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, 2022 Commission File Number: 1 - 14678

CANADIAN IMPERIAL BANK OF COMMERCE

(Exact name of registrant as specified in its charter)

Canada	6029	13-1942440
(Province or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

81 Bay Street
CIBC Square
Toronto, Ontario
Canada, M5J 0E7
(416) 980-2211
(Address and telephone number of registrant's principal executive offices)

Achilles M. Perry
Vice-President and General Counsel
CIBC World Markets Corp.
425 Lexington Avenue – 3rd Floor
New York, New York, 10017
(212) 667-8316
(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	CM	New York Stock Exchange

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

Not Applicable
(Title of Class)

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

Debt Securities
(Title of Class)

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	905,993,892

Class A Preferred Shares:

Series 39	16,000,000
Series 41	12,000,000
Series 43	12,000,000
Series 47	18,000,000
Series 49	13,000,000
Series 51	10,000,000
Series 53	750,000[1]
Series 54	750,000[1]
Series 55	800,000[1]
Series 56	600,000

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 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. ☒

[1] The Series 53, 54 and 55 Class A Preferred Shares are held by a consolidated entity, CIBC LRCN Limited Recourse Capital Trust, in connection with the issuance of $750 million principal amount of 4.375% Limited Recourse Capital Notes Series 1(NVCC) (subordinated indebtedness), $750 million principal amount of 4.000% Limited Recourse Capital Notes Series 2(NVCC) (subordinated indebtedness) and $800 million principal amount of 7.150% Limited Recourse Capital Notes Series 3(NVCC) (subordinated indebtedness), respectively. The Series 53, 54 and 55 Class A Preferred Shares are distributable to holders of such notes upon certain events.

DISCLOSURE CONTROL AND PROCEDURES

The disclosure provided under the heading “Management’s discussion and analysis—Controls and procedures—Disclosure controls and procedures” included in Exhibit B.3(c) is incorporated by reference herein.

MANAGEMENT’S ANNUAL REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The disclosure provided under the heading “Management’s discussion and analysis—Controls and procedures—Management’s annual report on internal control over financial reporting” included in Exhibit B.3(c) is incorporated by reference herein.

ATTESTATION REPORT OF THE REGISTERED PUBLIC ACCOUNTING FIRM

The disclosure provided under the heading “Report of independent registered public accounting firm—To the shareholders and directors of Canadian Imperial Bank of Commerce—Opinion on internal control over financial reporting” included in Exhibit B.3(b) is incorporated by reference herein.

CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

The disclosure provided under the heading “Management’s discussion and analysis—Controls and procedures—Changes in internal control over financial reporting” included in Exhibit B.3(c) is incorporated by reference herein.

AUDIT COMMITTEE FINANCIAL EXPERT

CIBC’s Board of Directors has determined that (i) CIBC has at least one “audit committee financial expert” (as that term is defined in General Instruction B(8)(b) of the General Instructions to Form 40-F) serving on its audit committee, the members of which are Ms. Michelle L. Collins, Mr. Nicholas D. Le Pan, Ms. Mary Lou Maher and Ms. Jane L. Peverett, (ii) each audit committee member is an “audit committee financial expert” (as so defined), and (iii) each audit committee member is “independent” (as that term is defined in the listing standards of the New York Stock Exchange).

In accordance with the rules of the Securities and Exchange Commission, notwithstanding their designation as “audit committee financial experts,” each of the individuals listed above shall not (i) be deemed “experts” for any purpose, including, without limitation, for purposes of Section 11 of the Securities Act of 1933, as amended, or (ii) have any greater duties, obligations or liability than those imposed on any other member of the audit committee or board of directors.

CODE OF ETHICS

CIBC has adopted a Code of Conduct applicable to all its officers (including CIBC’s Chief Executive Officer, Chief Financial Officer, Chief Accountant and Controller), directors, employees and contractors. The Code of Conduct meets the definition of a “code of ethics” (as that term is defined in General Instruction B(9)(b) of the General Instructions to Form 40-F).

The Code of Conduct is available on CIBC’s website at https://www.cibc.com/ca/inside-cibc/governance/governance-practices/code-of-conduct.html. CIBC also undertakes to provide a copy of the Code of Conduct to any person without charge by contacting Investor Relations at

investorrelations@cibc.com or by mail “Attention: CIBC Investor Relations” at the Toronto executive office address shown above.

Effective November 1, 2022, CIBC adopted the following amendments to the Code of Conduct:

- Changes were made to address:
  - compliance with Bill C-86 amendments to the Bank Act (Canada) that includes new regulation of banks’ sales practices, products and services, complaints handling and related governance requirements;
  - our commitment to Environment, Social and Governance (ESG) that aligns with our ESG strategy for FY2023; and
  - changes to internal businesses and organizational structure.
- In addition to these changes, certain other technical, administrative or non-substantive amendments were made to the Code of Conduct.

No waivers from the provisions of the Code of Conduct were granted in the fiscal year ended October 31, 2022 to the Chief Executive Officer, Chief Financial Officer, Chief Accountant or Controller of CIBC.

PRINCIPAL ACCOUNTANT FEES AND SERVICES

The disclosure provided under the heading “Management’s discussion and analysis—Controls and procedures—Supplementary annual financial information—Fees paid to the shareholders’ auditors” included in Exhibit B.3(c) is incorporated by reference herein.

The disclosure provided under the heading “Annual Information Form—PRE-APPROVAL POLICIES AND PROCEDURES” included in Exhibit B.3(a) is incorporated by reference herein.

