022). The discount rates we applied in determining the recoverable amounts in 2023 ranged from 8.9% to 11.4% (6.8% to 11.2% in 2022) and were based on our estimate of the cost of capital for each CGU. The cost of capital for each CGU was estimated using the Capital Asset Pricing Model, based on the historical betas of publicly traded peer companies that are comparable to the CGU. We use significant judgment to determine inputs to the discounted cash flow model, which is most sensitive to changes in future cash flows, discount rates and terminal growth rates applied to cash flows beyond the forecast period.

The key assumptions described above may change as market and economic conditions change. However, we estimate that reasonably possible changes in these assumptions are not expected to cause the recoverable amounts of our CGUs to decline below their carrying amounts.

A continuity of our goodwill by group of CGUs for the years ended October 31, 2023 and 2022 is as follows:

(Canadian $ in millions)	Personal and Commercial Banking			BMO Wealth Management			BMO Capital Markets	Total
	Canadian P&C	U.S. P&C	Total	Wealth and Asset Management	Insurance	Total		
Balance – October 31, 2021	97	3,567	3,664	1,310	2	1,312	402	5,378
Disposals (7)	–	–	–	(538)	–	(538)	–	(538)
Foreign exchange and other (1)	–	362	362	50	–	50	33	445
Balance – October 31, 2022	97	3,929	4,026	822	2	824	435	5,285
Acquisitions (7)	**233**	**10,345**	**10,578**	**237**	**–**	**237**	**85**	**10,900**
Foreign exchange and other (1)	**–**	**515**	**515**	**20**	**–**	**20**	**8**	**543**
Balance – October 31, 2023	**330** (2)	**14,789** (3)	**15,119**	**1,079** (4)	**2** (5)	**1,081**	**528** (6)	**16,728**

(1) Other changes in goodwill included the effects of translating goodwill denominated in foreign currencies into Canadian dollars and purchase accounting adjustments related to prior-year purchases.
(2) Relates primarily to AIR MILES, bcpbank Canada, Diners Club, Aver Media LP and GE Transportation Finance.
(3) Relates primarily to Bank of the West, First National Bank & Trust, Ozaukee Bank, Merchants and Manufacturers Bancorporation, Inc., Diners Club, AMCORE, M&I Marshall and Ilsley Banks (M&I) and GE Transportation Finance.
(4) Relates primarily to Bank of the West, CTC Consulting LLC, M&I, Stoker Ostler Wealth Advisors, Inc., myCFO, Inc., Guardian Group of Funds Ltd. and BMO Nesbitt Burns Inc. Pyrford International Limited, LGM Investments Limited and F&C Asset Management plc were divested in fiscal 2022.
(5) Relates to AIG Life Holdings (Canada), ULC.
(6) Relates to Radicle, Clearpool, KGS-Alpha Capital Markets, Gerard Klauer Mattison, BMO Nesbitt Burns Inc., Paloma Securities L.L.C., M&I and Greene Holcomb Fisher.
(7) Refer to Note 10 for further information.

Intangible Assets

Intangible assets related to our acquisitions are initially recorded at their fair value at the acquisition date and subsequently at cost less accumulated amortization. Software is recorded at cost less accumulated amortization. Amortization expense is recorded in amortization of intangible assets in our Consolidated Statement of Income. The following table presents the changes in the balance of these intangible assets:

(Canadian $ in millions)	Customer relationships	Core deposits	Software – amortizing	Software under development	Other	Total
Cost as at October 31, 2021	719	894	5,548	204	601	7,966
Additions	–	–	11	662	20	693
Transfers	–	–	611	(611)	–	–
Disposals (2)	(247)	–	(53)	(1)	(319)	(620)
Foreign exchange and other	49	84	120	5	20	278
Cost as at October 31, 2022	521	978	6,237 (1)	259	322	8,317
Additions	**–**	**–**	**58**	**739**	**33**	**830**
Acquisitions (3)	**311**	**2,453**	**103**	**–**	**227**	**3,094**
Transfers	**–**	**–**	**672**	**(672)**	**–**	**–**
Disposals (2)(3)	**–**	**–**	**(29)**	**(2)**	**(21)**	**(52)**
Foreign exchange and other	**18**	**122**	**30**	**–**	**11**	**181**
Cost as at October 31, 2023	**850**	**3,553**	**7,071** (1)	**324**	**572**	**12,370**

(1) Includes $6,172 million of internally generated software as at October 31, 2023 ($5,486 million as at October 31, 2022).
(2) Includes fully depreciated assets written off and assets sold as part of divestitures in 2022.
(3) Refer to Note 10 for further information.

The following table presents the accumulated amortization of our intangible assets:

(Canadian $ in millions)	Customer relationships	Core deposits	Software – amortizing	Software under development	Other	Total
Accumulated amortization at October 31, 2021	616	894	3,821	–	369	5,700
Amortization	22	–	556	–	26	604
Disposals (2)(3)	(247)	–	(49)	–	(123)	(419)
Foreign exchange and other	44	84	94	–	17	239
Accumulated amortization at October 31, 2022	435	978	4,422 (1)	–	289	6,124
Amortization	**44**	**291**	**653**	**–**	**27**	**1,015**
Disposals (2)(3)	**–**	**–**	**(22)**	**–**	**(21)**	**(43)**
Foreign exchange and other	**8**	**26**	**20**	**–**	**4**	**58**
Accumulated amortization at October 31, 2023	**487**	**1,295**	**5,073** (1)	**–**	**299**	**7,154**
Carrying value at October 31, 2023	**363**	**2,258**	**1,998**	**324**	**273**	**5,216**
Carrying value at October 31, 2022	86	–	1,815	259	33	2,193

(1) Includes $4,420 million of internally generated software as at October 31, 2023 ($3,819 million as at October 31, 2022).
(2) Includes fully depreciated assets written off and assets sold as part of divestitures in 2022. Refer to Note 10 for further information.
(3) Includes impairment charges.

Intangible assets are amortized to income over the period during which we believe the assets will benefit us, on either a straight-line or an accelerated basis, over a period not to exceed 15 years. We have $227 million as at October 31, 2023 ($nil million as at October 31, 2022) in intangible assets with indefinite lives that relate primarily to card processing and trade name contracts.

The useful lives of intangible assets are reviewed annually for any changes in circumstances. We test definite-life intangible assets for impairment when events or changes in circumstances indicate that their carrying value may not be recoverable. Indefinite-life intangible assets are tested annually for impairment. If any intangible assets are determined to be impaired, we write them down to their recoverable amount, the higher of value in use and fair value less costs to sell.

There were write-downs of software-related intangible assets of $9 million during the year ended October 31, 2023 ($5 million in 2022).

Note 12: Other Assets

Customers' Liability Under Acceptances

Acceptances represent a form of negotiable short-term debt issued by our customers, which we guarantee for a fee. The fees earned are recorded in non-interest revenue, lending fees, in our Consolidated Statement of Income over the term of the acceptance. The amount potentially due under acceptances is recorded in other liabilities in our Consolidated Balance Sheet. We record the bank's equivalent claim against our customers in the event of a call on these commitments in other assets in our Consolidated Balance Sheet.

Other

The components of other within other assets are as follows:

(Canadian $ in millions)	2023	2022
Accounts receivable, prepaid expenses and other items	**5,278**	3,634
Accrued interest receivable	**4,097**	2,726
Bank owned life insurance policies	**6,306**	4,509
Leased vehicles, net of accumulated amortization	**124**	263
Cash collateral	**9,939**	13,586
Due from clients, dealers and brokers	**381**	313
Insurance-related assets (1)	**3,161**	2,575
Other employee future benefits assets (Note 21)	**81**	51
Pension asset (Note 21)	**1,225**	1,267
Precious metals (2)	**4,701**	2,970
Total	**35,293**	31,894

(1) Includes $1,073 million of investment properties ($1,001 million as at October 31, 2022) carried at cost less accumulated amortization. These investment properties support our insurance contract liabilities. The fair value, determined by external independent property valuers for disclosure purposes, is $1,326 million and categorized as Level 3 (refer to Note 17 for further information on fair value levels) using models with unobservable market inputs ($1,184 million as at October 31, 2022).
(2) Precious metals are recorded at fair value based on quoted prices in active markets.

Note 13: Deposits

	Payable on demand					
(Canadian $ in millions)	Interest bearing	Non-interest bearing	Payable after notice	Payable on a fixed date (2)(4)	2023	2022
Deposits by:						
Banks (1)	**4,237**	**1,855**	**1,609**	**21,886**	**29,587**	30,901
Business and government	**57,781**	**45,648**	**183,610**	**287,631**	**574,670**	495,831
Individuals	**4,318**	**34,959**	**137,978**	**128,164**	**305,419**	242,746
Total (3)	**66,336**	**82,462**	**323,197**	**437,681**	**909,676**	769,478
Booked in:						
Canada	**54,328**	**68,495**	**127,523**	**312,863**	**563,209**	515,290
United States	**11,899**	**13,957**	**193,457**	**81,751**	**301,064**	217,720
Other countries	**109**	**10**	**2,217**	**43,067**	**45,403**	36,468
Total	**66,336**	**82,462**	**323,197**	**437,681**	**909,676**	769,478

(1) Includes regulated and central banks.
(2) Includes $63,925 million of senior unsecured debt as at October 31, 2023 subject to the Bank Recapitalization (Bail-In) regime ($51,746 million as at October 31, 2022). The Bail-In regime provides certain statutory powers to the Canada Deposit Insurance Corporation, including the ability to convert specified eligible shares and liabilities into common shares if the bank becomes non-viable.
(3) Included in deposits as at October 31, 2023 and 2022 are $491,201 million and $384,080 million, respectively, of deposits denominated in U.S. dollars, and $55,705 million and $46,830 million, respectively, of deposits denominated in other foreign currencies.
(4) We have unencumbered liquid assets of $360,213 million as at October 31, 2023 to support these and other deposit liabilities ($335,299 million as at October 31, 2022).

Deposits are measured at amortized cost, except structured notes, structured deposits and metals deposits, which are measured at FVTPL. Deposits payable on demand are comprised primarily of our customers' chequing accounts, on some of which we pay interest. Our customers need not notify us prior to withdrawing money from their chequing accounts. Deposits payable after notice are comprised primarily of our customers' savings accounts, on which we pay interest. Deposits payable on a fixed date are comprised of:

- Various investment instruments purchased by our customers to earn interest over a fixed period, such as retail and small business term deposits, wholesale funding and guaranteed investment certificates. Deposits totalling $30,852 million as at October 31, 2023 ($29,966 million as at October 31, 2022) can be early redeemed, either fully or partially, by customers without penalty. These are classified as payable on a fixed date, based on their remaining contractual maturities.
- Commercial paper, which totalled $52,884 million as at October 31, 2023 ($42,138 million as at October 31, 2022).
- Covered bonds, which totalled $28,400 million as at October 31, 2023 ($29,076 million as at October 31, 2022).

The following table presents deposits payable on a fixed date and greater than one hundred thousand dollars:

(Canadian $ in millions)	Canada	United States	Other	Total
As at October 31, 2023	**269,262**	**73,226**	**43,106**	**385,594**
As at October 31, 2022	230,475	50,542	34,241	315,258

The following table presents the maturity schedule for deposits payable on a fixed date and greater than one hundred thousand dollars, that are booked in Canada:

(Canadian $ in millions)	Less than 3 months	3 to 6 months	6 to 12 months	Over 12 months	Total
As at October 31, 2023	**55,070**	**38,509**	**61,370**	**114,313**	**269,262**
As at October 31, 2022	46,792	28,826	55,288	99,569	230,475

Structured Note Liabilities

Most of our structured note liabilities included in deposits have been designated at FVTPL, which aligns the accounting result with the way the portfolio is managed. The change in fair value of these structured notes is recorded in non-interest revenue, trading revenues (losses), with the changes in fair value due to own credit risk recognized in other comprehensive income. The impact of changes in our own credit risk is measured based on movements in our own credit spread year over year.

The following table presents fair value and changes in fair value of structured note liabilities:

(Canadian $ in millions)	Fair value	Notional amount due at contractual maturity	Change in fair value recorded in the Consolidated Statement of Income (1)	Change in fair value due to own credit risk recorded in OCI (before tax)	Cumulative change in fair value due to own credit risk recognized in AOCI (before tax)
As at October 31, 2023	**35,300**	**42,437**	**1,336**	**(379)**	**865**
As at October 31, 2022	26,305	32,507	4,617	1,653	1,245

(1) Change in fair value may be offset by related change in fair value on hedge contracts.

Note 14: Other Liabilities

Acceptances

Acceptances represent a form of negotiable short-term debt that is issued by our customers, which we guarantee for a fee. The fees earned are recorded in non-interest revenue, lending fees, in our Consolidated Statement of Income over the term of the acceptance. The amount potentially due under acceptances is recorded in other liabilities in our Consolidated Balance Sheet. We record the bank's equivalent claim against our customers in the event of a call on these commitments in other assets in our Consolidated Balance Sheet.

Securities Lending and Borrowing

Securities lending and borrowing transactions are generally collateralized by securities or cash. Cash advanced or received as collateral is recorded in securities borrowed or purchased under resale agreements, or other liabilities, securities lent or sold under repurchase agreements, respectively. Interest earned on cash collateral is recorded in interest, dividend and fee income, in our Consolidated Statement of Income, and interest expense on cash collateral is recorded in interest expense, other liabilities, in our Consolidated Statement of Income. The transfer of the securities to counterparties is only reflected in our Consolidated Balance Sheet if the risks and rewards of ownership have also been transferred. Securities borrowed are not recognized in our Consolidated Balance Sheet unless they are then sold to third parties, in which case the obligation to return the securities is recorded at fair value in securities sold but not yet purchased, with any gains or losses recorded in non-interest revenue, trading revenues (losses), in our Consolidated Statement of Income.

Securities Sold But Not Yet Purchased

Securities sold but not yet purchased represent our obligations to deliver securities that we did not own at the time of sale. These obligations are recorded at their fair value. Adjustments to fair value as at the balance sheet date and gains and losses on the settlement of these obligations are recorded in non-interest revenue, trading revenues (losses), in our Consolidated Statement of Income.

Securitization and Structured Entities' Liabilities

Securitization and structured entities' liabilities include notes issued by our consolidated bank securitization vehicles and liabilities associated with the securitization of our Canadian mortgage loans as part of the Canada Mortgage Bond program, the NHA MBS program and our own programs. Additional information on our securitization programs and associated liabilities is provided in Notes 6 and 7. These liabilities are initially measured at fair value plus any directly attributable costs and are subsequently measured at amortized cost. The interest expense related to these liabilities is recorded in interest expense, other liabilities, in our Consolidated Statement of Income.

Other

The components of other within other liabilities are as follows:

(Canadian $ in millions)	2023	2022
Accounts payable, accrued expenses and other items	**11,987**	11,206
Accrued interest payable	**5,299**	2,319
ACL on off-balance sheet items	**460**	381
Cash collateral	**6,406**	5,042
Credit card loyalty rewards	**1,432**	441
Current tax liabilities	**44**	425
Deferred tax liabilities (Note 22)	**16**	102
Insurance-related liabilities	**12,340**	11,201
Lease liabilities	**3,506**	2,835
Liabilities of subsidiaries	**18,120**	7,494
Other employee future benefits liability (Note 21)	**823**	832
Payable to brokers, dealers and clients	**2,436**	2,966
Pension liability (Note 21)	**179**	88
Total	**63,048**	45,332

Credit Card Loyalty Rewards

We earn interchange fees on our proprietary cards and fees on our AIR MILES business. We defer the fees related to our obligation to fulfill redemption of rewards/miles and record them in other liabilities, other in our Consolidated Balance Sheet. We recognize these fees in non-interest revenue in our Consolidated Statement of Income when the rewards/miles are redeemed.

Insurance-Related Liabilities

We are engaged in insurance businesses related to life insurance, annuities, which includes pension risk, accident and sickness, creditor insurance, and reinsurance. We designate the obligations related to certain investment contracts in our insurance businesses at FVTPL, which eliminates a measurement inconsistency that would otherwise arise from measuring the investment contract liabilities and offsetting changes in the fair value of the investments supporting them on a different basis. The change in fair value of these investment contract liabilities is recorded in insurance claims, commissions and changes in policy benefit liabilities, with the exception of changes in our own credit risk recognized in other comprehensive income. The impact of changes in our own credit risk is measured based on movements in our own credit spread year over year. Changes in the fair value of investments backing these investment contract liabilities are recorded in non-interest revenue, insurance revenue (loss).

The following table presents the fair value and changes in fair value in our investment contract liabilities:

(Canadian $ in millions)	Fair value	Notional amount due at contractual maturity	Change in fair value recorded in the Consolidated Statement of Income	Change in fair value due to own credit risk recorded in OCI (before tax)	Cumulative change in fair value due to own credit risk recognized in AOCI (before tax)
As at October 31, 2023	**708**	**1,397**	**(13)**	**(15)**	**8**
As at October 31, 2022	770	1,459	(114)	94	22

Insurance claims and policy benefit liabilities represent current claims and estimates of future insurance policy benefit liabilities. Liabilities for life insurance contracts are determined using the Canadian Asset Liability Method, which incorporates best-estimate assumptions for mortality, morbidity, policy lapses, surrenders, future investment yields, policy dividends, administration costs and margins for adverse deviation. These assumptions are reviewed at least annually and updated to reflect actual experience and market conditions.