During the fiscal year ended October 31, 2022, all of the services related to Audit-Related Fees, Tax Fees or All Other Fees were approved by the Audit Committee pursuant to its pre-approval policy.

During the fiscal year ended October 31, 2022, less than 50% of the of the hours expended by CIBC’s independent registered public accounting firms’ engagement to audit CIBC’s financial statements were attributed to work performed by persons other than CIBC’s independent registered public accounting firms’ full-time, permanent employees.

OFF-BALANCE SHEET ARRANGEMENTS

The disclosure provided under the heading “Management’s discussion and analysis—Off-balance sheet arrangements” included in Exhibit B.3(c) is incorporated by reference herein.

DISCLOSURE OF CONTRACTUAL OBLIGATIONS

The disclosure provided under the heading “Management’s discussion and analysis—Contractual obligations” included in Exhibit B.3(c) is incorporated by reference herein.

IDENTIFICATION OF THE AUDIT COMMITTEE

The disclosure provided under the heading “Annual Information Form—AUDIT COMMITTEE” included in Exhibit B.3(a) is incorporated by reference herein.

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.

DISCLOSURE REQUIRED BY NYSE LISTED COMPANY MANUAL

A summary of the significant differences between the governance practices of the Registrant and those required of U.S. domestic companies under the New York Stock Exchange listing standards can be found in the Governance section of the Registrant's website at https://www.cibc.com/en/about-cibc/corporate-governance/practices/disclosure-nyse-manual.html.

DISCLOSURE REQUIRED BY IRAN THREAT REDUCTION AND SYRIA HUMAN RIGHTS ACT OF 2012

Under the Iran Threat Reduction and Syrian Human Rights Act of 2012 ("ITRSHRA"), which added Section 13(r) of the Exchange Act, the Registrant is required to include certain disclosures in its periodic reports if it or any of its "affiliates" knowingly engaged in certain specified activities during the period covered by the report. The Registrant is not presently aware that it or its affiliates have knowingly engaged in any transaction or dealing reportable under Section 13(r) of the Exchange Act during the year ended October 31, 2022.

SIGNATURE

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.

Date: December 1, 2022

CANADIAN IMPERIAL BANK OF COMMERCE

By: /s/ Victor G. Dodig
Victor G. Dodig
President and Chief Executive Officer

By: /s/ Hratch Panossian
Hratch Panossian
Senior Executive Vice-President and
Chief Financial Officer

EXHIBITS

(Information to be filed on this Form pursuant to General Instruction (references are to paragraphs to General Instructions))

Exhibit	Description of Exhibit
B.3(a)	Annual Information Form
B.3(b)	Audited consolidated financial statements for the year ended October 31, 2022 excerpted from pages 108-109 and 116-193 of the 2022 Annual Report of Canadian Imperial Bank of Commerce ("CIBC") and the report of independent registered public accounting firm (PCAOB ID: 1263) to shareholders with respect to the report on financial statements related to the consolidated balance sheets as at October 31, 2022 and 2021, and the consolidated statements of income, comprehensive income, changes in equity and cash flows for the years then ended and the report of independent registered public accounting firm (PCAOB ID: 1263) on internal control over financial reporting under standards of the Public Company Accounting Oversight Board (United States) as of October 31, 2022 from pages 113-115 of the 2022 Annual Report of CIBC
B.3(c)	Management's discussion and analysis excerpted from pages 1-107 of CIBC's 2022 Annual Report
B.3(d)	Other Pages of CIBC's 2022 Annual Report incorporated in Annual Information Form
B.6(a)(1)	Certifications required by Rule 13a-14(a)
B.6(a)(2)	Certifications required by Rule 13a-14(b) and Section 1350 of Chapter 63 of Title 18 of the United States Code
D.9	Consent of Independent Registered Public Accounting Firm
101	Interactive Data File (formatted as Inline XBRL)
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101

Exhibit B.3(a): Annual Information Form



Canadian Imperial Bank of Commerce

ANNUAL INFORMATION FORM

November 30, 2022

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A NOTE ABOUT FORWARD-LOOKING STATEMENTS

From time to time, we make written or oral forward-looking statements within the meaning of certain securities laws, including in this Annual Information Form, in other filings with Canadian securities regulators or the U.S. Securities and Exchange Commission and in other communications. All such statements are made pursuant to the "safe harbour" provisions of, and are intended to be forward-looking statements under applicable Canadian and U.S. securities legislation, including the U.S. Private Securities Litigation Reform Act of 1995. These statements include, but are not limited to, statements made about our operations, business lines, financial condition, risk management, priorities, targets, ongoing objectives, strategies, the regulatory environment in which we operate and outlook for calendar year 2023 and subsequent periods. Forward-looking statements are typically identified by the words "believe", "expect", "anticipate", "intend", "estimate", "forecast", "target", "objective" and other similar expressions or future or conditional verbs such as "will", "should", "would" and "could". By their nature, these statements require us to make assumptions, including the economic assumptions set out in this Annual Information Form, and are subject to inherent risks and uncertainties that may be general or specific. Given the continuing impact of high inflation, rising interest rates and the war in Ukraine on the global economy, financial markets, and our business, results of operations, reputation and financial condition, there is inherently more uncertainty associated with our assumptions as compared to prior periods. A variety of factors, many of which are beyond our control, affect our operations, performance and results, and could cause actual results to differ materially from the expectations expressed in any of our forward-looking statements. These factors include: inflationary pressures; global supply-chain disruptions; geopolitical risk, including from the war in Ukraine, the occurrence, continuance or intensification of public health emergencies, such as the COVID-19 pandemic, and any related government policies and actions; credit, market, liquidity, strategic, insurance, operational, reputation, conduct and legal, regulatory and environmental risk; currency value and interest rate fluctuations, including as a result of market and oil price volatility; the effectiveness and adequacy of our risk management and valuation models and processes; legislative or regulatory developments in the jurisdictions where we operate, including the Organisation for Economic Co-operation and Development Common Reporting Standard, and regulatory reforms in the United Kingdom and Europe, the Basel Committee on Banking Supervision's global standards for capital and liquidity reform, and those relating to bank recapitalization legislation and the payments system in Canada; amendments to, and interpretations of, risk-based capital guidelines and reporting instructions, and interest rate and liquidity regulatory guidance; the resolution of legal and regulatory proceedings and related matters; the effect of changes to accounting standards, rules and interpretations; changes in our estimates of reserves and allowances; changes in tax laws; changes to our credit ratings; political conditions and developments, including changes relating to economic or trade matters; the possible effect on our business of international conflicts, such as the war in Ukraine, and terrorism; natural disasters, disruptions to public infrastructure and other catastrophic events; reliance on third parties to provide components of our business infrastructure; potential disruptions to our information technology systems and services; increasing cyber security risks which may include theft or disclosure of assets, unauthorized access to sensitive information, or operational disruption; social media risk; losses incurred as a result of internal or external fraud; anti-money laundering; the accuracy and completeness of information provided to us concerning clients and counterparties; the failure of third parties to comply with their obligations to us and our affiliates or associates; intensifying competition from established competitors and new entrants in the financial services industry including through internet and mobile banking; technological change; global capital market activity; changes in monetary and economic policy; general business and economic conditions worldwide, as well as in Canada, the U.S. and other countries where we have operations, including increasing Canadian household debt levels and global credit risks; climate change and other environmental and social risks; our success in developing and introducing new products and services, expanding existing distribution channels, developing new distribution channels and realizing increased revenue from these channels; changes in client spending and saving habits; our ability to attract and retain key employees and executives; our ability to successfully execute our strategies and complete and integrate acquisitions and joint ventures; the risk that expected benefits of an acquisition, merger or divestiture will not be realized within the expected time frame or at all; and our ability to anticipate and manage the risks associated with these factors. This list is not exhaustive of the factors that may affect any of our forward-looking statements. These and other factors should be considered carefully and readers should not place undue reliance on our forward-looking statements. Any forward-looking statements contained in this Annual Information Form represent the views of management only as of the date hereof and are presented for the purpose of assisting our shareholders and financial analysts in understanding our financial position, objectives and priorities and anticipated financial performance as at and for the periods ended on the dates presented, and may not be appropriate for other purposes. We do not undertake to update any forward-looking statement that is contained in this Annual Information Form or in other communications except as required by law.

INFORMATION INCORPORATED BY REFERENCE

Certain disclosures in this Annual Information Form (AIF) are incorporated by reference from CIBC's 2022 Annual Report for the year ended October 31, 2022. The table below identifies pages from the 2022 Annual Report which are incorporated by reference into this AIF. The 2022 Annual Report is available on SEDAR at www.sedar.com.

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Unless otherwise specified, this AIF presents information as at October 31, 2022.

CORPORATE STRUCTURE

Name, Address and Incorporation

Canadian Imperial Bank of Commerce (CIBC) is a diversified financial institution governed by the *Bank Act* (Canada), which constitutes its charter. CIBC was formed through the amalgamation of The Canadian Bank of Commerce and Imperial Bank of Canada in 1961. The Canadian Bank of Commerce was originally incorporated as Bank of Canada by special act of the legislature of the Province of Canada in 1858. Subsequently, the name was changed to The Canadian Bank of Commerce and it opened for business under that name in 1867. Imperial Bank of Canada was incorporated in 1875 by special act of the Parliament of Canada and commenced operations in that year. The address of the registered and head office of CIBC is 81 Bay Street, CIBC SQUARE, Toronto, Ontario, Canada, M5J 0E7.

Intercorporate Relationships

Information about the intercorporate relationships among CIBC and its significant subsidiaries is provided in Note 26 to the consolidated financial statements included in the 2022 Annual Report.

DESCRIPTION OF THE BUSINESS

The CIBC Organization

CIBC is a leading North American financial institution. CIBC serves its clients through four main strategic business units: Canadian Personal and Business Banking, Canadian Commercial Banking and Wealth Management, U.S. Commercial Banking and Wealth Management and Capital Markets.

Canadian Personal and Business Banking provides personal and business clients across Canada with financial advice, services and solutions through banking centres, as well as mobile and online channels to help make their ambitions a reality.

Canadian Commercial Banking and Wealth Management provides high-touch, relationship-oriented banking and wealth management services to middle-market companies, entrepreneurs, high-net-worth individuals and families across Canada, as well as asset management services to institutional investors.

U.S. Commercial Banking and Wealth Management provides high-touch, relationship-oriented banking and wealth management services across the U.S., focused on middle-market and mid-corporate companies, entrepreneurs, high-net-worth individuals and families, as well as personal and small business banking services in four U.S. Midwestern markets.

Capital Markets provides integrated global markets products and services, investment banking advisory and execution, corporate banking solutions andtop-ranked research to our clients around the world. It includes Direct Financial Services which focuses on expanding CIBC's digital capabilities to provide a cohesive set of direct banking, direct investing and innovative multi-currency payment solutions for CIBC's clients.