A reconciliation of the change in insurance-related liabilities is as follows:

(Canadian $ in millions)	2023	2022
Insurance-related liabilities, beginning of year	**11,201**	12,845
Increase (decrease) in life insurance policy benefit liabilities from:		
New business	**1,424**	354
In-force policies	**(261)**	(1,938)
Changes in actuarial assumptions and methodology	**(21)**	201
Foreign currency	**–**	3
Net increase (decrease) in life insurance policy benefit liabilities	**1,142**	(1,380)
Change in other insurance-related liabilities	**(3)**	(264)
Insurance-related liabilities, end of year	**12,340**	11,201

Reinsurance

In the ordinary course of business, our insurance subsidiaries reinsure risks with other insurance and reinsurance companies in order to provide greater diversification, limit loss exposure to large risks, and provide additional capacity for future growth. These ceding reinsurance arrangements do not relieve our insurance subsidiaries of their direct obligation to the insured parties. We evaluate the financial condition of the reinsurers and monitor their credit ratings in order to minimize our exposure to losses from reinsurer insolvency.

Reinsurance premiums ceded are recorded net against direct premium income and are included in non-interest revenue, insurance revenue (loss), in our Consolidated Statement of Income for the years ended October 31, 2023 and 2022, as shown in the table below:

(Canadian $ in millions)	**2023**	2022
Direct premium income	**2,879**	1,623
Ceded premiums	**(646)**	(399)
	2,233	1,224

Lease Liabilities

When we enter into leases we record lease liabilities representing the present value of future lease payments over the lease term. Interest expense recorded on lease liabilities for the year ended October 31, 2023 was $92 million ($59 million in 2022). Total cash outflow for lease liabilities for the year ended October 31, 2023 was $435 million ($342 million in 2022). Variable lease payments (for example maintenance, utilities and property taxes) not included in the measurement of lease liabilities for the year ended October 31, 2023 were $218 million ($206 million in 2022).

The maturity profile of our undiscounted lease liabilities is $439 million for 2024, $440 million for 2025, $427 million for 2026, $404 million for 2027, $375 million for 2028 and $2,089 million for 2029 and thereafter.

Note 15: Subordinated Debt

Subordinated debt represents our direct unsecured obligations to our debt holders, in the form of notes and debentures, and forms part of our regulatory capital. Subordinated debt is recorded at amortized cost using the effective interest rate method. Where appropriate, we enter into fair value hedges to hedge the risks caused by changes in interest rates (see Note 8). The rights of the holders of our notes and debentures are subordinate to the claims of depositors and certain other creditors. We require approval from OSFI before we can redeem any part of our subordinated debt.

The face values, terms to maturity and carrying values of our subordinated debt are as follows:

(Canadian $ in millions, except as noted)	Face value	Maturity date	Interest rate (%)	Reset premium (%)	Redeemable at our option (2)	**2023 Total**	2022 Total
Debentures Series 20	150	December 2025 to 2040	8.25	na	Not redeemable	**147**	146
3.803% Subordinated Notes due 2032 (1)	US 1,250	December 2032	3.80	1.43 (3)	December 2027	**1,510**	1,497
4.338% Subordinated Notes due 2028 (1)	US 850	October 2028	4.34	na	October 2023 (4)	**–**	1,135
Series J Medium-Term Notes, First Tranche (1)	1,000	September 2029	2.88	1.18 (5)	September 2024	**999**	998
Series J Medium-Term Notes, Second Tranche (1)	1,250	June 2030	2.08	1.32 (5)	June 2025	**1,248**	1,248
Series K Medium-Term Notes, First Tranche (1)	1,000	July 2031	1.93	0.59 (5)	July 2026	**988**	984
3.088% Subordinated Notes due 2037 (1)	US 1,250	January 2037	3.09	1.40 (6)	January 2032	**1,439**	1,393
Series L Medium-Term Notes, First Tranche (1)	750	October 2032	6.53	2.70 (7)	October 2027	**749**	749
Series M Medium-Term Notes, First Tranche (1)	1,150	September 2033	6.03	2.02 (7)	September 2028	**1,148**	–
Total (8)						**8,228**	8,150

(1) These notes include a NVCC provision, which is necessary for notes issued after a certain date to qualify as regulatory capital under Basel III. As such, they are convertible into a variable number of our common shares if OSFI announces that the bank is, or is about to become, non-viable or if a federal or provincial government in Canada publicly announces that the bank has accepted or agreed to accept a capital injection, or equivalent support, to avoid non-viability. In such an event, each note is convertible into common shares pursuant to an automatic conversion formula with a multiplier and a conversion price based on the greater of: (i) a floor price of $5.00 and (ii) the current market price of our common shares based on the volume weighted-average trading price of our common shares on the TSX. The number of common shares issued is determined by dividing the par value of the note (including accrued and unpaid interest on such note) by the conversion price and then applying the multiplier.

(2) Redeemable at par with accrued and unpaid interest to and excluding the redemption date.

(3) Interest rate will reset at a rate equal to the 5-year mid-swap rate plus the reset premium noted.

(4) All US$850 million 4.338% Subordinated Notes due 2028 were redeemed on October 5, 2023 for 100% of the principal amount, plus accrued interest to and excluding the redemption date.

(5) Interest rate will reset at a rate equal to the 3-month CDOR plus the reset premium noted.

(6) Interest rate will reset at a rate equal to the 5-year U.S. treasury bill rate plus the reset premium noted.

(7) Interest rate will reset at a rate equal to the CORRA plus the reset premium noted.

(8) Certain amounts of subordinated debt were issued at a premium or discount and include fair value hedge adjustments, which together decreased their carrying value as at October 31, 2023 by $539 million (decreased by $565 million in 2022); see Note 8 for further details on hedge adjustments. The carrying value is also adjusted for our subordinated debt holdings, held for market-making purposes.

na – not applicable

The aggregate remaining maturities of our subordinated debt, based on the maturity dates under the terms of issue, can be found in the blue-tinted font in the Contractual Maturities of Assets and Liabilities and Off-Balance Sheet Commitments section of Management's Discussion and Analysis within this report.

Note 16: Equity

Preferred and Common Shares Outstanding and Other Equity Instruments

(Canadian $ in millions, except as noted)	2023			2022		
	Number of shares	Amount	Dividends declared per share	Number of shares	Amount	Dividends declared per share
Preferred Shares – Classified as Equity						
Class B – Series 27	**20,000,000**	**500**	**0.96**	20,000,000	500	0.96
Class B – Series 29	**16,000,000**	**400**	**0.91**	16,000,000	400	0.91
Class B – Series 31	**12,000,000**	**300**	**0.96**	12,000,000	300	0.96
Class B – Series 33	**8,000,000**	**200**	**0.76**	8,000,000	200	0.76
Class B – Series 44	**16,000,000**	**400**	**1.21**	16,000,000	400	1.21
Class B – Series 46	**14,000,000**	**350**	**1.28**	14,000,000	350	1.28
Class B – Series 50 (1)	**500,000**	**500**	**73.73**	500,000	500	24.64
Class B – Series 52 (2)	**650,000**	**650**	**57.52**	–	–	–
Preferred Shares – Classified as Equity		**3,300**			2,650	
Other Equity Instruments						
4.800% Additional Tier 1 Capital Notes (AT1 Notes)		**658**			658	
4.300% Series 1 LRCNs		**1,250**			1,250	
5.625% Series 2 LRCNs		**750**			750	
7.325% Series 3 LRCNs		**1,000**			1,000	
Preferred Shares and Other Equity Instruments		**6,958**			6,308	
Common Shares						
Balance at beginning of year	**677,106,878**	**17,744**		648,136,472	13,599	
Issued under the Shareholder Dividend Reinvestment and Share Purchase Plan	**13,482,314**	**1,609**		7,531,233	999	
Issued under the Stock Option Plan and other stock-based compensation plans (Note 20)	**724,853**	**61**		733,591	57	
Treasury shares sold/(purchased)	**101,178**	**14**		(138,168)	(17)	
Issued to align capital position with increased regulatory requirements as announced by OSFI	**28,331,227**	**3,360**		–	–	
Issued for acquisitions (Note 10)	**1,162,711**	**153**		20,843,750	3,106	
Balance at End of Year (3)	**720,909,161**	**22,941**	**5.80**	677,106,878	17,744	5.44

(1) On July 27, 2022, we issued Class B Series 50 Preferred Shares for $500 million.
(2) On January 31, 2023, we issued Class B Series 52 Preferred Shares for $650 million.
(3) Common shares are net of 73,511 treasury shares as at October 31, 2023 (174,689 treasury shares as at October 31, 2022).

Preferred Share Rights and Privileges

(Canadian $, except as noted)

	Redemption amount	Non-cumulative dividend (1)	Reset premium	Date redeemable / convertible	Convertible to
Class B – Series 27	25.00	$ 0.240750 (2)	2.33%	May 25, 2024 (3)(4)	Class B – Series 28 (5)(6)
Class B – Series 29	25.00	$ 0.226500 (2)	2.24%	August 25, 2024 (3)(4)	Class B – Series 30 (5)(6)
Class B – Series 31	25.00	$ 0.240688 (2)	2.22%	November 25, 2024 (3)(4)	Class B – Series 32 (5)(6)
Class B – Series 33	25.00	$ 0.190875 (2)	2.71%	August 25, 2025 (3)(4)	Class B – Series 34 (5)(6)
Class B – Series 44	25.00	$ 0.303125 (2)	2.68%	November 25, 2023 (3)(4)	Class B – Series 45 (5)(6)
Class B – Series 46	25.00	$ 0.318750 (2)	3.51%	May 25, 2024 (3)(4)	Class B – Series 47 (5)(6)
Class B – Series 50	1,000.00	$ 36.865000 (2)	4.25%	November 26, 2027 (3)	Not convertible (6)
Class B – Series 52	1,000.00	$ 35.285000 (2)	4.25%	May 26, 2028 (3)	Not convertible (6)

(1) Non-cumulative dividends are payable quarterly as and when declared by the Board of Directors, except for Class B – Series 50 and 52 preferred shares, which are payable semi-annually.
(2) The dividend rate will reset on the date redeemable and every five years thereafter at a rate equal to the5-year Government of Canada bond yield plus the reset premium noted. If converted to a floating rate series, the rate will be set as, and when declared, at the 3-month Government of Canada treasury bill yield plus the reset premium noted.
(3) Redeemable on the date noted and every five years thereafter.
(4) Convertible on the date noted and every five years thereafter if not redeemed. If converted, the shares will become floating rate preferred shares.
(5) If converted, the holders have the option to convert back to the original preferred shares on subsequent redemption dates.
(6) The shares issued include a NVCC provision, which is necessary for the shares to qualify as regulatory capital under Basel III. Refer to the Non-Viability Contingent Capital paragraph below for details.

On October 19, 2023, we announced that we did not intend to exercise our right to redeem the current outstanding Non-Cumulative5-Year Rate Reset Class B Preferred Shares, Series 44 (Preferred Shares Series 44) on November 25, 2023. As a result, subject to certain conditions, the holders of Preferred Shares Series 44 had the right, at their option, by November 10, 2023, to convert any or all of their Preferred Shares Series 44 on a one-for-one basis into Non-Cumulative Floating Rate Class B Preferred Shares, Series 45 (Preferred Shares Series 45). During the conversion period, which ran from October 25, 2023 to November 10, 2023, 93,870 Preferred Shares Series 44 were tendered for conversion into Preferred Shares Series 45, which is less than the minimum 1,000,000 required to give effect to the conversion, as described in the Preferred Shares Series 44 prospectus supplement dated September 10, 2018. As a result, no Preferred Shares Series 45 were issued and the holders of Preferred Shares Series 44 retained their shares. The dividend rate for the Preferred Shares Series 44 for the five-year period commencing November 25, 2023 to, but excluding, November 25, 2028 will be 6.816%.

On January 31, 2023, we issued 650,000 Non-Cumulative 5-Year Fixed Rate Reset Class B Preferred Shares, Series 52 (NVCC) at a price of $1,000 per share for gross proceeds of $650 million. For the initial fixed rate period to, but excluding, May 26, 2028, the shares paynon-cumulative preferential fixed semi-annual cash dividends, as and when declared, in the amount of $70.57 per share per annum, to yield 7.057% annually. The dividend rate will reset on May 26, 2028 and every five years thereafter at a rate equal to the 5-year Government of Canada bond yield plus 4.250%.

Other Equity Instruments

The $1,250 million 4.300% Series 1 LRCNs (NVCC), $750 million 5.625% Series 2 LRCNs (NVCC) and $1,000 million 7.325% Series 3 LRCNs (NVCC) are classified as equity and form part of our Additional Tier 1 Capital. Upon the occurrence of a recourse event, the noteholders will have recourse to assets held in a consolidated trust managed by a third-party trustee. The trust assets are currently comprised of $1,250 million of BMO issued Non-Cumulative 5-Year Rate Reset Class B Preferred Shares, Series 48 (NVCC) (Preferred Shares Series 48), $750 million of BMO issued Non-Cumulative 5-Year Rate Reset Class B Preferred Shares, Series 49 (NVCC) (Preferred Shares Series 49) and $1,000 million of BMO issued Non-Cumulative 5-Year Rate Reset Class B Preferred Shares, Series 51 (NVCC) (Preferred Shares Series 51) issued concurrently with Series 1, Series 2 and Series 3 LRCNs, respectively. As the Preferred Shares Series 48, Series 49 and Series 51 eliminate on consolidation, they do not currently form part of our Additional Tier 1 Capital.

The US$500 million 4.800% AT1 Notes (NVCC) are also classified as equity and form part of our Additional Tier 1 Capital.

The LRCNs and AT1 Notes are compound financial instruments that have both equity and liability features. On the date of issuance, we assigned an insignificant value to the liability components of both types of instruments and, as a result, the full amount of proceeds have been classified as equity. Semi-annual distributions on the LRCNs and AT1 Notes will be recorded when payable. The LRCNs and AT1 Notes are subordinate to the claims of the depositors and certain other creditors in right of payment. The following table shows the details of our AT1 Notes and LRCNs as at October 31, 2023 and 2022.

(Canadian $ in millions, except as noted)					2023	2022
	Face value	Interest rate (%)	Redeemable at our option	Convertible to	**Total**	Total
4.800% AT1 Notes	US$ 500	4.800 (1)	August 2024 (2)	Variable number of common shares (3)	**658**	658
4.300% Series 1 LRCNs	$1,250	4.300 (4)	November 2025 (2)	Variable number of common shares (3)(4)	**1,250**	1,250
5.625% Series 2 LRCNs	$ 750	5.625 (4)	May 2027 (2)	Variable number of common shares (3)(4)	**750**	750
7.325% Series 3 LRCNs	$1,000	7.325 (4)	November 2027 (2)	Variable number of common shares (3)(4)	**1,000**	1,000
Total					**3,658**	3,658

(1) Non-cumulative interest is payable semi-annually in arrears, at the bank's discretion.
(2) The notes are redeemable at a redemption price equal to 100% of the principal amount plus any accrued and unpaid interest, in whole or in part, at our option on any interest payment date on or after the first interest reset date or following certain regulatory or tax events. The bank may, at any time, purchase the notes at any price in the open market.
(3) The notes issued include a NVCC provision, which is necessary for the notes to qualify as regulatory capital under Basel III. Refer to the Non-Viability Contingent Capital paragraph below for details.
(4) Non-deferrable interest is payable semi-annually on these notes, at the bank's discretion. Non-payment of interest will result in a recourse event, with the noteholders' sole remedy being the holders' proportionate share of trust assets comprised of our NVCC Preferred Shares Series 48 for Series 1 LRCNs, Preferred Shares Series 49 for Series 2 LRCNs and Preferred Shares Series 51 for Series 3 LRCNs. In such an event, the delivery of the trust assets will represent the full and complete extinguishment of our obligations under the LRCNs. In circumstances under which NVCC, including the Preferred Shares Series 48, Preferred Shares Series 49 and Preferred Shares Series 51 for Series 1, Series 2 and Series 3 LRCNs, respectively, would be converted into common shares of the bank (described below), the LRCNs would be redeemed, with the noteholders' sole remedy being their proportionate share of trust assets, then comprised of common shares of the bank received by the trust on conversion.

Common Shares

On December 16, 2022, we issued 13,575,750 common shares for $1,610 million through a public offering and 8,431,700 common shares for $1,000 million under a private placement. On January 25, 2023, we issued an additional 6,323,777 common shares for $750 million to BNP Paribas S.A. under a private placement. In total, we issued 28,331,227 common shares for $3,360 million to align our capital position with increased regulatory requirements as announced by OSFI on December 8, 2022.

On December 1, 2022, we issued 1,162,711 common shares for $153 million for the acquisition of Radicle Group Inc. Refer to Note 10 for further information.

Authorized Share Capital

We classify financial instruments that we issue as financial liabilities, equity instruments or compound instruments. Financial instruments that will be settled by a variable number of our common shares upon conversion by the holders are classified as liabilities in our Consolidated Balance Sheet. Dividends and interest payments on financial liabilities are classified as interest expense in our Consolidated Statement of Income. Financial instruments are classified as equity instruments when there is no contractual obligation to transfer cash or other financial assets. Issued instruments that are not mandatorily redeemable, or that are not convertible into a variable number of our common shares at the holder's option, are classified as equity and presented in share capital. Dividend payments on equity instruments are recognized as a reduction in equity.