CIBC's four main strategic business units are supported by the following functional groups: Technology, Infrastructure and Innovation, Risk Management, People, Culture and Brand, Finance and Enterprise Strategy, as well as other support groups, which all form part of Corporate and Other. Information about CIBC's business lines and functional groups is provided in the 2022 Annual Report on pages 1 to 100.

A more complete description of services provided by Canadian Personal and Business Banking, Canadian Commercial Banking and Wealth Management, U.S. Commercial Banking and Wealth Management and Capital Markets can be found in the 2022 Annual Report on pages 22 to 32.

Competitive Conditions

CIBC was the fifth largest Canadian chartered bank in terms of market capitalization as at October 31, 2022.

Canada's economy registered healthy growth through the first half of 2022, but then joined the U.S. in showing signs of a deceleration in the second half of 2022 in the face of higher interest rates aimed at reducing inflation. Canada's growth benefitted from strength in consumer spending as public health constraints were further eased, funded by income gains from a strong jobs market and prior savings, while nominal exports increased as commodity prices peaked in the first half of the year. Rising interest rates in the latter half of the year caused mortgage demand to decelerate from the very high growth rates in place early in the year as higher interest rates slowed transactions volumes and eased house prices, while wider corporate bond spreads negatively impacted margins. Non-mortgage household credit demand picked up with greater discretionary services spending. Business loan demand remained healthy in both Canada and the U.S., reflecting inflation's impact on nominal measures of economic activity and wider spreads in the corporate bond market. Financial markets saw healthy merger and acquisition (M&A) volumes but a softer backdrop for CIBC wealth businesses and equity issuance, particularly in the latter half of the year, as market conditions weakened in the face of the economic shocks from the war in Ukraine, monetary tightening, and prospects for slower growth ahead. Deposit growth in Canada decelerated close to historical norms after being elevated earlier in the pandemic, with a shift towards term deposits as interest rates climbed.

Social and Environmental Policies

Additional information about our environmental policies and environmental and social risk can be found under "Management of risk – Top and emerging risks – Climate risk" and "Management of risk – Other risks – Environmental and social risk" on page 55 and page 84, respectively, of the 2022 Annual Report. Furthermore, CIBC's Sustainability Report and Public Accountability Statement summarizes our commitment to our stakeholders and highlights the activities we are undertaking to enhance our economic, environmental, social and governance contributions.

This report is available on our website at https://www.cibc.com/en/about-cibc/corporate-responsibility.html.

Risk Factors

A discussion of risk factors related to CIBC and its business, and the steps taken to manage those risks appears throughout the 2022 Annual Report and in particular under the heading "Management of risk" on pages 47 to 86.

GENERAL DEVELOPMENT OF THE BUSINESS

Three and Five Year History

At CIBC, our goal is to deliver superior client experience and top-tier shareholder returns while maintaining our financial strength.

As discussed in the "Overview" section in the 2022 Annual Report, CIBC has reported a scorecard of financial measures to evaluate and report on our progress to external stakeholders. These measures, for which CIBC has set through the cycle targets, which we currently define as three to five years, assuming a normal business environment and credit cycle, can be categorized into four key areas:

1. Earnings Growth
   - Our 2022 target was 5%-10% growth in our adjusted average annual diluted earnings per share (EPS)[1]. Going forward, our target will be to deliver an adjusted diluted EPS[1][2] compound annual growth rate (CAGR) of 7% to 10% through the cycle.

2. Operating Leverage
   - Our 2022 target was to deliver positive adjusted operating leverage[1]. Going forward, we will target positive adjusted operating leverage[1] through the cycle.

3. Profitability — Return on Common Shareholders' Equity (ROE) / Dividend Payout Ratio / Total Shareholder Return (TSR)
   - Our 2022 target was an adjusted ROE[1] of at least 15%. Going forward, we have increased our adjusted ROE[1] target to at least 16% through the cycle by 2025.
   - Our 2022 target was an adjusted dividend payout ratio[1] in the range of 40% to 50% of earnings to common shareholders. Going forward, we will target an adjusted dividend payout ratio[1] of 40% to 50% through the cycle.
   - TSR that exceeds the industry average, which we have defined as the Standard & Poor's (S&P)/Toronto Stock Exchange (TSX) Composite Banks Index, over a rolling three- and five-year periods.

4. Balance Sheet Strength
   - Our 2022 target was to actively manage our capital to maintain a strong and efficient capital base while supporting our business and returning capital to our shareholders. Going forward, we will continue to maintain a strong buffer to regulatory requirements.
   - The Liquidity Coverage Ratio (LCR) standard requires that, absent a situation of financial stress, the value of the ratio be no lower than 100%. This target remains unchanged going forward.

(1) Non-GAAP measures do not have a standardized meaning under GAAP, and accordingly, these measures may not be comparable to similar measures used by other companies. Adjusted measures represent non-GAAP measures. Adjusted results remove items of note from reported results and are used to calculate our adjusted measures. Non-GAAP ratios include an adjusted measure as one or more of their components. Non-GAAP ratios include adjusted diluted EPS, adjusted operating leverage, adjusted dividend payout ratio and adjusted return on common shareholders' equity. Certain additional disclosures for these specified financial measures have been incorporated by reference and can be found in the "Non-GAAP" measures section on page 14 of the 2022 Annual Report available on SEDAR at www.sedar.com.

(2) On April 7, 2022, CIBC shareholders approved a two-for-one share split (Share Split) of CIBC's issued and outstanding common shares. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and per common share amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.