Common Shares

We are authorized by our shareholders to issue an unlimited number of our common shares, without par value, for unlimited consideration. Our common shares are not redeemable or convertible. Dividends are declared by our Board of Directors at their discretion. Historically, the Board of Directors has declared dividends on a quarterly basis and the amount can vary from quarter to quarter.

Preferred Shares

We are authorized by our shareholders to issue an unlimited number of Class A Preferred Shares and Class B Preferred Shares, without par value, in series, for unlimited consideration. Class B Preferred Shares may be issued in a foreign currency.

Treasury Shares

When we purchase our common shares as part of our trading business, we record the cost of those shares as a reduction in shareholders' equity. If those shares are resold at a price higher than their cost, the premium is recorded as an increase in contributed surplus. If those shares are resold at a price below their cost, the discount is recorded as a reduction first to contributed surplus and then to retained earnings for any amount in excess of the total contributed surplus related to treasury shares.

Non-Viability Contingent Capital

Our preferred shares, AT1 Notes and LRCNs, by virtue of the recourse to the preferred shares held in the consolidated trusts, include a NVCC provision, which is necessary for them to qualify as regulatory capital under Basel III. As such, they are convertible into a variable number of our common shares if OSFI announces that the bank is, or is about to become, non-viable or if a federal or provincial government in Canada publicly announces that the bank has accepted, or agreed to accept, a capital injection, or equivalent support, to avoid non-viability. In such an event, each preferred share or other equity instrument is convertible into common shares pursuant to an automatic conversion formula and a conversion price based on the greater of: (i) a floor price of $5.00 and (ii) the current market price of our common shares based on the volume weighted-average trading price of our common shares on the TSX. The number of common shares issued is determined by dividing the value of the preferred share or other equity instrument issuance, including declared and unpaid dividends on such preferred share or other equity instrument issuance, by the conversion price and then applying the multiplier.

Normal Course Issuer Bid

We did not establish a normal course issuer bid in the current fiscal year.

Share Redemption and Dividend Restrictions

OSFI must approve any plan to redeem any of our preferred share issues or other equity instruments for cash.

We are prohibited from declaring dividends on our preferred or common shares when we would be, as a result of paying such a dividend, in contravention of the capital adequacy, liquidity or any other regulatory directive issued under the *Bank Act (Canada)*. In addition, common share dividends cannot be paid unless all dividends declared and payable on our preferred shares have been paid or sufficient funds have been set aside to do so and, in certain circumstances, Class B Preferred Share dividends cannot be paid unless dividends on our Preferred Shares Series 48, Preferred Shares Series 49 and Preferred Shares Series 51 have been paid.

In addition, if the bank does not pay the interest in full on the AT1 Notes, the bank will not declare dividends on its common shares or preferred shares, or redeem, purchase or otherwise retire such shares, until the month commencing after the bank resumes full interest payments on the AT1 Notes.

Currently, these limitations do not restrict the payment of dividends on common or preferred shares.

Shareholder Dividend Reinvestment and Share Purchase Plan

We offer a Dividend Reinvestment and Share Purchase Plan (the Plan) for our shareholders. Participation in the Plan is optional. Under the terms of the Plan, cash dividends on common shares are reinvested to purchase additional common shares. Shareholders also have the opportunity to make optional cash payments to acquire additional common shares.

Until further notice, common shares under the Plan are issued by the bank from treasury with a 2% discount, calculated in accordance with the terms of the Plan. The discount will not apply to common shares purchased under the Optional Cash Payment feature of the Plan.

We issued 13,482,314 common shares under the Plan for the year ended October 31, 2023 (7,531,233 for the year ended October 31, 2022).

Potential Share Issuances

As at October 31, 2023, we had reserved 12,187,362 common shares (25,669,677 as at October 31, 2022) for potential issuance in respect of the Plan. We have also reserved 6,312,576 common shares (5,976,870 as at October 31, 2022) for the potential exercise of stock options, as further described in Note 20.

Non-Controlling Interest

Non-controlling interest in subsidiaries, relating to our acquisition of Bank of the West, was $28 million as at October 31, 2023 ($nil million as at October 31, 2022). Refer to Note 10 for further information.

Note 17: Fair Value of Financial Instruments and Trading-Related Revenue

We record assets and liabilities held for trading, assets and liabilities designated at fair value, derivatives, certain equity and debt securities and securities sold but not yet purchased at fair value, and other non-trading assets and liabilities at amortized cost less allowances or write-downs for impairment. The fair values presented in this note are based upon the amounts estimated for individual assets and liabilities and do not include an estimate of the fair value of any of the legal entities or underlying operations that comprise our business. For certain portfolios of financial instruments where we manage exposures to similar and offsetting risks, fair value is determined on the basis of our net exposure to that risk.

Fair value represents an estimate of the amount that we would receive, or would be payable in the case of a liability, in an orderly transaction between willing parties at the measurement date. The fair value amounts disclosed represent point-in-time estimates that may change in subsequent reporting periods due to changes in market conditions or other factors. Some financial instruments are not typically exchangeable or exchanged and therefore it is difficult to determine their fair value. Where there is no quoted market price, we determine fair value using management's best estimates based on a range of valuation techniques and assumptions; since these involve uncertainties, the fair values may not be realized in an actual sale or immediate settlement of the asset or liability.

Governance Over the Determination of Fair Value

Senior executive oversight of our valuation processes is provided through various valuation and risk committees. In order to ensure that all financial instruments carried at fair value are accurately and appropriately measured for risk management and financial reporting purposes, we have established governance structures and controls, such as model validation and approval, independent price verification (IPV) and profit or loss attribution analysis (PAA), consistent with industry practice. These controls are applied independently of the relevant operating groups.

We establish valuation methodologies for each type of financial instrument that is required to be measured at fair value. The application of valuation models for products or portfolios is subject to independent approval to ensure only validated models are used. The impact of known limitations of models and data inputs is also monitored on an ongoing basis. IPV is a process that regularly and independently verifies the accuracy and appropriateness of market prices or model inputs used in the valuation of financial instruments. This process assesses fair values using a variety of different approaches to verify and validate the valuations. PAA is a daily process carried out by management to identify and explain changes in fair value positions across all operating lines of business within BMO CM. This process works in concert with other processes to ensure that the fair values being reported are reasonable and appropriate.

Securities

For traded securities, quoted market value is considered to be fair value. Quoted market value is based on bid or ask prices, depending on which is the most appropriate to measure fair value. Securities for which no active market exists are valued using all reasonably available market information. Our fair value methodologies are described below.

Government Securities
The fair value of debt securities issued or guaranteed by governments in active markets is determined by reference to recent transaction prices, broker quotes or third-party vendor prices. The fair value of securities that are not traded in an active market is modelled using implied yields derived from the prices of similar actively traded government securities and observable spreads.

Mortgage-Backed Securities and Collateralized Mortgage Obligations
The fair value of MBS and CMO is determined using prices obtained from independent third-party vendors, broker quotes and relevant market indices, as applicable. If such prices are not available, fair value is determined using cash flow models that make maximum use of observable market inputs or benchmark prices for similar instruments. Valuation assumptions for MBS and CMO include discount rates, default rates, expected prepayments, credit spreads and recoveries.

Corporate Debt Securities
The fair value of corporate debt securities is determined using prices observed in the most recent transactions. When observable quoted prices are not available, fair value is determined based on discounted cash flow models using discounting curves and spreads obtained from independent dealers, brokers and third-party vendors.

Trading Loans
The fair value of trading loans is determined by referring to current market prices for the same or similar instruments.

Corporate Equity Securities
The fair value of corporate equity securities is determined using quoted prices in active markets, where available. Where quoted prices in active markets are not readily available, fair value is determined using either quoted market prices for similar securities or by using valuation techniques, which include discounted cash flow analysis and earnings multiples.

Privately Issued Securities
Privately issued debt and equity securities are valued using prices observed in recent market transactions, where available. Otherwise, fair value is derived from valuation models using a market or income approach. These models consider various factors, including projected cash flows, earnings, revenue and other third-party evidence, as available. The fair value of our privately issued securities includes net asset values published by third-party fund managers, as applicable.

Prices obtained from dealers, brokers and third-party vendors are corroborated as part of our independent review process, which may include using valuation techniques or obtaining consensus or composite prices from other pricing services. We validate the estimates of fair value by obtaining multiple third-party quotes for external market prices and input values. We review the approach taken by third-party vendors to ensure that they employ a valuation model that maximizes the use of observable inputs such as benchmark yields, bid-ask spreads, underlying collateral, weighted-average terms to maturity and prepayment rate assumptions. Fair value estimates from internal valuation techniques are verified, where possible, by reference to prices obtained from third-party vendors.

Loans

In determining the fair value of our fixed rate performing loans, other than credit card loans, we discount the remaining contractual cash flows, adjusted for estimated prepayment, at market interest rates currently offered for loans with similar terms and credit risk profiles. For credit card performing loans, fair value is considered to be equal to carrying value, due to their short-term nature.

For floating rate performing loans, changes in interest rates have minimal impact on fair value since interest rates are repriced or reset frequently. On that basis, fair value is assumed to be equal to carrying value.

The fair value of loans is not adjusted to reflect any credit protection purchased to mitigate credit risk.

Derivative Instruments

A number of valuation techniques are employed to estimate fair value, including discounted cash flow analysis, the Black-Scholes model, Monte Carlo simulation and other accepted market models. These independently validated models incorporate current market data for interest rates, foreign exchange rates, equity and commodity prices and indices, credit spreads, recovery rates, corresponding market volatility levels, spot prices, correlation levels and other market-based pricing factors. Option implied volatilities, an input into many valuation models, are either obtained directly from market sources or calculated from market prices. Multi-contributor pricing sources are used wherever possible.

In determining the fair value of complex and customized derivatives, we consider all reasonably available information, including dealer and broker quotes, multi-contributor pricing sources and any relevant observable market inputs. Our models calculate fair value based on inputs specific to the type of contract, which may include share prices, correlation for multiple assets, interest rates, foreign exchange rates, yield curves and volatilities.

We calculate a credit valuation adjustment (CVA) to recognize the credit risk related to the possibility that the counterparty may not ultimately be able to fulfill its derivative obligations. The CVA is derived from market-observed credit spreads or proxy credit spreads and our assessment of the net counterparty credit risk exposure, taking into account credit mitigants such as collateral, master netting agreements and novation to central counterparties. We also calculate a funding valuation adjustment (FVA) to recognize the implicit funding costs associated with over-the-counter derivative positions. The FVA is determined by reference to our own funding spreads.

Deposits

In determining the fair value of our deposits, we incorporate the following assumptions:

- For fixed rate, fixed maturity deposits, we discount the remaining contractual cash flows related to these deposits, adjusted for expected redemptions, at market interest rates currently offered for deposits with similar terms and risk profiles. The fair value of our senior note liabilities and covered bonds is determined by referring to current market prices for similar instruments or using valuation techniques, such as discounted cash flow models that use market interest rate yield curves and funding spreads.
- For fixed rate deposits with no defined maturities, we consider fair value to equal carrying value, since carrying value is equivalent to the amount payable on the reporting date.
- For floating rate deposits, changes in interest rates have minimal impact on fair value, since deposits reprice to market frequently. On that basis, fair value is considered to equal carrying value.

Certain of our structured note liabilities that have coupons or repayment terms linked to the performance of interest rates, foreign currencies, commodities or equity securities have been designated at FVTPL. The fair value of these structured notes is estimated using internally validated valuation models incorporating observable market prices for identical or comparable securities, as well as other inputs, such as interest rate yield curves, option volatilities and foreign exchange rates, where appropriate. Where observable market prices or inputs are not available, management judgment is required to determine the fair value by assessing other relevant sources of information, such as historical data and proxy information from similar transactions.

Securities Sold But Not Yet Purchased

The fair value of these obligations is based on the fair value of the underlying securities, which can be equity or debt securities. As these obligations are fully collateralized, the method used to determine fair value would be the same as that used for the relevant underlying equity or debt securities.

Securitization and Structured Entities' Liabilities

The determination of the fair value of our securitization and structured entities' liabilities is based on quoted market prices or quoted market prices for similar financial instruments, where available. Where quoted prices are not available, fair value is determined using valuation techniques, such as discounted cash flow models, that maximize the use of observable inputs.

Subordinated Debt

The fair value of our subordinated debt is determined by referring to current market prices for the same or similar instruments.

Financial Instruments with a Carrying Value Approximating Fair Value

Carrying value is considered to be a reasonable estimate of fair value for our cash and cash equivalents.

The carrying value of certain financial assets and liabilities, such as interest bearing deposits with banks, securities borrowed or purchased under resale agreements, customers' liability under acceptances and certain other assets, as well as acceptances, securities lent or sold under repurchase agreements and certain other liabilities, is a reasonable estimate of fair value because of their short-term nature or because they are frequently repriced to current market rates. These items are therefore excluded from the table below.

Fair Value Hierarchy

We categorize financial instruments in a fair value hierarchy according to the inputs we use in valuation techniques to measure fair value.

Fair Value of Financial Instruments Not Carried at Fair Value on the Balance Sheet

Set out in the following table are the fair values of financial instruments not carried at fair value in our Consolidated Balance Sheet.

(Canadian $ in millions)	2023		2022	
	Carrying value	**Fair value** (6)	Carrying value	Fair value (6)
Securities (1)				
Amortized cost	**116,814**	**104,171**	106,590	94,832
Loans (1)(2)				
Residential mortgages	**175,350**	**167,863**	148,569	142,526
Consumer instalment and other personal	**103,265**	**101,021**	85,612	83,948
Credit cards	**11,893**	**11,893**	9,387	9,387
Business and government	**358,527**	**356,842**	302,079	300,173
	649,035	**637,619**	545,647	536,034
Deposits (3)	**873,831**	**870,573**	742,419	739,339
Securitization and structured entities' liabilities (4)	**24,631**	**23,739**	25,816	24,989
Other liabilities (5)	**4,160**	**3,287**	4,088	3,181
Subordinated debt	**8,228**	**7,849**	8,150	7,743

(1) Carrying value is net of ACL.
(2) Excludes $1,676 million of residential mortgages classified as FVTPL, $5,720 million of business and government loans classified as FVTPL and $58 million of business and government loans classified as FVOCI ($176 million, $5,496 million and $60 million, respectively, as at October 31, 2022).
(3) Excludes $35,300 million of structured note liabilities ($26,305 million as at October 31, 2022), $341 million of structured deposits ($536 million as at October 31, 2022) and $204 million of metals deposits ($218 million as at October 31, 2022) measured at fair value.
(4) Excludes $2,463 million of securitization and structured entities' liabilities classified as FVTPL ($1,252 million as at October 31, 2022).
(5) Other liabilities include certain other liabilities of subsidiaries.
(6) If financial instruments not carried at fair value were categorized based on the fair value hierarchy, all of these financial instruments would be categorized as Level 2, except for amortized cost securities, which would have $21,229 million categorized as Level 1 ($39,622 million as at October 31, 2022) and $82,942 million categorized as Level 2 ($55,210 million as at October 31, 2022).

Valuation Techniques and Significant Inputs

We determine the fair value of publicly traded fixed maturity debt and equity securities using quoted prices in active markets (Level 1) when these are available. When quoted prices in active markets are not available, we determine the fair value of financial instruments using models such as discounted cash flows, with observable market data for inputs, such as yields or broker quotes and other third-party vendor quotes (Level 2). Fair value may also be determined using models where significant observable market data is not available due to inactive markets or minimal market activity (Level 3). We maximize the use of observable market inputs to the extent possible.

Our Level 2 trading securities are primarily valued using discounted cash flow models with observable spreads or broker quotes. The fair value of Level 2 FVOCI securities is determined using discounted cash flow models with observable spreads or third-party vendor quotes. Level 2 structured note liabilities are valued using models with observable market information. Level 2 derivative assets and liabilities are valued using industry-standard models and observable market information.