Throughout 2022, economic challenges driven by geopolitical and persistent supply-chain issues had an impact on our ability to achieve certain performance objectives.

1. Earnings Growth

Reported diluted EPS[1] was $6.68 in 2022, compared with $6.96 in 2021, down 4%. Reported diluted EPS[1] was $4.11 in 2020, $5.60 in 2019 and $5.83 in 2018. Adjusted diluted EPS[1][2] was $7.05 in 2022, compared with $7.23 in 2021, down 2%. Adjusted diluted EPS[1][2] was $4.85 in 2020, $5.96 in 2019 and $6.11 in 2018. Our 3-year CAGR[3] for reported and adjusted[2] diluted EPS[1] were 6.1% and 5.8%, respectively, and our 5-year CAGR[3] for reported and adjusted[2] diluted EPS[1] were 3.5% and 4.9%, respectively.

2. Operating Leverage

Reported operating leverage[4] was (1.9)% in 2022, compared with 5.3% in 2021, (4.0)% in 2020, (1.5)% in 2019 and 2.4% in 2018. Adjusted operating leverage[2] was (1.9)% in 2022 compared with 0.7% in 2021, (0.6)% in 2020, 0.2% in 2019 and 3.2% in 2018. Our 3-year simple average reported and adjusted operating leverage was (0.2)% and (0.6)% respectively. Our 5-year simple average reported and adjusted operating leverage was 0.1% and 0.5% respectively.

3. Profitability — Return on Common Shareholders' Equity / Dividend Payout Ratio / Total Shareholder Return

In 2022, reported ROE[4] of 14.0% was down from 16.1% in 2021. Reported ROE[4] was 10.0% in 2020, 14.5% in 2019, and 16.6% in 2018. Adjusted ROE[2] of 14.7% in 2022 was below our 15% target and down from 16.7% reported in 2021. Adjusted ROE[2] was 11.7% in 2020, 15.4% in 2019 and 17.4% in 2018. On a 3-year average basis, our reported[4] and adjusted[2] ROE were 13.4% and 14.4%, respectively. On a 5-year average basis, our reported[4] and adjusted[2] ROE were 14.2% and 15.2%, respectively.

CIBC's 2022 reported dividend payout ratio[4] was 48.8%, compared with 41.8% in 2021. The reported dividend payout ratio[4] was 70.7% in 2020, 49.9% in 2019 and 45.5% in 2018. CIBC's 2022 adjusted dividend payout ratio[2] was 46.3%, compared with 40.3% in 2021. The adjusted dividend payout ratio[2] was 60.0% in 2020, 46.9% in 2019 and 43.4% in 2018. On a 3-year average basis, our reported[4] and adjusted[2] dividend payout ratios were 53.8% and 48.9%, respectively. On a 5-year average basis, our reported[4] and adjusted[2] dividend payout ratios were 51.3% and 47.4%, respectively.

CIBC's rolling five-year TSR for the period ended October 31, 2022 was 40.2%, compared with 40.6% for the S&P/TSX Composite Banks Index. For the three years ended October 31, 2022, our TSR was 28.5%, in line with the S&P/TSX Composite Banks Index of 29.0%.

4. Balance Sheet Strength

At the end of 2022, CIBC's Common Equity Tier 1 (CET1) ratio[5] was 11.7%, compared to 12.4% in 2021, 12.1% in 2020, 11.6% in 2019 and 11.4% in 2018, well above the current regulatory requirement set by OSFI of 10.5%.

For the quarter ended October 31, 2022, our three-month daily average liquidity coverage ratio (LCR) [4] was 129% compared to 127% for the same period last year. LCR was 145% in 2020, 125% in 2019 and 128% in 2018. It measures unencumbered high-quality liquid assets (HQLA) that can be converted into cash to meet liquidity needs for a 30-calendar-day liquidity stress scenario.

(1) On April 7, 2022, CIBC shareholders approved a two-for-one share split (Share Split) of CIBC's issued and outstanding common shares. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and per common share amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.

(2) Non-GAAP measures do not have a standardized meaning under GAAP, and accordingly, these measures may not be comparable to similar measures used by other companies. Adjusted measures represent non-GAAP measures. Adjusted results remove items of note from reported results and are used to calculate our adjusted measures. Non-GAAP ratios include an adjusted measure as one or more of their components. Non-GAAP ratios include adjusted diluted EPS, adjusted operating leverage, adjusted dividend payout ratio and adjusted return on common shareholders' equity. Certain additional disclosures for these specified financial measures have been incorporated by reference and can be found in the "Non-GAAP" measures section on page 14 of the 2022 Annual Report available on SEDAR at www.sedar.com.

(3) The 3-year compound annual growth rate (CAGR) is calculated from 2019 to 2022 and the 5-year CAGR is calculated from 2017 to 2022.

(4) Certain additional disclosures for these specified financial measures have been incorporated by reference and can be found in the "Financial Highlights" section on page 4 of the 2022 Annual Report, available on SEDAR at www.sedar.com.

(5) CET1 and LCR are calculated pursuant to OSFI's Capital Adequacy Requirements (CAR) Guideline and OSFI's Liquidity Adequacy Requirements (LAR) Guideline, respectively, which are both based on the Basel Committee on Banking Supervision (BCBS) standards. Certain additional disclosures for these specified financial measures have been incorporated by reference and can be found in the "Capital management" and "Liquidity risk" sections on page 35 and page 76, respectively, of the 2022 Annual Report, available on SEDAR at www.sedar.com.

DIVIDENDS

On March 13, 2020, following the onset of the COVID-19 pandemic, OSFI imposed temporary measures on federally regulated financial institutions to cease dividend increases and share buybacks in order to ensure that the additional capital available is used to support Canadian lending activities. The temporary measures were lifted by OSFI effective November 4, 2021.

CIBC has a common share dividend policy of maintaining a balance between the distribution of profits to shareholders and the need to retain capital for safety and soundness, and to support growth of the businesses. In the context of this overall policy, CIBC's key criteria for considering dividend increases are the current payout ratio compared to the target, and its view on the sustainability of the level of current earnings through the cycle. Going forward, CIBC will continue to target an adjusted dividend payout ratio[1] of 40% to 50%.

The cash dividends declared and paid per share for each class of CIBC shares and restrictions on the payment of dividends can be found on pages 166 to 170 of the 2022 Annual Report.

(1) Non-GAAP measures do not have a standardized meaning under GAAP, and accordingly, these measures may not be comparable to similar measures used by other companies. Adjusted measures represent non-GAAP measures. Adjusted results remove items of note from reported results and are used to calculate our adjusted measures. Non-GAAP ratios include an adjusted measure as one or more of their components. Non-GAAP ratios include adjusted diluted EPS, adjusted operating leverage, adjusted dividend payout ratio and adjusted return on common shareholders' equity. Certain additional disclosures for these specified financial measures have been incorporated by reference and can be found in the "Non-GAAP" measures section on page 14 of the 2022 Annual Report available on SEDAR at www.sedar.com.

CAPITAL STRUCTURE

The following summary of CIBC's capital structure is qualified in its entirety by CIBC's by-laws and the actual terms and conditions of such shares. Additional detail on CIBC's capital structure is provided on pages 43 to 45 and 166 to 171 of the 2022 Annual Report.

Description of Common Shares

CIBC's authorized common share capital consists of an unlimited number of common shares without nominal or par value. The holders of common shares are entitled to receive dividends as and when declared by the Board of Directors of CIBC (the Board), subject to the preference of holders of preferred shares. A holder of common shares is entitled to notice of and to attend all shareholders' meetings, except meetings at which only holders of a specified class or series of shares are entitled to vote, and for all purposes will be entitled to one vote for each common share held. In the event of liquidation, dissolution or winding-up of CIBC, after payment of all outstanding deposits and debts and subject to the preference of any shares ranking senior to the common shares, the holders of common shares will be entitled to a *pro rata* distribution of the remaining assets of CIBC. The holders of common shares have no pre-emptive, subscription, redemption or conversion rights. The rights, preferences and privileges of the common shares are subject to the rights of the holders of preferred shares.

Share Split

In February 2022, CIBC's Board of Directors approved a two-for-one share split (Share Split) of CIBC's issued and outstanding common shares to be effected through an amendment to CIBC's by-laws. On April 7, 2022, CIBC shareholders approved the Share Split. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and per common share amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.

Description of Preferred Shares

CIBC is authorized to issue an unlimited number of Class A Preferred Shares and Class B Preferred Shares without nominal or par value, issuable in series, with such rights, privileges, restrictions and conditions as the Board may determine, provided that, for each class of preferred shares, the maximum aggregate consideration for all outstanding shares, at any time does not exceed $10 billion. The following series of Class A Preferred Shares are currently outstanding: Series 39, 41, 43, 47, 49, 51, 53, 54, 55 and 56[(1)]. No Class B Preferred Shares are currently outstanding.

(1) Non-Cumulative 5-Year Fixed Rate Reset Class A Preferred Shares Series 53, 54 and 55 (NVCC) (Preferred Shares Series 53, 54 and 55) are held by a consolidated entity, CIBC LRCN Limited Recourse Capital Trust (the Limited Recourse Trust).

The *Bank Act* (Canada) requires that banks maintain adequate capital in relation to their operations. The Superintendent of Financial Institutions (the Superintendent) establishes capital adequacy requirements for issuances of regulatory capital by banks. These requirements include that all regulatory capital must be able to absorb losses in a failed financial institution. Effective January 1, 2013, in accordance with capital adequacy requirements adopted by the Superintendent, non-common capital instruments issued after January 1, 2013, including preferred shares, must include non-viability contingent capital (NVCC) provisions, providing for the full and permanent automatic conversion (an NVCC Automatic Conversion) of such non-common capital instruments into common shares upon the occurrence of certain trigger events relating to financial viability (the NVCC Provisions) in order to qualify as regulatory capital.

The following describes certain general terms and conditions of the preferred shares.

Certain Conditions of the Class A Preferred Shares as a Class

The following is a summary of certain provisions attached to the Class A Preferred Shares as a class.

Priority

The Class A Preferred Shares of each series of Class A Preferred Shares rank on a parity with every other series of Class A Preferred Shares and rank in priority to the Class B Preferred Shares and the common shares of CIBC with respect to the payment of dividends and on the distribution of assets in the event of the liquidation, dissolution or winding-up of CIBC, provided that an NVCC Automatic Conversion as contemplated under the NVCC Provisions applicable to a series of Class A Preferred Shares has not occurred.

Restrictions on Creation of Additional Class A Preferred Shares

In addition to any shareholder approvals required by applicable law, the approval of the holders of the Class A Preferred Shares given in the manner described under "Modification" below, is required for any increase in the maximum aggregate consideration for which the Class A Preferred Shares may be issued and for the creation of any shares ranking prior to or on a parity with the Class A Preferred Shares.