The extent of our use of actively quoted market prices (Level 1), internal models using observable market information as inputs (Level 2) and models without observable market information as inputs (Level 3) in the valuation of securities, residential mortgages, business and government loans classified as FVTPL and FVOCI, other assets, fair value liabilities, derivative assets and derivative liabilities is presented in the following table:

(Canadian $ in millions)	2023				2022			
	Valued using quoted market prices	**Valued using models (with observable inputs)**	**Valued using models (without observable inputs)**	**Total**	Valued using quoted market prices	Valued using models (with observable inputs)	Valued using models (without observable inputs)	Total
Trading Securities								
Issued or guaranteed by:								
Canadian federal government	**6,728**	**3,898**	**–**	**10,626**	6,981	3,955	–	10,936
Canadian provincial and municipal governments	**3,560**	**3,470**	**–**	**7,030**	1,120	4,990	–	6,110
U.S. federal government	**8,645**	**11,687**	**–**	**20,332**	7,326	9,373	–	16,699
U.S. states, municipalities and agencies	**–**	**279**	**–**	**279**	56	83	–	139
Other governments	**408**	**2,167**	**–**	**2,575**	1,085	2,885	–	3,970
NHA MBS, and U.S. agency MBS and CMO	**–**	**22,973**	**896**	**23,869**	–	13,327	985	14,312
Corporate debt	**2,551**	**9,071**	**112**	**11,734**	1,445	8,144	3	9,592
Trading loans	**3**	**447**	**–**	**450**	–	346	–	346
Corporate equity	**47,422**	**202**	**37**	**47,661**	46,073	–	–	46,073
	69,317	**54,194**	**1,045**	**124,556**	64,086	43,103	988	108,177
FVTPL Securities								
Issued or guaranteed by:								
Canadian federal government	**211**	**5**	**–**	**216**	319	174	–	493
Canadian provincial and municipal governments	**445**	**722**	**–**	**1,167**	36	1,044	–	1,080
U.S. federal government	**5**	**2,083**	**–**	**2,088**	–	4	–	4
Other governments	**–**	**48**	**–**	**48**	–	87	–	87
NHA MBS, and U.S. agency MBS and CMO	**–**	**19**	**–**	**19**	–	8	–	8
Corporate debt	**25**	**7,308**	**27**	**7,360**	62	6,409	8	6,479
Corporate equity	**809**	**805**	**4,208**	**5,822**	1,440	6	4,044	5,490
	1,495	**10,990**	**4,235**	**16,720**	1,857	7,732	4,052	13,641
FVOCI Securities								
Issued or guaranteed by:								
Canadian federal government	**13,297**	**6,850**	**–**	**20,147**	3,544	8,757	–	12,301
Canadian provincial and municipal governments	**610**	**4,445**	**–**	**5,055**	972	3,599	–	4,571
U.S. federal government	**727**	**5,153**	**–**	**5,880**	1,443	1,667	–	3,110
U.S. states, municipalities and agencies	**–**	**5,301**	**–**	**5,301**	–	3,713	1	3,714
Other governments	**480**	**6,489**	**–**	**6,969**	1,795	4,616	–	6,411
NHA MBS, and U.S. agency MBS and CMO	**–**	**15,765**	**–**	**15,765**	–	9,268	–	9,268
Corporate debt	**406**	**3,145**	**–**	**3,551**	355	3,678	–	4,033
Corporate equity	**–**	**–**	**160**	**160**	–	–	153	153
	15,520	**47,148**	**160**	**62,828**	8,109	35,298	154	43,561
Loans								
Residential mortgages	**–**	**1,676**	**–**	**1,676**	–	176	–	176
Business and government loans	**–**	**5,592**	**186**	**5,778**	–	5,536	20	5,556
	–	**7,268**	**186**	**7,454**	–	5,712	20	5,732
Other Assets (1)	**6,020**	**33**	**397**	**6,450**	4,148	60	49	4,257
Fair Value Liabilities								
Securities sold but not yet purchased	**20,989**	**22,792**	**–**	**43,781**	18,465	22,514	–	40,979
Structured note liabilities (2)	**–**	**35,300**	**–**	**35,300**	–	26,305	–	26,305
Structured deposits (3)	**–**	**341**	**–**	**341**	–	536	–	536
Other liabilities (4)	**1,479**	**3,250**	**5**	**4,734**	1,179	2,298	2	3,479
	22,468	**61,683**	**5**	**84,156**	19,644	51,653	2	71,299
Derivative Assets								
Interest rate contracts	**21**	**13,329**	**–**	**13,350**	80	12,682	–	12,762
Foreign exchange contracts	**28**	**19,861**	**–**	**19,889**	21	22,475	26	22,522
Commodity contracts	**668**	**1,349**	**5**	**2,022**	1,514	4,810	–	6,324
Equity contracts	**58**	**4,632**	**–**	**4,690**	939	5,552	–	6,491
Credit default swaps	**–**	**25**	**–**	**25**	–	61	–	61
	775	**39,196**	**5**	**39,976**	2,554	45,580	26	48,160
Derivative Liabilities								
Interest rate contracts	**52**	**17,749**	**–**	**17,801**	58	16,540	–	16,598
Foreign exchange contracts	**1**	**19,204**	**–**	**19,205**	2	25,108	–	25,110
Commodity contracts	**589**	**1,067**	**1**	**1,657**	1,523	2,066	–	3,589
Equity contracts	**160**	**11,335**	**8**	**11,503**	1,203	13,381	–	14,584
Credit default swaps	**–**	**25**	**2**	**27**	–	73	2	75
	802	**49,380**	**11**	**50,193**	2,786	57,168	2	59,956

(1) Other assets include precious metals, segregated fund assets in our insurance business, carbon credits, certain receivables and other items measured at fair value.
(2) This represents the structured note liabilities included in deposits that have been designated at FVTPL.
(3) This represents certain embedded options related to structured deposits carried at amortized cost.
(4) Other liabilities include investment contract liabilities and segregated fund liabilities in our insurance business, certain payables and metals deposits that have been designated at FVTPL, as well as certain securitization and structured entities' liabilities measured at FVTPL.

Quantitative Information about Level 3 Fair Value Measurements

The table below presents the fair values of our significant Level 3 financial instruments, the valuation techniques used to determine their fair values and the value ranges of significant unobservable inputs used in the valuations. We have not applied any other reasonably possible alternative assumptions to the significant Level 3 categories of private equity investments, as the net asset values are provided by the investment or fund managers.

(Canadian $ in millions except as noted)					**2023**	
					Range of input values (1)	
	Reporting line in fair value hierarchy table	Fair value of assets	Valuation techniques	Significant unobservable inputs	Low	High
Private equity	Corporate equity	**4,208**	Net asset value	Net asset value	**na**	**na**
			EV/EBITDA	Multiple	**3x**	**23x**
NHA MBS, U.S. agency MBS and CMO	NHA MBS, U.S. agency MBS and CMO	**896**	Discounted cash flows	Prepayment rate	**2%**	**65%**
			Market comparable	Comparability adjustment (2)	**0.31**	**0.92**
						2022
Private equity	Corporate equity	4,044	Net asset value	Net asset value	na	na
			EV/EBITDA	Multiple	5x	19x
NHA MBS, U.S. agency MBS and CMO	NHA MBS, U.S. agency MBS and CMO	985	Discounted cash flows	Prepayment rate	3%	47%
			Market comparable	Comparability adjustment (2)	0.32	0.88

(1) The low and high input values represent the lowest and highest actual level of inputs used to value a group of financial instruments in a particular product category. These value ranges do not reflect the level of input uncertainty but are affected by the specific underlying instruments within each product category. The value ranges will therefore vary from period to period based on the characteristics of the underlying instruments held at each balance sheet date.

(2) Range of input values represents price per security adjustment (Canadian $).

Certain comparative figures have been reclassified to conform with the current year's presentation.

na – not applicable

Significant Unobservable Inputs in Level 3 Instrument Valuations

Net Asset Value

Net asset value represents the estimated value of a security based on valuations received from the investment or fund manager. As no observable price is available for most private equity securities, the valuation is based on the economic benefit we expect to derive from our investment.

EV/EBITDA Multiple

The fair value of private equity and merchant banking investments is derived by calculating an enterprise value (EV) using the EV/EBITDA multiple and then proceeding through a waterfall of the company's capital structure to determine the value of the assets or securities we hold. The EV/EBITDA multiple is determined using judgment in considering factors such as multiples for comparable listed companies, recent transactions and company-specific factors, as well as liquidity discounts that account for the lack of active trading in these assets and securities.

Prepayment Rates

Discounted cash flow models are used to determine the fair values of our NHA MBS and U.S. agency MBS and CMO. The cash flow model includes assumptions related to conditional prepayment rates, constant default rates and percentage loss on default. Prepayment rates impact our estimate of future cash flows. Changes in the prepayment rate tend to be negatively correlated with interest rates. In other words, an increase in the prepayment rate will result in a higher fair value when the asset interest rate is lower than the current reinvestment rate. A decrease in the prepayment rate will result in a lower fair value when the asset interest rate is higher than the current reinvestment rate.

Comparability Adjustment

Market comparable pricing is used to evaluate the fair values of NHA MBS and U.S. agency MBS and CMO. This technique involves obtaining prices from third parties for similar instruments and applying adjustments to reflect recent transaction prices and instrument specific characteristics.

Significant Transfers

Our policy is to record transfers of assets and liabilities between fair value hierarchy levels at their fair values as at the end of each reporting period, consistent with the date of the determination of fair value. Transfers between the various fair value hierarchy levels reflect changes in the availability of quoted market prices or observable market inputs that result from changes in market conditions. Transfers from Level 1 to Level 2 were due to reduced observability of the inputs used to value the securities. Transfers from Level 2 to Level 1 were due to increased availability of quoted prices in active markets.

The following table presents significant transfers between Level 1 and Level 2 for the years ended October 31, 2023 and 2022.

(Canadian $ in millions)	**2023**		2022	
	Level 1 to Level 2	**Level 2 to Level 1**	Level 1 to Level 2	Level 2 to Level 1
Trading securities	**10,926**	**19,119**	10,983	13,062
FVTPL securities	**1,301**	**993**	607	522
FVOCI securities	**7,078**	**9,295**	16,452	11,895
Securities sold but not yet purchased	**9,211**	**15,704**	9,499	14,623

Changes in Level 3 Fair Value Measurements

The tables below present a reconciliation of all changes in Level 3 financial instruments for the years ended October 31, 2023 and 2022, including realized and unrealized gains (losses) included in earnings and other comprehensive income, as well as transfers into and out of Level 3. Transfers from Level 2 to Level 3 were due to an increase in unobservable market inputs used in pricing the securities. Transfers from Level 3 to Level 2 were due to an increase in observable market inputs used in pricing the securities.

For the year ended October 31, 2023 (Canadian $ in millions)	Balance October 31, 2022	Change in fair value: Included in earnings	Change in fair value: Included in other comprehensive income (1)	Movements: Purchases/ Issuances (3)	Movements: Sales	Movements: Maturities/ Settlement	Transfers: Transfers into Level 3	Transfers: Transfers out of Level 3	Fair value as at October 31, 2023	Change in unrealized gains (losses) recorded in income for instruments still held (2)
Trading Securities										
NHA MBS and U.S. agency MBS and CMO	985	(137)	8	682	(473)	–	378	(547)	896	(103)
Corporate debt	3	–	1	39	(7)	–	85	(9)	112	–
Corporate equity	–	–	–	–	–	–	37	–	37	–
Total trading securities	988	(137)	9	721	(480)	–	500	(556)	1,045	(103)
FVTPL Securities										
Corporate debt	8	–	–	19	–	–	–	–	27	1
Corporate equity	4,044	(233)	45	2,784	(349)	(1)	15	(2,097)	4,208	(39)
Total FVTPL securities	4,052	(233)	45	2,803	(349)	(1)	15	(2,097)	4,235	(38)
FVOCI Securities										
Issued or guaranteed by:										
U.S. states, municipalities and agencies	1	–	–	–	–	(1)	–	–	–	na
Corporate equity	153	–	1	7	(1)	–	–	–	160	na
Total FVOCI securities	154	–	1	7	(1)	(1)	–	–	160	na
Business and Government Loans	20	–	4	259	–	(97)	–	–	186	–
Other Assets	49	1	–	358	–	(11)	–	–	397	2
Derivative Assets										
Foreign exchange contracts	26	(17)	–	–	–	(9)	–	–	–	9
Commodity contracts	–	(8)	–	13	–	–	–	–	5	(8)
Equity contracts	–	2	–	–	–	–	1	(3)	–	2
Total derivative assets	26	(23)	–	13	–	(9)	1	(3)	5	3
Other Liabilities	2	(1)	–	11	(4)	–	–	(3)	5	(1)
Derivative Liabilities										
Foreign exchange contracts	–	12	–	–	–	(12)	–	–	–	(38)
Commodity contracts	–	1	–	–	–	–	–	–	1	1
Equity contracts	–	–	–	–	–	–	8	–	8	–
Credit default swaps	2	–	–	–	–	–	–	–	2	–
Total derivative liabilities	2	13	–	–	–	(12)	8	–	11	(37)

For the year ended October 31, 2022 (Canadian $ in millions)	Balance October 31, 2021	Change in fair value: Included in earnings	Change in fair value: Included in other comprehensive income (1)	Movements: Purchases/ Issuances	Movements: Sales	Movements: Maturities/ Settlement	Transfers: Transfers into Level 3	Transfers: Transfers out of Level 3	Fair value as at October 31, 2022	Change in unrealized gains (losses) recorded in income for instruments still held (2)
Trading Securities										
NHA MBS and U.S. agency MBS and CMO	675	(237)	76	1,045	(657)	–	444	(361)	985	(45)
Corporate debt	7	(2)	(1)	11	(5)	–	2	(9)	3	(1)
Corporate equity	–	–	–	–	–	–	–	–	–	–
Total trading securities	682	(239)	75	1,056	(662)	–	446	(370)	988	(46)
FVTPL Securities										
Corporate debt	–	–	–	8	–	–	–	–	8	–
Corporate equity	2,442	231	176	1,450	(321)	–	66	–	4,044	274
Total FVTPL securities	2,442	231	176	1,458	(321)	–	66	–	4,052	274
FVOCI Securities										
Issued or guaranteed by:										
U.S. states, municipalities and agencies	1	–	–	–	–	–	–	–	1	na
Corporate equity	132	–	1	15	(1)	–	6	–	153	na
Total FVOCI securities	133	–	1	15	(1)	–	6	–	154	na
Business and Government Loans	6	–	–	15	–	(1)	–	–	20	–
Other Assets	–	–	–	49	–	–	–	–	49	–
Derivative Assets										
Foreign exchange contracts	–	–	–	26	–	–	–	–	26	–
Commodity contracts	–	–	–	–	–	–	–	–	–	–
Equity contracts	–	–	–	–	–	–	–	–	–	–
Total derivative assets	–	–	–	26	–	–	–	–	26	–
Other Liabilities	–	–	–	2	–	–	–	–	2	–
Derivative Liabilities										
Foreign exchange contracts	–	–	–	–	–	–	–	–	–	–
Commodity contracts	–	–	–	–	–	–	–	–	–	–
Equity contracts	–	–	–	–	–	–	–	–	–	–
Credit default swaps	2	–	–	–	–	–	3	(3)	2	–
Total derivative liabilities	2	–	–	–	–	–	3	(3)	2	–

(1) Foreign exchange translation on assets and liabilities held by foreign operations is included in other comprehensive income, net foreign operations.
(2) Changes in unrealized gains (losses) on trading and FVTPL securities still held on October 31, 2023 and 2022 are included in earnings for the year.
(3) FVTPL securities include $969 million of Federal Home Loan Bank (FHLB) and Federal Reserve Bank equity and $587 million of investments in LIHTC entities, acquired as a result of our acquisition of Bank of the West.

Unrealized gains (losses) recognized on Level 3 financial instruments may be offset by (losses) gains on economic hedge contracts.

na – not applicable

Trading-Related Revenue

Trading assets and liabilities, including derivatives, securities and financial instruments designated at FVTPL, are measured at fair value, with gains and losses recognized in non-interest revenue, trading revenues (losses), in our Consolidated Statement of Income. Trading-related revenue includes net interest income and non-interest revenue and excludes underwriting fees and commissions on securities transactions, which are shown separately in our Consolidated Statement of Income.

Net interest income arises from interest and dividends related to trading assets and liabilities, and is reported net of interest expense associated with funding these assets and liabilities in the following table:

(Canadian $ in millions)	**2023**	2022
Interest rates	**770**	893
Foreign exchange	**638**	571
Equities	**610**	713
Commodities	**192**	189
Other (1)	**(1,526)**	7,556
Total trading-related revenue	**684**	9,922
Reported as:		
Net interest income	**900**	1,672
Non-interest revenue – trading revenues (losses) (1)	**(216)**	8,250
Total trading-related revenue	**684**	9,922

(1) Includes management of fair value changes on the purchase of Bank of the West. Refer to Note 10 for further information.

Note 18: Offsetting of Financial Assets and Financial Liabilities

Financial assets and financial liabilities are offset and the net amount is reported in our Consolidated Balance Sheet when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis or realize the asset and settle the liability simultaneously. The following table presents the amounts that have been offset in our Consolidated Balance Sheet, including securities purchased under resale agreements, securities sold under repurchase agreements and derivative instruments, generally under a market settlement mechanism (e.g. an exchange or clearing house) where simultaneous net settlement can be achieved to eliminate credit and liquidity risk between counterparties. Also presented are amounts not offset in our Consolidated Balance Sheet related to transactions where a master netting agreement or similar arrangement is in place with a right to offset the amounts only in the event of default, insolvency or bankruptcy, or where the offset criteria are otherwise not met.

(Canadian $ in millions)							**2023**
				Amounts not offset in the balance sheet			
	Gross amounts	**Amounts offset in the balance sheet**	**Net amounts presented in the balance sheet**	**Impact of master netting agreements**	**Securities received/pledged as collateral** (1)(2)	**Cash collateral**	**Net amount** (3)
Financial Assets							
Securities borrowed or purchased under resale agreements	**118,128**	**2,466**	**115,662**	**11,386**	**102,852**	**25**	**1,399**
Derivative instruments	**40,513**	**537**	**39,976**	**26,674**	**3,266**	**4,569**	**5,467**
	158,641	**3,003**	**155,638**	**38,060**	**106,118**	**4,594**	**6,866**
Financial Liabilities							
Derivative instruments	**50,730**	**537**	**50,193**	**26,674**	**7,837**	**7,186**	**8,496**
Securities lent or sold under repurchase agreements	**108,574**	**2,466**	**106,108**	**11,386**	**94,291**	**106**	**325**
	159,304	**3,003**	**156,301**	**38,060**	**102,128**	**7,292**	**8,821**

							2022
Financial Assets							
Securities borrowed or purchased under resale agreements	116,309	3,115	113,194	11,757	99,736	4	1,697
Derivative instruments	48,494	334	48,160	31,878	3,282	3,201	9,799
	164,803	3,449	161,354	43,635	103,018	3,205	11,496
Financial Liabilities							
Derivative instruments	60,290	334	59,956	31,878	7,212	8,843	12,023
Securities lent or sold under repurchase agreements	107,078	3,115	103,963	11,757	91,494	176	536
	167,368	3,449	163,919	43,635	98,706	9,019	12,559

(1) Financial assets received/pledged as collateral are disclosed at fair value and are limited to the net balance sheet exposure (i.e. any over-collateralization is excluded from the table).
(2) Certain amounts of collateral are restricted from being sold or repledged except in the event of default or the occurrence of other predetermined events.
(3) Not intended to represent our actual exposure to credit risk.

Note 19: Capital Management

Our objective is to maintain a strong capital position in a cost-effective structure that: is appropriate given our target regulatory capital ratios and our internal assessment of required economic capital; underpins our operating groups' business strategies and considers the market environment; supports depositor, investor and regulator confidence while building long-term shareholder value; and is consistent with our target credit ratings.

Our approach includes establishing limits, targets and performance measures that are used to manage balance sheet positions, risk levels and capital requirements, as well as issuing and redeeming capital instruments to achieve a cost-effective capital structure.

Regulatory capital requirements for the bank are determined in accordance with guidelines issued by OSFI, which are based on the Basel III Framework developed by the Basel Committee on Banking Supervision.

CET1 Capital is the most permanent form of capital. It is comprised of common shareholders' equity and may include a portion of ECL provisions, less deductions for goodwill, intangible assets and certain other items.

Tier 1 Capital is primarily comprised of CET1 Capital, preferred shares and other equity instruments, less regulatory deductions.

Tier 2 Capital is primarily comprised of subordinated debentures and may include a portion of ECL provisions, less regulatory deductions. Total Capital includes Tier 1 and Tier 2 Capital.

Total Loss Absorbing Capacity (TLAC) is comprised of Total Capital and other TLAC instruments, including eligiblebail-in debt, less regulatory deductions. Details of the components of our capital position are presented in Notes 11, 12, 15 and 16.

The primary regulatory capital measures are the CET1 Ratio, Tier 1 Capital Ratio, Total Capital Ratio, TLAC Ratio, Leverage Ratio and TLAC Leverage Ratio.

- Regulatory capital ratios are calculated by dividing CET1 Capital, Tier 1 Capital, Total Capital and TLAC by their respective risk-weighted assets.
- The Leverage Ratio is defined as Tier 1 Capital divided by leverage exposures, which consist of on-balance sheet items and specified off-balance sheet items, net of specified adjustments. The TLAC Leverage Ratio is defined as TLAC divided by leverage exposures.

The domestic implementation of Basel III reforms related to capital, leverage, liquidity and disclosure requirements was effective in the second quarter of 2023. Capital changes under these reforms include revised rules for credit risk and operational risk. Effective February 1, 2023, the capital floor adjustment factor was set at 65%, and will rise by an additional 2.5% on November 1 of each year to reach 72.5% in fiscal 2026. Domestic Systemically Important Banks (D-SIBs) are also required to meet a 0.5% buffer requirement for the Leverage and TLAC Leverage Ratios, in addition to the minimum requirements. Revisions related to market risk and credit valuation adjustment risk became effective on November 1, 2023.

As at October 31, 2023, we met OSFI's required target regulatory capital ratios, which include a 2.5% Capital Conservation Buffer, a 1.0% CET1 Surcharge for D-SIBs, a Countercyclical Buffer and a 3.0% Domestic Stability Buffer (DSB) applicable to D-SIBs. In December 2022, OSFI increased the DSB's range from 0% to 2.5%, to 0% to 4.0%. Effective November 1, 2023, the DSB was increased to 3.5%. Our capital position as at October 31, 2023 is further detailed in the Enterprise-Wide Capital Management section of Management's Discussion and Analysis.

Regulatory Capital and Total Loss Absorbing Capacity Measures, Risk-Weighted Assets and Leverage Exposures (1)

(Canadian $ in millions, except as noted)	**2023**	2022
CET1 Capital	**52,914**	60,891
Tier 1 Capital	**59,785**	67,121
Total Capital	**68,718**	75,309
TLAC	**114,402**	120,663
Risk-Weighted Assets	**424,197**	363,997
Leverage Exposures	**1,413,036**	1,189,990
CET1 Ratio	**12.5%**	16.7%
Tier 1 Capital Ratio	**14.1%**	18.4%
Total Capital Ratio	**16.2%**	20.7%
TLAC Ratio	**27.0%**	33.1%
Leverage Ratio	**4.2%**	5.6%
TLAC Leverage Ratio	**8.1%**	10.1%

(1) Calculated in accordance with OSFI's CAR Guideline, Leverage Requirements Guideline and TLAC Guideline, as applicable.

Note 20: Employee Compensation – Share-Based Compensation

Stock Option Plan

We maintain a Stock Option Plan for designated officers and employees. Options are granted at an exercise price equal to the closing price of our common shares on the day before the grant date. Stock options granted vest in equal tranches of 50% on the third and fourth anniversaries of their grant date. Each tranche is treated as a separate award with a different vesting period. In general, options expire 10 years from their grant date.

We determine the fair value of stock options on their grant date and record this amount as compensation expense over the period that the stock options vest, with a corresponding increase to contributed surplus. When these stock options are exercised, we issue shares and record the amount of proceeds, together with the amount recorded in contributed surplus, in share capital. The estimated grant date fair value of stock options granted to employees who are eligible to retire is expensed at the date of grant.

The following table summarizes information about our Stock Option Plan:

(Canadian $, except as noted)	2023		2022	
	Number of stock options	Weighted-average exercise price	Number of stock options	Weighted-average exercise price
Outstanding at beginning of year	**5,976,870**	**98.12**	5,682,206	87.79
Granted	**1,322,817**	**122.31**	1,028,255	135.58
Exercised	**(724,853)**	**76.12**	(733,591)	70.64
Forfeited/expired/cancelled	**(262,258)**	**109.19**	–	–
Outstanding at end of year	**6,312,576**	**105.26**	5,976,870	98.12
Exercisable at end of year	**2,759,935**	**89.99**	2,648,426	84.14
Available for grant	**10,619,482**		11,680,041	

Employee compensation expense related to this plan for the years ended October 31, 2023 and 2022 was $20 million and $12 million, respectively.

Options outstanding and exercisable at October 31, 2023 by range of exercise price were as follows:

(Canadian $, except as noted)	2023				
	Options outstanding			Options exercisable	
Range of exercise prices	Number of stock options	Weighted-average remaining contractual life (years)	Weighted-average exercise price	Number of stock options	Weighted-average exercise price
$60.01 to $70.00	**230,413**	**0.1**	**68.60**	**230,413**	**68.60**
$70.01 to $80.00	**615,909**	**1.7**	**77.59**	**615,909**	**77.59**
$80.01 to $90.00	**654,099**	**5.1**	**89.90**	**654,099**	**89.90**
$90.01 to $100.00	**1,277,195**	**5.9**	**97.07**	**386,544**	**96.90**
$100.01 and over	**3,534,960**	**7.5**	**118.27**	**872,970**	**101.38**

The following table summarizes additional information about our Stock Option Plan:

(Canadian $ in millions, except as noted)	2023	2022
Unrecognized compensation cost for non-vested stock option awards	**14**	9
Cash proceeds from stock options exercised	**55**	52
Weighted-average share price for stock options exercised (in dollars)	**123.01**	141.50

The fair value of options granted was estimated using a binomial option pricing model. The weighted-average fair value of options granted during the years ended October 31, 2023 and 2022 was $18.94 and $14.17, respectively. To determine the fair value of the stock option tranches on the grant date, the following ranges of values were used as inputs for each option pricing assumption:

	2023	2022
Expected dividend yield	**4.5% – 4.6%**	4.2%
Expected share price volatility	**20.9%**	16.8%
Risk-free rate of return	**3.2%**	1.8% – 1.9%
Expected period until exercise (in years)	**6.5 – 7.0**	6.5 – 7.0

Changes to the input assumptions can result in different fair value estimates.

Expected dividend yield is based on market expectations of future dividends on our common shares. Expected share price volatility is determined based on the market consensus implied volatility for traded options on our common shares. The risk-free rate is based on the yields of a Canadian swap curve with maturities similar to the expected period remaining until exercise of the options. The weighted-average exercise price on the grant date for the years ended October 31, 2023 and 2022 was $122.31 and $135.58, respectively.

Other Share-Based Compensation

Share Purchase Plans

We offer various employee share purchase plans. The largest of these plans provides employees with the option of directing a portion of their gross salary toward the purchase of our common shares. We match 50% of employee contributions up to 6% of their individual gross salary to a maximum of $75,000. Our contributions during the first two years vest after two years of participation in the plan, with subsequent contributions vesting immediately. The shares held in the employee share purchase plan are purchased on the open market and are considered outstanding for purposes of computing earnings per share. The dividends earned on our common shares held by the plan are used to purchase additional common shares on the open market.

We account for our contributions as employee compensation expense when they are contributed to the plan.

Employee compensation expense related to these plans for the years ended October 31, 2023 and 2022 was $48 million and $45 million, respectively. There were 18.2 million and 17.8 million common shares held in these plans for the years ended October 31, 2023 and 2022, respectively.

Compensation Trusts

Our compensation trusts include share ownership and deferred compensation arrangements. These compensation trusts are consolidated if we control the trust, meaning that we have power over the trust, exposure to variable returns as a result of our involvement, and the ability to exercise power to affect the amount of our returns.

We sponsor various share ownership arrangements, certain of which are administered through trusts into which our matching contributions are paid and not required to be consolidated. Total assets held related to these share ownership arrangements amounted to $1,908 million as at October 31, 2023 ($2,239 million as at October 31, 2022).

We sponsor various deferred compensation arrangements, administered through trusts into which our contributions are paid to fund deferred compensation to certain U.S. senior employees. Some of these trusts are required to be consolidated. Total consolidated trust assets are $306 million as at October 31, 2023 as a result of our acquisition of Bank of the West ($nil million as at October 31, 2022). Total assets held related to unconsolidated trusts amounted to $175 million as at October 31, 2023 ($154 million as at October 31, 2022).

Mid-Term Incentive Plans

We offer mid-term incentive plans for executives and certain senior employees. Payment amounts are adjusted to reflect reinvested dividends and changes in the market value of our common shares and the bank's performance relative to certain goals, when applicable. Depending on the plan, the recipient receives either a single cash payment at the end of the three-year period of the plan, or cash payments over the three years of the plan. As the awards are cash-settled, they are recorded as liabilities. Amounts payable under such awards are recorded as compensation expense over the vesting period. Amounts related to units granted to employees who are eligible to retire are expensed at the time of grant. Subsequent changes in the fair value of the liability are recorded in compensation expense in the period in which they arise.

Mid-term incentive plan units granted during the years ended October 31, 2023 and 2022 totalled6.9 million and 5.8 million, respectively.

The weighted-average fair value of the units granted during the years ended October 31, 2023 and 2022 was $129.18 and $139.04, respectively, and we recorded employee compensation expense of $605 million and $719 million, respectively. We hedge the impact of the change in market value of our common shares by entering into total return swaps. We also enter into foreign currency forwards to manage the impact of foreign exchange translation from our U.S. businesses. Gains (losses) on total return swaps and foreign currency forwards recognized for the years ended October 31, 2023 and 2022 were $(223) million and $3 million, respectively, resulting in net employee compensation expense of $828 million and $716 million, respectively.

A total of 17.8 million and 16.6 million mid-term incentive plan units were outstanding as at October 31, 2023 and 2022, respectively, and the intrinsic value of those awards which had vested was $1,361 million and $1,501 million, respectively.

Deferred Incentive Plans

We offer deferred incentive plans for members of our Board of Directors, executives and key employees in BMO CM and BMO WM. Under these plans, fees, annual incentive payments and/or commissions can be deferred and recorded as share units of our common shares. These share units are typically either fully vested on the grant date or vest at the end of three years. The value of these share units is adjusted to reflect reinvested dividends and changes in the market value of our common shares.

Deferred incentive plan payments are paid in cash upon the participant's departure from the bank.

Employee compensation expense for these plans is recorded in the year the fees, incentive payments and/or commissions are earned. Changes in the amount of the incentive plan payments as a result of dividends and share price movements are recorded as increases or decreases in employee compensation expense in the period of the change.

Deferred incentive plan units granted during the years ended October 31, 2023 and 2022 totalled0.2 million and 0.2 million, respectively, and the weighted-average fair value of the units granted during the years ended October 31, 2023 and 2022 was $123.64 and $136.74, respectively.

Liabilities related to these plans are recorded in other liabilities in our Consolidated Balance Sheet and totalled $517 million and $585 million as at October 31, 2023 and 2022, respectively.

Employee compensation expense (recovery) related to these plans for the years ended October 31, 2023 and 2022 was $(76) million and $(16) million, respectively. We have entered into derivative instruments to hedge our exposure related to these plans. Changes in the fair value of these derivatives are recorded in employee compensation expense in the period in which they arise. Gains (losses) on these derivatives recognized for the years ended October 31, 2023 and 2022 were $(105) million and $(30) million, respectively. These gains (losses) resulted in net employee compensation expense for the years ended October 31, 2023 and 2022 of $29 million and $14 million, respectively.

A total of 5.0 million and 4.7 million deferred incentive plan units were outstanding as at October 31, 2023 and 2022, respectively.

Note 21: Employee Compensation – Pension and Other Employee Future Benefits

Pension and Other Employee Future Benefit Plans

We sponsor a number of arrangements globally that provide pension and other employee future benefits to our retired and current employees. The largest of these arrangements, by defined benefit obligation, are the primary defined benefit pension plans for employees in Canada and the United States and the primary other employee future benefit plan for employees in Canada.

Pension arrangements include defined benefit pension plans, as well as supplementary arrangements that provide pension benefits in excess of statutory limits. Generally, under these plans we provide retirement benefits based on an employee's years of service and average annual earnings over a period of time prior to retirement. Our pension and other employee future benefit expenses, recorded in employee compensation expense, mainly comprise the current service cost plus or minus the interest on net defined benefit assets or liabilities. In addition, we provide defined contribution pension plans to our employees. The costs of these plans, recorded in employee compensation expense, are equal to our contributions to the plans.

Effective December 31, 2020, the primary defined benefit pension plan for employees in Canada was closed to new employees hired after that date. Employees hired or transferred to BMO Canada on or after January 1, 2021 are eligible to participate in a defined contribution pension plan once they have completed the waiting period of six months of continuous service.

We also provide other employee future benefits, including health and dental care benefits and life insurance, for eligible current and retired employees.

Short-term employee benefits, such as salaries, paid absences, bonuses and other benefits, are accounted for on an accrual basis over the period in which the employees provide the related services.

Investment Policy

The defined benefit pension plans are administered under an established governance structure, with oversight exercised by the Board of Directors.

The plans are managed under a framework that considers both assets and liabilities in the development of an investment policy and in the management of risk. We have implemented a liability-driven investment strategy for the primary Canadian and U.S. plans to enhance risk-adjusted returns while reducing the plans' surplus volatility. This strategy has reduced the impact of the plans on our regulatory capital.

The plans invest in asset classes that include equities, fixed income and alternative strategies, under established investment guidelines. Plan assets are diversified across asset classes and by geographic exposure. They are managed by asset management firms that are responsible for the selection of investment securities. Derivative instruments are permitted under policy guidelines and are generally used to hedge foreign currency exposures, manage interest rate exposures or replicate the return of an asset.

Risk Management

The defined benefit pension plans are exposed to various risks, including market risk (interest rate, equity and foreign currency risks), credit risk, operational risk, surplus risk and longevity risk. We follow a number of approaches to monitor and actively manage these risks, including:

- monitoring surplus-at-risk, which measures a plan's risk exposures in an asset-liability framework;
- stress testing and scenario analyses to evaluate the volatility of the plans' financial positions and any potential impact on the bank;
- hedging of foreign currency and interest rate risk exposures within policy limits;
- controls related to asset mix allocations, geographic allocations, portfolio duration, credit quality of debt securities, sector guidelines, issuer/counterparty limits and others; and
- ongoing monitoring of exposures, performance and risk levels.

Pension and Other Employee Future Benefit Liabilities

Our actuaries perform valuations of our defined benefit obligations for pension and other employee future benefits as at October 31 of each year using the projected unit credit method based on management's assumptions about discount rates, rates of compensation increase, retirement age, mortality and health care cost trend rates.

The discount rates for the primary Canadian and U.S. pension and other employee future benefit plans were selected based on the yields of high-quality AA rated corporate bonds with terms matching the plans' cash flows.