Modification

Approval of amendments to the provisions of the Class A Preferred Shares as a class and any other authorization required to be given by the holders of Class A Preferred Shares may be given by a resolution carried by an affirmative vote of not less than $66^{2/3}$% of the votes cast at a meeting at which the holders of 10% of the outstanding Class A Preferred Shares are present or represented by proxy or, if no quorum is present at such meeting, at an adjourned meeting at which the shareholders then present would form the necessary quorum.

Rights on Liquidation

In the event of the liquidation, dissolution or winding-up of CIBC, provided that an NVCC Automatic Conversion as contemplated under the NVCC Provisions applicable to a series of Class A Preferred Shares has not occurred, the holders of the Class A Preferred Shares will be entitled to receive an amount equal to the price at which such shares are issued together with such premium, if any, as shall have been provided for with respect to the Class A Preferred Shares of any series, together with all declared and unpaid dividends, before any amount is paid or any assets of CIBC are distributed to the holders of any shares ranking junior to the Class A Preferred Shares. Upon payment to the holders of the Class A Preferred Shares of the amounts so payable to them, they will not be entitled to share in any further distribution of the assets of CIBC. If an NVCC Automatic Conversion as contemplated under the NVCC Provisions applicable to a series of Class A Preferred Shares has occurred, all of the Class A Preferred Shares of such series shall have been converted into common shares of CIBC in accordance with a pre-determined conversion formula specified at the time of issuance of the Class A Preferred Shares of such series and will rank on parity with all other common shares of CIBC.

Voting Rights

Subject to the provisions of the *Bank Act* (Canada), the directors of CIBC are empowered to set voting rights, if any, for each series of Class A Preferred Shares.

Contingent Conversion of Certain Series of Class A Preferred Shares

All of CIBC's currently outstanding Class A Preferred Shares were issued after January 1, 2013 and, accordingly, contain NVCC Provisions in their respective share terms and conditions. The number of common shares into which such Class A Preferred Shares would be converted upon an NVCC Automatic Conversion will be determined in accordance with a pre-determined conversion formula specified at the time of issuance of such Class A Preferred Shares.

Description of Limited Recourse Capital Notes

CIBC has outstanding 4.375% Limited Recourse Capital Notes Series 1 due October 28, 2080 (NVCC) (subordinated indebtedness), 4.000% Limited Recourse Capital Notes Series 2 due January 28, 2082 (NVCC) (subordinated indebtedness) and 7.150% Limited Recourse Capital Notes Series 3 due July 28, 2082 (NVCC) (subordinated indebtedness), collectively referred to as the "Notes", which are reported as equity on the consolidated balance sheet, and carry standard NVCC provisions necessary for them to qualify as Tier 1 regulatory capital under Basel III.

The following describes certain general terms and conditions of the Notes.

Certain Conditions of the Limited Recourse Capital Notes

The following is a summary of certain provisions attached to the Notes.

Priority

The Notes are junior, subordinated, unsecured indebtedness of CIBC and will rank subordinate to all of CIBC's deposit liabilities and all other indebtedness (including all of CIBC's other unsecured and subordinated indebtedness) from time to time issued and outstanding, except for such indebtedness which by its terms ranks equally in right of payment with, or is subordinate to, the Notes.

Limited Recourse

In the event of a non-payment by CIBC of the principal amount of, interest on, or redemption price for, the Notes when due, the sole remedy of holders of the Notes shall be the delivery of the Preferred Shares Series 53, 54 and 55, which are held in the Limited Recourse Trust and carry standard NVCC provisions as described above.

Voting Rights

None, other than in certain limited circumstances.

Bank Act (Canada) Restrictions Related to Share Ownership

The *Bank Act* (Canada) contains restrictions on the issue, transfer, acquisition, beneficial ownership and voting of all shares of a chartered bank. By way of summary, no person, or persons acting jointly or in concert, shall be a major shareholder of a bank if the bank has equity of $12 billion or more (which would include CIBC). A person is a major shareholder of a bank where: (i) the aggregate of the shares of any class of voting shares beneficially owned by that person, by entities controlled by that person and by any person associated or acting jointly or in concert with that person (as contemplated by the *Bank Act* (Canada)) is more than 20% of that class of voting shares; or (ii) the aggregate of the shares of any class of non-voting shares beneficially

owned by that person, by entities controlled by that person and by any person associated or acting jointly or in concert with that person (as contemplated by the *Bank Act* (Canada)) is more than 30% of that class of non-voting shares. No person, or persons acting jointly or in concert, shall have a significant interest in any class of shares of a bank, including CIBC, unless the person first receives the approval of the Minister of Finance (Canada). For purposes of the *Bank Act* (Canada), a person has a significant interest in a class of shares of a bank where the aggregate of any shares of the class beneficially owned by that person, by entities controlled by that person and by any person associated or acting jointly or in concert with that person (as contemplated by the *Bank Act* (Canada)) exceeds 10% of all of the outstanding shares of that class of shares of such bank.

In addition, the *Bank Act* (Canada) prohibits a bank, including CIBC, from recording in its securities register the transfer or issuance of shares of any class to Her Majesty in right of Canada or of a province, an agent or agency of Her Majesty, a government of a foreign country or any political subdivision of a foreign country, or an agent or agency of a foreign government. The *Bank Act* (Canada) also suspends the exercise of any voting rights attached to any share of a bank, including CIBC, that is beneficially owned by Her Majesty in right of Canada or of a province, an agency of Her Majesty, a government of a foreign country or any political subdivision of a foreign country, or any agency thereof.