The fair value of plan assets is deducted from the defined benefit obligation to determine the net defined benefit asset or liability. For defined benefit pension plans that are in a net defined benefit asset position, the recognized asset is limited to the present value of economic benefits available in the form of future refunds from the plan or reductions in future contributions to the plan (the asset ceiling). Changes in the asset ceiling are recognized in other comprehensive income. Components of the change in our net defined benefit assets or liabilities and our pension and other employee future benefit expenses are as follows:

Current service cost represents benefits earned in the current year. The cost is determined with reference to the current workforce and the amount of benefits to which employees will be entitled upon retirement, based on the provisions of our benefit plans.

Interest on net defined benefit asset or liability represents the increase in the net defined benefit asset or liability that results from the passage of time and is determined by applying the discount rate to the net defined benefit asset or liability.

Actuarial gains and losses may arise in two ways. First, each year our actuaries recalculate the defined benefit obligations and compare them to those estimated as at the previous year end. Any differences that result from changes in demographic and economic assumptions or from plan member experience being different from management's expectations at the previous year end are considered actuarial gains or losses. Second, actuarial gains and losses arise when there are differences between the discount rate and actual returns on plan assets. Actuarial gains and losses are recognized immediately in other comprehensive income as they occur and are not subsequently reclassified to income in future periods.

Plan amendments are changes in our defined benefit obligations that result from changes to provisions of the plans. The effects of plan amendments are recognized immediately in income when a plan is amended.

Settlements occur when defined benefit obligations for plan participants are settled, usually through lump sum cash payments, and as a result we no longer have any obligation to provide such participants with benefit payments in the future.

Funding of Pension and Other Employee Future Benefit Plans

We fund our defined benefit pension plans in Canada and the United States in accordance with statutory requirements, and the assets in these plans are used to pay benefits to retirees and other employees. Some groups of employees are also eligible to make voluntary contributions in order to receive enhanced benefits. Our supplementary pension plan in Canada is funded, while the supplementary pension plan in the United States is unfunded.

Our other employee future benefit plans in Canada and the United States are either funded or unfunded. Benefit payments related to these plans are paid either through the respective plan or directly by us.

We measure the fair value of plan assets for our plans in Canada and the United States as at October 31. In addition to actuarial valuations for accounting purposes, we are required to prepare valuations for determining our minimum funding requirements for our pension arrangements in accordance with the relevant statutory framework (our funding valuation). An annual funding valuation is performed for our plans in Canada and the United States. The most recent funding valuation for our primary Canadian pension plan was performed as at October 31, 2023 and the most recent funding valuation for our primary U.S. pension plan was performed as at January 1, 2022.

A summary of plan information for the past two years is as follows:

(Canadian $ in millions)	Pension benefit plans		Other employee future benefit plans	
	2023	2022	**2023**	2022
Defined benefit obligation	**7,513**	7,082	**880**	928
Fair value of plan assets	**8,559**	8,261	**138**	147
Surplus (deficit) and net defined benefit asset (liability)	**1,046**	1,179	**(742)**	(781)
Surplus (deficit) is comprised of:				
Funded or partially funded plans	**1,209**	1,267	**81**	51
Unfunded plans	**(163)**	(88)	**(823)**	(832)
Surplus (deficit) and net defined benefit asset (liability)	**1,046**	1,179	**(742)**	(781)

Pension and Other Employee Future Benefit Expenses

Pension and other employee future benefit expenses are determined as follows:

(Canadian $ in millions)	Pension benefit plans		Other employee future benefit plans	
	2023	2022	**2023**	2022
Annual benefits expense				
Current service cost	**163**	237	**6**	8
Net interest (income) expense on net defined benefit (asset) liability	**(64)**	(27)	**42**	35
Impact of plan amendments	**(1)**	(2)	**(51)**	–
Gain on settlement	**–**	(1)	**–**	–
Administrative expenses	**10**	4	**–**	–
Remeasurement of other long-term benefits	**–**	–	**9**	(18)
Benefits expense	**108**	211	**6**	25
Government pension plans expense (1)	**361**	252	**–**	–
Defined contribution expense	**271**	176	**–**	–
Total annual pension and other employee future benefit expenses recognized in our Consolidated Statement of Income	**740**	639	**6**	25

(1) Includes Canada Pension Plan, Quebec Pension Plan and U.S. *Federal Insurance Contribution Act.*

Weighted-Average Assumptions

	Pension benefit plans		Other employee future benefit plans	
	2023	2022	**2023**	2022
Defined Benefit Expenses				
Discount rate at beginning of year (1)(2)	**5.5%**	3.2%	**5.5%**	3.3%
Rate of compensation increase	**2.3%**	2.2%	**na**	na
Assumed overall health care cost trend rate	**na**	na	**4.7%** (4)	4.8% (4)
Defined Benefit Obligation				
Discount rate at end of year	**5.8%**	5.5%	**5.7%**	5.5%
Rate of compensation increase	**2.1%**	2.3%	**na**	na
Assumed overall health care cost trend rate	**na**	na	**4.8%** (3)	4.7% (4)

(1) The pension benefit current service cost was calculated using a separate discount rate of 5.4% and 3.7% for 2023 and 2022, respectively.
(2) The other employee future benefit plans current service cost was calculated using a separate discount rate of 5.5% and 3.6% for 2023 and 2022, respectively.
(3) Trending to 4.03% in 2040 and remaining at that level thereafter.
(4) Trending to 4.00% in 2041 and remaining at that level thereafter.

na – not applicable

Assumptions regarding future mortality are based on published statistics and mortality tables calibrated to plan experience, when applicable. The current life expectancies underlying the amounts of the defined benefit obligations for our primary plans are as follows:

(Years)	Canada		United States	
	2023	2022	**2023**	2022
Life expectancy for those currently age 65				
Males	**23.9**	23.9	**21.9**	21.8
Females	**24.3**	24.2	**23.3**	23.2
Life expectancy at age 65 for those currently age 45				
Males	**24.8**	24.8	**23.1**	23.0
Females	**25.2**	25.1	**24.5**	24.4

Changes in the estimated financial positions of our defined benefit pension plans and other employee future benefit plans are as follows:

(Canadian $ in millions, except as noted)	Pension benefit plans		Other employee future benefit plans	
	2023	2022	**2023**	2022
Defined benefit obligation				
Defined benefit obligation at beginning of year	**7,082**	9,716	**928**	1,220
Acquisition of defined benefit obligation (1)	**563**	–	**28**	–
Divestiture of defined benefit obligation (2)	**–**	(532)	**–**	–
Current service cost	**163**	237	**6**	8
Interest cost	**393**	290	**50**	39
Impact of plan amendments	**(1)**	(2)	**(51)**	–
(Gain) on settlements	**–**	(1)	**–**	–
Benefits paid	**(449)**	(578)	**(58)**	(49)
Employee contributions	**20**	18	**6**	6
Actuarial (gains) losses due to:				
Changes in demographic assumptions	**–**	–	**(2)**	(60)
Changes in financial assumptions	**(349)**	(2,386)	**(19)**	(244)
Plan member experience	**46**	207	**(10)**	(9)
Foreign exchange and other	**45**	113	**2**	17
Defined benefit obligation at end of year	**7,513**	7,082	**880**	928
Wholly or partially funded defined benefit obligation	**7,350**	6,994	**57**	96
Unfunded defined benefit obligation	**163**	88	**823**	832
Total defined benefit obligation	**7,513**	7,082	**880**	928
Fair value of plan assets				
Fair value of plan assets at beginning of year	**8,261**	10,525	**147**	166
Acquisition of plan assets (1)	**487**	–	**–**	–
Divestiture of plan assets (2)	**–**	(647)	**–**	–
Interest income	**457**	317	**8**	4
Return on plan assets (excluding interest income)	**(300)**	(1,524)	**(12)**	(37)
Employer contributions	**50**	58	**45**	40
Employee contributions	**20**	18	**6**	6
Benefits paid	**(449)**	(578)	**(58)**	(49)
Administrative expenses	**(10)**	(4)	**–**	–
Foreign exchange and other	**43**	96	**2**	17
Fair value of plan assets at end of year	**8,559**	8,261	**138**	147
Surplus (Deficit) and net defined benefit asset (liability) at end of year	**1,046**	1,179	**(742)**	(781)
Recorded in:				
Other assets	**1,225**	1,267	**81**	51
Other liabilities	**(179)**	(88)	**(823)**	(832)
Surplus (Deficit) and net defined benefit asset (liability) at end of year	**1,046**	1,179	**(742)**	(781)
Actuarial gains (losses) recognized in other comprehensive income				
Net actuarial (losses) on plan assets	**(300)**	(1,524)	**(12)**	(37)
Actuarial gains (losses) on defined benefit obligation due to:				
Changes in demographic assumptions	**–**	–	**14**	56
Changes in financial assumptions	**349**	2,386	**17**	228
Plan member experience	**(46)**	(207)	**9**	10
Foreign exchange and other	**(8)**	(14)	**–**	–
Actuarial gains (losses) recognized in other comprehensive income for the year	**(5)**	641	**28**	257

(1) Relates to the defined benefit plan included in our acquisition of Bank of the West in fiscal 2023. Refer to Note 10 for further information.
(2) Relates to the defined benefit plan included in the sale of our EMEA Asset Management business in fiscal 2022. Refer to Note 10 for further information.

Plan Asset Allocations and Fair Value

Our pension and other employee future benefit plan assets are measured at fair value on a recurring basis. The asset allocation ranges, weighted-average actual asset allocations and fair values of plan assets held by our primary plans as at October 31, 2023 and 2022 are as follows:

(Canadian $ in millions)	**2023**					2022				
	Target range	**% of total**	**Quoted**	**Unquoted**	**Total**	Target range	% of total	Quoted	Unquoted	Total
Equities	**15-40%**	**20%**	**925**	**663**	**1,588**	20-40%	24%	1,187	704	1,891
Fixed income investments	**40-60%**	**49%**	**168**	**3,855**	**4,023**	40-55%	45%	110	3,378	3,488
Alternative strategies	**10-40%**	**31%**	**–**	**2,537**	**2,537**	15-40%	31%	–	2,454	2,454
		100%	**1,093**	**7,055**	**8,148**		100%	1,297	6,536	7,833

Certain comparative figures have been reclassified to conform with the current year's presentation.

No plan assets are directly invested in securities of the bank or those of its related parties as at October 31, 2023 and 2022. As at October 31, 2023, our primary Canadian plan did not directly hold, through pooled funds, any of our common shares and fixed income securities (less than $1 million as at October 31, 2022). The plans do not hold any property we occupy or other assets we use.

Sensitivity of Assumptions

Key weighted-average assumptions for 2023 used in measuring the defined benefit obligations for our primary plans are outlined in the following table. The sensitivity analysis provided in the table should be used with caution, as it is hypothetical and the impact of changes in each key assumption may not be linear. The sensitivities to changes in each key variable have been calculated independently of the impact of changes in other key variables. Actual experience may result in simultaneous changes in a number of key assumptions, which would amplify or reduce certain sensitivities.

(Canadian $ in millions, except as noted)	Defined benefit obligation	
	Pension benefit plans	Other employee future benefit plans
Discount rate (%)	5.8	5.7
Impact of: 1% increase ($)	(659)	(65)
1% decrease ($)	807	77
Rate of compensation increase (%)	2.1	na
Impact of: 0.25% increase ($)	29	na
0.25% decrease ($)	(28)	na
Mortality		
Impact of: 1 year shorter life expectancy ($)	114	16
1 year longer life expectancy ($)	(117)	(16)
Assumed overall health care cost trend rate (%)	na	4.8 (1)
Impact of: 1% increase ($)	na	33
1% decrease ($)	na	(30)

(1) Trending to 4.03% in 2040 and remaining at that level thereafter.

na – not applicable

Maturity Profile

The duration of the defined benefit obligation for our primary plans is as follows:

(Years)	**2023**	2022
Canadian pension plans	**12.1**	12.1
U.S. pension plans	**7.2**	7.5
Canadian other employee future benefit plans	**11.2**	12.5

Cash Flows

Cash payments we made during the year in connection with our employee future benefit plans are as follows:

(Canadian $ in millions)	Pension benefit plans		Other employee future benefit plans	
	2023	2022	**2023**	2022
Net contributions to defined benefit plans	**7**	24	**–**	–
Contributions to defined contribution plans	**271**	176	**–**	–
Benefits paid directly to pensioners	**43**	34	**45**	40
	321	234	**45**	40

Our best estimate of the contributions and benefits paid directly to pensioners we expect to make for the year ending October 31, 2024 is approximately $7 million for our defined benefit pension plans and $49 million for our other employee future benefit plans. Benefit payments from our defined benefit and other employee future benefit plans to retirees for the year ending October 31, 2024 are estimated to be $589 million.

Note 22: Income Taxes

We report our provision for income taxes in our Consolidated Statement of Income based upon transactions recorded in our consolidated financial statements regardless of when they are recognized for income tax purposes, with the exception of repatriation of retained earnings from our subsidiaries, as noted below.

In addition, we record an income tax expense or benefit in other comprehensive income or directly in equity when the taxes relate to amounts recorded in other comprehensive income or equity. For example, income tax expense (recovery) on hedging gains (losses) related to our net investment in foreign operations is recorded in our Consolidated Statement of Comprehensive Income as part of net gains (losses) on translation of net foreign operations.

Current tax is the amount of income tax recoverable (payable) in respect of the taxable loss (profit) for a period. Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities for accounting and tax purposes. Deferred tax assets and liabilities are measured at the tax rates expected to apply when temporary differences reverse. Changes in deferred tax assets and liabilities related to a change in tax rates are recorded in income in the period the tax rate is substantively enacted, except to the extent that the tax arises from a transaction or event that is recognized either in other comprehensive income or directly in equity. Current and deferred taxes are offset only when they are levied by the same tax authority, on the same entity or group of entities, and when there is a legal right to offset.

Included in deferred tax assets is $6 million ($nil million as at October 31, 2022) related to Canadian tax loss carryforwards and $7 million ($10 million as at October 31, 2022) related to both U.S. tax loss carryforwards and tax credits that will expire in various amounts in U.S. taxation years from 2023 through 2042. On the evidence available, including management projections of income, we believe it is probable that there will be sufficient taxable income generated by our business operations to support these deferred tax assets. The amount of tax on temporary differences, unused tax losses and unused tax credits for which no deferred tax asset is recognized in our Consolidated Balance Sheet as at October 31, 2023 is $1,018 million ($922 million as at October 31, 2022), of which $74 million ($36 million in 2022) is scheduled to expire within five years. Deferred tax assets have not been recognized in respect of these items because it is not probable that these benefits will be realized.

Income that we earn through our foreign subsidiaries is generally taxed in the country in which they operate. Income that we earn through our foreign branches is also generally taxed in the country in which they operate. Canada also taxes the income we earn through our foreign branches and a credit is allowed for certain foreign taxes paid on such income. Repatriation of earnings from certain foreign subsidiaries would require us to pay tax on certain of these earnings. As repatriation of such earnings is not planned in the foreseeable future, we have not recorded a related deferred tax liability. The taxable temporary differences associated with the repatriation of earnings from investments in certain subsidiaries, branches, associates and interests in joint ventures for which deferred tax liabilities have not been recognized totalled $24 billion as at October 31, 2023 ($24 billion as at October 31, 2022).

Provision for Income Taxes

(Canadian $ in millions)	2023	2022
Consolidated Statement of Income		
Current		
Provision for income taxes for the current period	**2,220**	3,889
Adjustments for prior periods	**(2)**	(15)
Deferred		
Origination and reversal of temporary differences	**(711)**	475
Effect of changes in tax rates	**(21)**	–
	1,486	4,349
Other Comprehensive Income and Equity		
Income tax expense (recovery) related to:		
Unrealized (losses) on FVOCI debt securities	**(35)**	(182)
Reclassification to earnings of (gains) on FVOCI debt securities	**(11)**	(5)
(Losses) on derivatives designated as cash flow hedges	**(576)**	(1,794)
Reclassification to earnings/goodwill of (gains) losses on derivatives designated as cash flow hedges	**366**	(114)
Unrealized (losses) on hedges of net foreign operations	**(90)**	(124)
Gains on remeasurement of pension and other employee future benefit plans	**24**	239
Gains (losses) on remeasurement of own credit risk on financial liabilities designated at fair value	**(103)**	465
Unrealized gains on FVOCI equity securities	**–**	1
Share-based compensation	**4**	5
	(421)	(1,509)
Total provision for income taxes	**1,065**	2,840

Components of Total Provision for Income Taxes

(Canadian $ in millions)	2023	2022
Canada: Current taxes		
Federal	**509**	1,178
Provincial	**278**	672
	787	1,850
Canada: Deferred taxes		
Federal	**(491)**	148
Provincial	**(269)**	85
	(760)	233
Total Canadian	**27**	2,083
Foreign: Current taxes	**933**	953
Deferred taxes	**105**	(196)
Total foreign	**1,038**	757
Total provision for income taxes	**1,065**	2,840

Reconciliation to Statutory Tax Rate

Set out below is a reconciliation of our statutory tax rates and income taxes that would be payable at these rates to the effective tax rates and provision for income taxes that we have recorded in our Consolidated Statement of Income:

(Canadian $ in millions, except as noted)		2023		2022
Combined Canadian federal and provincial income taxes at the statutory tax rate	**1,630**	**27.8%**	4,757	26.6%
Increase (decrease) resulting from:				
Tax-exempt income from securities	**(265)**	**(4.5)**	(200)	(1.1)
Foreign operations subject to different tax rates	**(233)**	**(4.0)**	(160)	(0.9)
Income attributable to investments in associates and joint ventures	**(31)**	**(0.5)**	(57)	(0.3)
Net impact of certain Canadian tax measures	**371**	**6.3**	–	–
Other	**14**	**0.2**	9	–
Provision for income taxes in our Consolidated Statement of Income and effective tax rate	**1,486**	**25.3%**	4,349	24.3%

On December 15, 2022, the Canadian government enacted legislation related to certain tax measures that are applicable to certain Canadian companies in a bank or life insurer group, including a one-time 15% tax (referred to as the Canada Recovery Dividend, or CRD), based on the average taxable income for fiscal 2020 and fiscal 2021, less a $1 billion exemption, payable in equal instalments over five years. The legislation also included a permanent 1.5% increase in the tax rate, based on taxable income above $100 million (effective for taxation years that end after April 7, 2022 and pro-rated for the first year). In the first quarter of 2023, we recorded a one-time tax expense of $371 million in income tax expense, including $312 million relating to the CRD, and $59 million relating to the pro-rated fiscal 2022 impact of the 1.5% increase in tax rate, net of a related remeasurement of our net deferred tax assets.

Components of Deferred Tax Balances

(Canadian $ in millions)

Deferred Tax Asset (Liability)	Net asset, November 1, 2022	Bank of the West acquisition	Benefit (expense) to income statement	Benefit (expense) to equity	Translation and other	Net asset, October 31, 2023
Allowance for credit losses	605	**96**	**182**	**–**	**10**	**893**
Employee future benefits	256	**–**	**21**	**(14)**	**1**	**264**
Deferred compensation benefits	708	**115**	**(50)**	**–**	**10**	**783**
Other comprehensive income	573	**–**	**–**	**(51)**	**–**	**522**
Premises and equipment	(460)	**(179)**	**375**	**–**	**(8)**	**(272)**
Pension benefits	(370)	**25**	**(41)**	**(9)**	**–**	**(395)**
Goodwill and intangible assets	(244)	**(767)**	**134**	**–**	**(36)**	**(913)**
Securities	142	**1,086**	**(286)**	**–**	**45**	**987**
Other	(137)	**897** (1)	**397** (2)	**(3)**	**42**	**1,196**
Net deferred tax assets (liabilities)	1,073	**1,273**	**732**	**(77)**	**64**	**3,065**
Comprising						
Deferred tax assets	1,175					**3,081**
Deferred tax liabilities	(102)					**(16)**
Net deferred tax assets (liabilities)	1,073	**–**	**–**	**–**	**–**	**3,065**

(Canadian $ in millions)

Deferred Tax Asset (Liability)	Net asset, November 1, 2021	Benefit (expense) to income statement	Benefit (expense) to equity	Translation and other	Net asset, October 31, 2022
Allowance for credit losses	651	(52)	–	6	605
Employee future benefits	330	(10)	(65)	1	256
Deferred compensation benefits	685	18	–	5	708
Other comprehensive income	(108)	(1)	682	–	573
Premises and equipment	(400)	(59)	–	(1)	(460)
Pension benefits	(148)	(47)	(174)	(1)	(370)
Goodwill and intangible assets	(241)	1	–	(4)	(244)
Securities	(51)	193	–	–	142
Other (3)	377	(518)	(5)	9	(137)
Net deferred tax assets (liabilities)	1,095	(475)	438	15	1,073
Comprising					
Deferred tax assets	1,287				1,175
Deferred tax liabilities	(192)				(102)
Net deferred tax assets (liabilities)	1,095	–	–	–	1,073

(1) Includes the tax impact of deferred revenue and purchase accounting adjustments in connection with our acquisition of Bank of the West.
(2) Includes the tax impact of interest rate swaps and securities we purchased to mitigate the impact of changes in interest rates in our acquisition of Bank of the West (refer to Note 10 for additional details) and the tax impact of leasing assets.
(3) Includes the tax impact of the interest rate swaps and securities we purchased to mitigate the impact of changes in interest rates on our acquisition of Bank of the West (refer to Note 10 for additional details) and the tax impact of the legal provision recorded in relation to the lawsuit described in Note 24.

Canadian tax authorities have reassessed us for additional income tax and interest in an amount of approximately $1,465 million, in respect of certain 2011 – 2018 Canadian corporate dividends. These reassessments denied certain dividend deductions on the basis that the dividends were received as part of a “dividend rental arrangement”. In general, the tax rules raised by the Canadian tax authorities were prospectively addressed in the 2015 and 2018 Canadian federal budgets. We filed Notices of Appeal with the Tax Court of Canada and the matter is in litigation. We remain of the view that our tax filing positions were appropriate and intend to challenge all reassessments. However, if such challenges are unsuccessful, the additional expense would negatively impact our net income.

Note 23: Earnings Per Share

Basic earnings per share is calculated by dividing net income attributable to bank shareholders, after deducting dividends payable on preferred shares and distributions payable on other equity instruments, by the daily average number of fully paid common shares outstanding throughout the year.

Diluted earnings per share is calculated in the same manner, with further adjustments made to reflect the dilutive impact of instruments that are convertible into our common shares.

The following table presents our basic and diluted earnings per share:

Basic Earnings Per Common Share

(Canadian $ in millions, except as noted)	2023	2022
Net income attributable to bank shareholders	**4,365**	13,537
Dividends on preferred shares and distributions on other equity instruments	**(331)**	(231)
Net income available to common shareholders	**4,034**	13,306
Weighted-average number of common shares outstanding (in thousands)	**709,364**	663,990
Basic earnings per common share (Canadian $)	**5.69**	20.04

Diluted Earnings Per Common Share

(Canadian $ in millions, except as noted)	2023	2022
Net income available to common shareholders adjusted for impact of dilutive instruments	**4,034**	13,306
Weighted-average number of common shares outstanding (in thousands)	**709,364**	663,990
Effect of dilutive instruments		
Stock options potentially exercisable (1)	**4,440**	5,178
Common shares potentially repurchased	**(3,289)**	(3,461)
Weighted-average number of diluted common shares outstanding (in thousands)	**710,515**	665,707
Diluted earnings per common share (Canadian $)	**5.68**	19.99

(1) In computing diluted earnings per common share, we excluded average stock options outstanding of 2,204,402 with a weighted-average exercise price of $135.69 for the year ended October 31, 2023 (943,741 with a weighted-average exercise price of $143.52 for the year ended October 31, 2022), as the average share price in each of the two years did not exceed the exercise price.

Note 24: Commitments, Guarantees, Pledged Assets, Provisions and Contingent Liabilities

In the ordinary course of business, we enter into a variety of contracts under which we may be required to make payments to reimburse a counterparty for a loss if a third party does not perform according to the terms of a contract or does not make payments when due under the terms of a debt instrument, and contracts under which we provide indirect guarantees of the indebtedness of another party, all of which are considered guarantees.

Guarantees that qualify as derivatives are accounted for in accordance with the policy for derivative instruments (refer to Note 8). For guarantees that do not qualify as derivatives, a liability is initially recorded at fair value, which is generally the fee received. Subsequently, guarantees are recorded at the higher of initial fair value, less amortization to recognize any fee income earned over the period, and our best estimate of the amount required to settle the obligation. Any change in the liability is recorded in our Consolidated Statement of Income.

We enter into a variety of commitments, including off-balance sheet credit instruments, such as backstop liquidity facilities, letters of credit, credit default swaps and commitments to extend credit, as a method of meeting the financial needs of our customers. These commitments include contracts under which we may be required to make payments to a counterparty, based on changes in the value of an asset, liability or equity security that the counterparty holds, due to changes in an underlying interest rate, foreign exchange rate or other variable. The contractual amount of our commitments represents our maximum undiscounted potential exposure, before possible recoveries under recourse and collateral provisions. Collateral requirements for these instruments are generally consistent with our collateral requirements for loans.

A large majority of these commitments expire without being drawn upon. As a result, the total contractual amounts may not be representative of the funding likely to be required for these commitments.

We strive to limit our exposure to credit risk by dealing only with counterparties that we believe are creditworthy, and we manage our credit risk for these instruments using the same credit risk process that we apply to loans and other credit assets.

The maximum amounts payable related to our various commitments are as follows:

(Canadian $ in millions)	2023	2022
Financial Guarantees		
Standby letters of credit	**29,656**	26,019
Credit default swaps (1)	**10,010**	11,099
Other Credit Instruments		
Backstop liquidity facilities	**18,805**	17,330
Documentary and commercial letters of credit	**1,763**	1,351
Commitments to extend credit (2)	**218,094**	200,814
Other commitments (3)	**9,947**	7,075
Total	**288,275**	263,688

(1) The fair value of the related derivatives included in our Consolidated Balance Sheet was $3 million as at October 31, 2023 ($(38) million as at October 31, 2022).
(2) Commitments to extend credit exclude personal lines of credit and credit cards that are unconditionally cancellable at our discretion.
(3) Other commitments include $5,611 million as at October 31, 2023 ($783 million as at October 31, 2022) of underwriting commitments that are extended but not yet accepted by the borrower.

Financial Guarantees

Standby letters of credit represent our obligation to make payments to third parties on behalf of customers if they are unable to make the required payments or meet other contractual requirements. The majority have a term of one year or less. Collateral requirements for standby letters of credit and guarantees are consistent with our collateral requirements for loans. Standby letters of credit and guarantees include our guarantee of a subsidiary's debt provided directly to a third party.

Written credit default swaps require us to compensate a counterparty following the occurrence of a credit event in relation to a specified reference obligation, such as a bond or a loan. The terms of these contracts range from less than 1 year to over 10 years. Refer to Note 8 for details.

Other Credit Instruments

Backstop liquidity facilities are provided to ABCP programs administered by us as an alternative source of financing when ABCP markets cannot be accessed. The terms of the backstop liquidity facilities do not require us to advance money to these programs in the event of insolvency of the borrower. The average term of these liquidity facilities is approximately 1 to 5 years.

In fiscal 2022, we divested our securities lending agency business. Prior to this date, we loaned certain eligible customers' securities tothird-party borrowers who had been evaluated for credit risk using the same credit risk process that is applied to loans and other credit assets. In connection with these activities, we may have provided indemnification to clients against losses resulting from the failure of the borrower to return loaned securities when due. All borrowings were fully collateralized with cash or marketable securities. As we loaned the securities, we required that the borrowers maintain collateral equal to, or in excess of 100% of the fair value of the securities borrowed.

Documentary and commercial letters of credit represent our agreement to honour drafts presented by a third party upon completion of specific activities.

Commitments to extend credit represent our commitment to customers to grant them credit in the form of loans or other financings for specific amounts and maturities, subject to their meeting certain conditions.

Other commitments include commitments to fund external private equity funds and investments in equity and debt securities at market value at the time the commitments are drawn. In addition, we act as underwriter for certain new issuances under which we, alone or together with a syndicate of financial institutions, purchase the new issue for resale to investors.

Indemnification Agreements

In the normal course of operations, we enter into various agreements that provide general indemnifications. These indemnifications typically occur in connection with sales of assets, securities offerings, service contracts, director contracts, membership agreements, clearing arrangements, derivative contracts and leasing transactions. Based on historical experience, we expect the risk of loss to be remote.

Exchange and Clearinghouse Guarantees

We are a member of several securities and futures exchanges and central counterparties. Membership in certain of these organizations may require us to pay a pro rata share of the losses incurred by the organization in the event of default by another member. It is difficult to estimate our maximum exposure under these membership agreements, since this would require an assessment of future claims that may be made against us that have not yet occurred. Based on historical experience, we expect the risk of material loss to be remote.

Pledged Assets and Collateral

In the ordinary course of business, we enter into trading, lending and borrowing activities that require us to pledge assets or provide collateral. Pledging and collateral transactions are typically conducted under terms and conditions that are usual and customary to these activities. If there is no default, the securities or their equivalents must be returned by the pledgee upon satisfaction of the obligation.

The following tables summarize our pledged assets and collateral, and the activities to which they relate:

(Canadian $ in millions)	**2023**	2022
Bank Assets		
Cash and due from banks	**125**	87
Securities (1)	**114,407**	95,194
Loans	**94,442**	71,795
Other assets	**10,596**	13,991
	219,570	181,067
Third-party Assets (2)		
Collateral received and available for sale or re-pledging	**191,148**	177,300
Less: Collateral not sold or re-pledged	**(46,324)**	(42,237)
	144,824	135,063
	364,394	316,130

(Canadian $ in millions)	**2023**	2022
Uses of pledged assets and collateral		
Clearing systems, payment systems and depositories	**18,096**	19,082
Foreign governments and central banks	**89**	87
Obligations related to securities sold short	**43,781**	40,979
Obligations related to securities sold under repurchase agreements	**92,549**	90,490
Securities borrowing and lending (3)	**87,136**	69,525
Derivatives transactions	**14,983**	16,341
Securitization	**27,058**	27,499
Covered bonds	**29,802**	33,175
Other (4)	**50,900**	18,952
Total pledged assets and collateral	**364,394**	316,130

(1) Includes NHA MBS of $4,481 million, which are included in loans in our Consolidated Balance Sheet ($5,277 million as at October 31, 2022).
(2) Includes on-balance sheet securities borrowed or purchased under resale agreements andoff-balance sheet collateral received.
(3) Includes off-balance sheet securities borrowing and lending.
(4) Includes $41,510 million of assets that have been pledged supporting FHLB activity ($34,013 million as at October 31, 2022).

Lease Commitments

We have entered into a number of non-cancellable leases for premises and equipment. Our computer and software leases are typically fixed for one term. Leases that we have signed but have not yet taken possession of, totalled $94 million as at October 31, 2023 ($303 million as at October 31, 2022).

Provisions and Contingent Liabilities

Provisions are recognized when we have a legal or constructive obligation as a result of past events, such as contractual commitments, legal or other obligations for which we can reliably estimate the related amount, and it is probable we will be required to settle the obligation. We recognize as a provision our best estimate of the amount required to settle the obligations as of the balance sheet date, taking into account the risks and uncertainties surrounding the obligations. Provisions are recorded in other liabilities in our Consolidated Balance Sheet. Contingent liabilities are potential obligations arising from past events, the existence of which will only be confirmed by the occurrence or non-occurrence of one or more future events not wholly within our control, and are not included in the table below.

Legal Proceedings

The bank and its subsidiaries are party to legal proceedings, including regulatory investigations, in the ordinary course of business. We review the status of these proceedings regularly and establish provisions when in our judgment it becomes probable that we will incur a loss and the amount can be reliably estimated. The bank's provisions represent our best estimates based upon currently available information for proceedings for which estimates can be made. However, the bank's provisions may differ significantly from the actual losses incurred as a result of, for example, the inherent uncertainty of the various potential outcomes of such proceedings; the varying stages of the proceedings; the existence of multiple defendants whose share of liability may not yet have been determined; unresolved issues in such proceedings, some of which involve novel legal theories and interpretations; the fact that the underlying matters will change from time to time; and such proceedings may involve very large or indeterminate damages. While it is inherently difficult to predict the ultimate outcome of these proceedings, based on our current knowledge, we do not expect the outcome of any of these proceedings, individually or in the aggregate, to have a material adverse effect on the consolidated financial position or the results of operations of the bank. However, because of the factors listed above, as well as other uncertainties inherent in litigation and regulatory matters, there is a possibility that the ultimate resolution of legal proceedings or regulatory investigations may be material to the bank's consolidated financial position or its results of operations for any particular reporting period.

BMO Bank National Association (BBNA), formerly BMO Harris Bank N.A., as successor to M&I Marshall and Ilsley Banks (M&I), was named as the defendant in a lawsuit filed in the U.S. Bankruptcy Court for the District of Minnesota (Bankruptcy Court) in connection with a Ponzi scheme carried out by Thomas J. Petters and certain affiliated individuals and entities (collectively, Petters). The lawsuit, brought by a Trustee in bankruptcy proceedings for certain Petters entities, alleged that between 1999 and 2008, M&I (and a predecessor bank) helped facilitate the Ponzi scheme operated by Petters. The trial took place from October 12 to November 8, 2022 and on November 8, 2022, the jury awarded damages of approximately US$564 million against BBNA. On August 22, 2023, the Court awarded the plaintiff approximately US$483 million in pre-judgment interest and ordered BBNA to pay post-judgment interest on the jury award at 4.74% and on the pre-judgment interest at 5.26%. BBNA strongly denies the plaintiff's allegations and will continue to defend itself vigorously. On June 27, 2023, BBNA filed its notice of appeal with the United States Court of Appeals for the Eighth Circuit, to contest the jury verdict and award. Following the court award of pre and post-judgment interest, we revised the previous provision of $1,120 million ($830 million after-tax) to $1,169 million ($871 million after-tax), comprising $609 million in non-interest expense, other and $560 million in interest expense, other liabilities, representing damages awarded by the jury, pre-judgment interest and accrued post-judgment interest, net of estimated recoveries. Recoveries relate to a settlement arrangement made in 2015 in connection with another Petters matter.

Restructuring and Severance Charges

Provisions for restructuring and severance charges relate to costs incurred related to the integration of Bank of the West and accelerating operational efficiencies across the enterprise. This represents our best estimate of the amount that will ultimately be paid out.

Changes in the provision balance during the year were as follows:

(Canadian $ in millions)			**2023**	2022
	Restructuring and severance	**Legal**	**Total**	Total
Balance at beginning of year	**109**	**1,168**	**1,277**	248
Additional provisions/increase in provisions	**388**	**188**	**576**	1,201
Provisions utilized	**(142)**	**(116)**	**(258)**	(155)
Amounts reversed	**(27)**	**(11)**	**(38)**	(20)
Foreign exchange and other	**7**	**14**	**21**	3
Balance at end of year	**335**	**1,243**	**1,578**	1,277

Note 25: Operating and Geographic Segmentation

Operating Groups

We conduct our business through three operating groups, each of which has a distinct mandate. Our operating groups reflect our organizational and management structure and therefore these groups, and the results attributed to them, may not be comparable with those of other financial services companies. We evaluate the performance of our operating groups using reported and adjusted measures, such as net income, revenue growth, return on equity, and non-interest expense-to-revenue (efficiency) ratio, as well as operating leverage. The acquisition of Bank of the West has been reflected in the U.S. P&C and BMO WM reporting segments.

Personal and Commercial Banking

P&C is comprised of two operating segments: Canadian P&C and U.S. P&C.

Canadian Personal and Commercial Banking

Canadian P&C provides a full range of financial products and services to eight million customers. Personal and Business Banking provides financial solutions through a network of almost 900 branches, contact centres, digital banking platforms and more than 3,200 automated teller machines. Commercial Banking serves clients across Canada and delivers sector and industry expertise, as well as a local presence.

U.S. Personal and Commercial Banking

U.S. P&C provides financial products and services to more than four million customers. Personal and Business Banking provides financial solutions through a network of more than 1,000 branches, contact centres, digital banking platforms and more than 40,000 automated teller machines. Commercial Banking serves clients across the United States and delivers sector and industry expertise, as well as a local presence.

BMO Wealth Management

BMO WM serves a full range of client segments, from mainstream to ultra high net worth and institutional, with a broad offering of wealth management products and services, including insurance products.

BMO Capital Markets

BMO CM offers a comprehensive range of products and services to corporate, institutional and government clients. Through our Investment and Corporate Banking and Global Markets lines of business, there are 2,700 professionals, operating in 33 locations around the world.

Corporate Services

Corporate Services consists of Corporate Units and Technology and Operations (T&O). Corporate Units provide enterprise-wide expertise, governance and support in a variety of areas, including strategic planning, risk management, finance, legal and regulatory compliance, human resources, communications, marketing, real estate and procurement. T&O develops, monitors, manages and maintains governance of information technology including data and analytics, and also provides cybersecurity and operations services.

The costs of these Corporate Units and T&O services are largely transferred to the three operating groups (P&C, BMO WM and BMO CM), with any remaining amounts retained in Corporate Services results. As such, Corporate Services results largely reflect the impact of residual unallocated expenses, residual treasury-related activities and the elimination of taxable equivalent adjustments. We review our expense allocation methodologies annually and update these as appropriate.

Basis of Presentation

The results of these operating groups are based on our internal financial reporting systems. The accounting policies used in these segments are generally consistent with those followed in the preparation of our consolidated financial statements, as disclosed in Note 1 and throughout the consolidated financial statements. Income taxes presented below may not be reflective of taxes paid in each jurisdiction in which we operate. Income taxes are generally applied to each segment based on a statutory tax rate and may be adjusted for items and activities specific to each segment. A notable accounting measurement difference is the taxable equivalent basis adjustment, as described below.

Periodically, certain business lines and units within the business lines are transferred between client and corporate support groups in order to more closely align our organizational structure with our strategic priorities. In addition, revenue and expense allocations are updated to more accurately align with current experience. Results for prior periods are restated to conform with the current year's presentation.

Taxable Equivalent Basis

We analyze revenue on a taxable equivalent basis (teb) at the operating group level. Revenue and the provision for income taxes are increased on tax-exempt securities to an equivalent before-tax basis to facilitate comparisons of income between taxable and tax-exempt sources. The offset to the operating segments' teb adjustments is reflected in Corporate Services revenue and provision for income taxes. The teb adjustment for the year ended October 31, 2023 was $354 million ($270 million in 2022).

Inter-Group Allocations

Various estimates and allocation methodologies are used in the preparation of the operating groups' financial information. Overhead expenses are allocated to operating groups using allocation formulas applied on a consistent basis. Operating group net interest income reflects internal funding charges and credits on the groups' assets, liabilities and capital at market rates, taking into account relevant terms and currency considerations. The offset of the net impact of these charges and credits is reflected in Corporate Services. These inter-group allocations are also applied to the geographic segmentation.

Our results and average assets, grouped by operating segment, are as follows:

(Canadian $ in millions)	Canadian P&C	U.S. P&C	BMO WM	BMO CM	Corporate Services (1)	2023 Total
Net interest income (2)	8,308	7,853	1,416	2,553	(1,449)	18,681
Non-interest revenue	2,519	1,573	5,978	3,897	(1,449)	12,518
Total Revenue	10,827	9,426	7,394	6,450	(2,898)	31,199
Provision for credit losses on impaired loans	784	380	5	9	2	1,180
Provision for credit losses on performing loans	146	130	13	9	700	998
Total provision for credit losses	930	510	18	18	702	2,178
Insurance claims, commissions and changes in policy benefit liabilities	–	–	1,939	–	–	1,939
Depreciation and amortization	573	889	300	337	–	2,099
Non-interest expense	4,197	4,613	3,662	3,942	2,706	19,120
Income (loss) before taxes and non-controlling interest in subsidiaries	5,127	3,414	1,475	2,153	(6,306)	5,863
Provision for (recovery of) income taxes	1,409	690	349	471	(1,433)	1,486
Reported net income (loss)	3,718	2,724	1,126	1,682	(4,873)	4,377
Non-controlling interest in subsidiaries	–	6	–	–	6	12
Net income (loss) attributable to bank shareholders	3,718	2,718	1,126	1,682	(4,879)	4,365
Average assets (3)	317,878	218,674	58,661	416,261	236,882	1,248,356

	Canadian P&C	U.S. P&C	BMO WM	BMO CM	Corporate Services (1)	2022 Total
Net interest income (2)	7,449	5,037	1,188	3,197	(986)	15,885
Non-interest revenue	2,419	1,265	3,336	2,975	7,830	17,825
Total Revenue	9,868	6,302	4,524	6,172	6,844	33,710
Provision for (recovery of) credit losses on impaired loans	432	107	2	(32)	(7)	502
Provision for (recovery of) credit losses on performing loans	(91)	(90)	(4)	(11)	7	(189)
Total provision for (recovery of) credit losses	341	17	(2)	(43)	–	313
Insurance claims, commissions and changes in policy benefit liabilities	–	–	(683)	–	–	(683)
Depreciation and amortization	516	424	258	282	–	1,480
Non-interest expense	3,833	2,619	3,306	3,573	1,383	14,714
Income before taxes	5,178	3,242	1,645	2,360	5,461	17,886
Provision for income taxes	1,352	745	394	588	1,270	4,349
Reported net income	3,826	2,497	1,251	1,772	4,191	13,537
Average assets (3)	292,087	145,187	50,488	390,306	194,429	1,072,497

(1) Corporate Services includes T&O.
(2) Operating groups report on a teb – see Basis of Presentation section.
(3) Included within average assets are average earning assets, which are comprised of deposits with other banks, deposits at central banks, reverse repos, loans and securities. Total average earning assets for 2023 are $1,145,632 million, including $303,855 million for Canadian P&C, $202,155 million for U.S. P&C, and $639,622 million for all other operating segments, including Corporate Services (2022 – Total: $979,341 million, Canadian P&C: $278,022 million, U.S. P&C: $138,094 million and all other operating segments: $563,225 million).

Certain comparative figures have been reclassified to conform with the current year's presentation.

Geographic Information

We operate primarily in Canada and the United States, but we also have operations in the United Kingdom, Europe, the Caribbean and Asia, which are grouped in other countries in the table below. We allocate our results by geographic region based on the location of the unit responsible for managing the related assets, liabilities, revenues and expenses.

Our results and average assets, grouped by geographic region, are as follows:

(Canadian $ in millions)	Canada	United States	Other countries	2023 Total
Total Revenue	16,884	11,967	2,348	31,199
Income (loss) before taxes	4,407	(44)	1,500	5,863
Reported net income	3,025	129	1,223	4,377
Average Assets	655,887	541,045	51,424	1,248,356

				2022
Total Revenue	15,977	16,980	753	33,710
Income before taxes	7,335	10,526	25	17,886
Reported net income	5,557	7,894	86	13,537
Average Assets	600,607	416,885	55,005	1,072,497

Note 26: Significant Subsidiaries

As at October 31, 2023, the bank, either directly or indirectly through its subsidiaries, controls the following significant operating subsidiaries.

Significant subsidiaries (1)(2)	Head or principal office	Book value of shares owned by the bank (Canadian $ in millions)
AIR MILES Loyalty Inc.	Toronto, Canada	213
Bank of Montreal (China) Co. Ltd.	Beijing, China	489
Bank of Montreal Europe plc	Dublin, Ireland	519
Bank of Montreal Holding Inc. and subsidiaries , including:	Toronto, Canada	36,341
Bank of Montreal Mortgage Corporation	Calgary, Canada	
BMO Mortgage Corp.	Vancouver, Canada	
BMO Investments Inc.	Toronto, Canada	
BMO Investments Limited	Hamilton, Bermuda	
BMO Reinsurance Limited	St. Michael, Barbados	
BMO InvestorLine Inc.	Toronto, Canada	
BMO Nesbitt Burns Inc.	Toronto, Canada	
BMO Private Equity (Canada) Inc.	Toronto, Canada	
BMO Capital Markets Limited	London, England	324
BMO Capital Partners Inc.	Toronto, Canada	799
BMO Financial Corp. and subsidiaries , including:	Chicago, United States	51,512
BMO Bank National Association	Chicago, United States	
BMO Capital Markets Corp .	New York, United States	
BMO Japan Securities Ltd.	Tokyo, Japan	6
BMO Life Insurance Company and subsidiaries, including:	Toronto, Canada	1,885
BMO Life Holdings (Canada), ULC	Halifax, Canada	
BMO Life Assurance Company	Toronto, Canada	
BMO Trust Company	Toronto, Canada	530

(1) Each subsidiary is incorporated or organized under the laws of the state or country in which the principal office is situated, except for BMO Financial Corp. and BMO Capital Markets Corp., which are incorporated under the laws of the state of Delaware, United States.
(2) Unless otherwise noted, the bank, either directly or indirectly through its subsidiaries, owns 100% of the outstanding voting shares of each subsidiary.

Significant Restrictions

Our ability to transfer funds between our subsidiaries may be restricted by statutory, contractual, capital and regulatory requirements. Restrictions include:

- Assets pledged as security for various liabilities we incur. Refer to Note 24 for details.
- Assets of our consolidated SEs that are held for the benefit of the note holders. Refer to Note 7 for details.
- Assets held by our insurance subsidiaries. Refer to Note 12 for details.
- Regulatory and statutory requirements that reflect capital and liquidity requirements.
- Funds required to be held with certain central banks, regulatory bodies and counterparties. Refer to Note 2 for details.

Note 27: Related Party Transactions

Related parties include subsidiaries, joint ventures, associates, employee future benefit plans and key management personnel and their close family members. Close family members include spouses, common-law partners and dependent minors. Transactions with our subsidiaries are eliminated on consolidation, and are not disclosed as related party transactions.

Key Management Personnel and Their Close Family Members

Key management personnel is defined as those persons having authority and responsibility for planning, directing and/or controlling the activities of an entity, being the members of our Board of Directors (directors) and certain senior executives.

The following table presents the compensation of our key management personnel:

(Canadian $ in millions)	2023	2022
Base salary and incentives	**22**	25
Post-employment benefits	**2**	3
Share-based payments (1)	**49**	45
Total key management personnel compensation	**73**	73

(1) Amounts included in share-based payments are the fair values of awards granted in the year.

We offer senior executives market interest rates on credit card balances, a fee-based subsidy on annual credit card fees, and a select suite of customer loan and mortgage products at rates normally accorded to preferred customers. As at October 31, 2023, loans and undrawn credit commitments to key management personnel and their close family members totalled $16 million ($20 million as at October 31, 2022). We had no specific PCL related to these amounts as at October 31, 2023 and 2022.

Directors receive a specified amount of their annual retainer in deferred stock units. Until a director's shareholdings (including deferred stock units) are eleven times greater than their annual retainer, they are required to take 100% of their annual retainer and other fees in the form of either our common shares or deferred stock units. Once the shareholding requirements have been met, directors may elect to receive the remainder of such retainer fees and other remuneration in cash, common shares or deferred stock units.

Directors of our wholly-owned subsidiary, BMO Financial Corp., are required to take a specified minimum amount of their annual retainer and other fees in the form of deferred stock units.

Joint Ventures and Associates

We provide banking services to our joint ventures and associates on the same terms offered to our customers for these services.

The following table presents the carrying amount of our interests in joint ventures and associates accounted for under the equity method, as well as our share of the income of those entities:

(Canadian $ in millions)	Joint ventures		Associates	
	2023	2022	**2023**	2022
Carrying amount	**679**	585	**782**	708
Share of net income	**61**	126	**124**	148

We do not have any joint ventures or associates that are individually material to our consolidated financial statements.

The following table presents transactions with our joint ventures and associates:

(Canadian $ in millions)	**2023**	2022
Loans (1)	**1,525**	1,190
Deposits	**265**	202
Fees paid for services received	**58**	61
Guarantees and commitments	**98**	93

(1) Includes customers' liability under acceptances.

Exhibit 99.4

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Tel 416-777-8500
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CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors of Bank of Montreal:

We consent to the use of:

i) our report of independent registered public accounting firm dated December 1, 2023 to the Shareholders and the Board of Directors of Bank of Montreal (the "Bank") on the consolidated financial statements of the Bank, which comprise the consolidated balance sheets as of October 31, 2023 and October 31, 2022, the related consolidated statements of income, comprehensive income, changes in equity and cash flows for the years then ended, and the related notes, and

ii) our report of independent registered public accounting firm dated December 1, 2023 to the Shareholders and the Board of Directors of the Bank on the effectiveness of internal control over financial reporting as of October 31, 2023

each of which is included in this Annual Report on Form 40-F of the Bank for the fiscal year ended October 31, 2023.

We also consent to the incorporation by reference of the above-mentioned reports and to the reference to our firm under the heading "Experts", in the following Registration Statements of the Bank:

1. Registration Statement – Form F-3 – File No. 333-264388
2. Registration Statement – Form F-3 – File No. 333-214934

We also consent to the incorporation by reference of the above-mentioned reports in the following Registration Statements of the Bank:

1. Registration Statement – Form S-8 – File No. 333-191591
2. Registration Statement – Form S-8 – File No. 333-180968
3. Registration Statement – Form S-8 – File No. 333-177579
4. Registration Statement – Form S-8 – File No. 333-177568
5. Registration Statement – Form S-8 – File No. 333-176479
6. Registration Statement – Form S-8 – File No. 333-175413
7. Registration Statement – Form S-8 – File No. 333-175412
8. Registration Statement – Form S-8 – File No. 333-113096
9. Registration Statement – Form S-8 – File No. 333-14260
10. Registration Statement – Form S-8 – File No. 33-92112
11. Registration Statement – Form S-8 – File No. 333-207739
12. Registration Statement – Form S-8 – File No. 333-237522

/s/ KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants

Toronto, Canada
December 1, 2023

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Exhibit 99.5

Certifications

Pursuant to Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Darryl White, Chief Executive Officer of Bank of Montreal, certify that:

1. I have reviewed this annual report on Form 40-F (the "report") of Bank of Montreal (the "issuer");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the issuer as of, and for, the periods presented in this report;

4. The issuer's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the issuer and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the issuer, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the issuer's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the issuer's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the issuer's internal control over financial reporting; and

5. The issuer's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the issuer's auditors and the audit committee of the issuer's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the issuer's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the issuer's internal control over financial reporting.

Date: December 1, 2023

/s/ Darryl White
Darryl White
Chief Executive Officer

Exhibit 99.6

Certifications

Pursuant to Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Tayfun Tuzun, Chief Financial Officer of Bank of Montreal, certify that:

1. I have reviewed this annual report on Form 40-F (the "report") of Bank of Montreal (the "issuer");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the issuer as of, and for, the periods presented in this report;

4. The issuer's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the issuer and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the issuer, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the issuer's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the issuer's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the issuer's internal control over financial reporting; and

5. The issuer's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the issuer's auditors and the audit committee of the issuer's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the issuer's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the issuer's internal control over financial reporting.

Date: December 1, 2023

/s/ Tayfun Tuzun
Tayfun Tuzun
Chief Financial Officer

Exhibit 99.7

Certifications

Pursuant to Rule 13(a) or 15(d) under the Securities Exchange Act of 1934, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Pursuant to 18 U.S.C. 1350, the undersigned officers of Bank of Montreal (the *"Bank"*), hereby certify that, to his knowledge, (a) the annual report on Form 40-F for the period ended October 31, 2023 (the *"Report"*) fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and (b) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Bank.

Date: December 1, 2023

/s/ Darryl White
Darryl White
Chief Executive Officer

Date: December 1, 2023

/s/ Tayfun Tuzun
Tayfun Tuzun
Chief Financial Officer