Liquidity and Credit Ratings

CIBC funds its operations with client-sourced deposits, supplemented with a wide range of wholesale funding.

CIBC's principal approach aims to fund its consolidated balance sheet with deposits primarily raised from personal and commercial banking channels. CIBC maintains a foundation of relationship-based core deposits, whose stability is regularly evaluated through internally developed statistical assessments.

We routinely access a range of short-term and long-term secured and unsecured funding sources diversified by geography, depositor type, instrument, currency and maturity. We raise long-term funding from existing programs including covered bonds, asset securitizations and unsecured debt.

Credit ratings assigned by external agencies impact CIBC's ability to raise capital and funding in wholesale markets and related borrowing costs. Adverse movements in CIBC's credit ratings could potentially result in higher financing costs, increased collateral pledging requirements and reduced access to capital markets. CIBC regularly reviews the impact of ratings downgrades and maintains liquidity buffers to ensure preparedness for continuity of operations under adverse conditions.

Additional information relating to CIBC's liquidity management and credit ratings is available on pages 76 to 81 of the 2022 Annual Report under the heading "Management of risk – Liquidity risk".

The table below provides the ratings for CIBC's Class A Preferred Shares and debt obligations as at November 30, 2022:

	DBRS Limited (DBRS)	Fitch Ratings, Inc. (Fitch)	Moody's Investors Service, Inc. (Moody's)	Standard & Poor's Ratings Services (S&P)
Deposit/Counterparty(1)	AA	AA	Aa2	A+
Legacy senior debt(2)	AA	AA	Aa2	A+
Senior debt(3)	AA(L)	AA-	A2	A-
Subordinated indebtedness	A(H)	A	Baa1	A-
Subordinated indebtedness – NVCC(4)	A(L)	A	Baa1	BBB+
Limited recourse capital notes – NVCC(4)	BBB(H)	n/a	Baa3	BBB-
Preferred shares – NVCC(4)	Pfd-2	n/a	Baa3	P-2(L)
Short-term debt	R-1(H)	F1+	P-1	A-1
Outlook	Stable	Stable	Stable	Stable

(1) DBRS Long-Term Issuer Rating; Fitch Long-Term Deposit Rating and Derivative Counterparty Rating; Moody's Long-Term Deposit and Counterparty Risk Assessment Rating; S&P's Issuer Credit Rating.
(2) Includes senior debt issued prior to September 23, 2018 as well as senior debt issued on or after September 23, 2018 which is not subject to the bank recapitalization (bail-in) conversion regulations issued by the Department of Finance (Canada).
(3) Comprises liabilities which are subject to conversion under the bail-in regulations.
(4) Comprises instruments which are treated as NVCC in accordance with OSFI's CAR Guideline.
n/a Not applicable.

The ratings should not be construed as a recommendation to buy, sell, or hold CIBC securities. Ratings may be revised or withdrawn at any time by the respective rating agencies.

Definitions of rating categories are available on the respective rating agencies' websites and are outlined in Appendix A. More detailed explanations of the various rating categories may be obtained directly from the rating agencies.

As is common practice, CIBC has paid fees charged by all four of the above-noted rating agencies for their rating services and, to certain of the rating agencies, for other services during the last two years. CIBC reasonably expects that such payments will continue to be made for services in the future.

MARKET FOR SECURITIES(1)

CIBC maintains a listing of its common shares on the Toronto Stock Exchange and the New York Stock Exchange. CIBC maintains a listing of its Class A Preferred Shares on the Toronto Stock Exchange.

The following subordinated indebtedness securities issued by CIBC are listed on the London Stock Exchange:

- U.S. Dollar Floating Rate Debenture Notes Due 2084 with interest at 6-month US$ LIBOR plus 0.25%. To CIBC's knowledge, the issue did not trade on the exchange during the year ended October 31, 2022.

- U.S. Dollar Floating Rate Subordinated Capital Debentures Due 2085 with interest at 6-month US$ LIBOR plus 0.125%. To CIBC's knowledge, the issue did not trade on the exchange during the year ended October 31, 2022.

(1) From time to time, securities of CIBC may be listed on other stock exchanges or quotation systems by investors, brokers or others without the consent or involvement of CIBC. This section does not include debt instruments that are deposits.

Trading Prices and Volume(1)

	2021		2022									
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.
Common Shares(2)												
High	$76.44	$74.31	$83.27	$83.75	$82.83	$76.78	$71.90	$71.10	$65.34	$68.74	$64.79	$63.11
Low	$71.06	$66.05	$74.51	$76.47	$75.88	$70.31	$67.70	$61.20	$59.03	$62.11	$59.34	$55.35
Volume (thousands)	50,888	78,654	76,680	52,789	101,455	49,639	56,054	113,188	76,091	46,616	97,616	66,035
Preferred Shares Series 39												
High	$24.90	$24.52	$24.40	$24.05	$23.24	$22.60	$22.23	$22.48	$22.19	$22.37	$21.75	$20.00
Low	$24.41	$23.71	$23.82	$22.91	$22.04	$20.03	$20.49	$20.76	$20.51	$21.45	$19.80	$17.99
Volume (thousands)	318	179	373	315	162	544	165	204	182	116	169	132
Preferred Shares Series 41												
High	$24.84	$24.63	$24.60	$24.37	$23.36	$22.50	$21.95	$22.40	$21.68	$22.25	$21.65	$19.14
Low	$24.35	$23.71	$24.02	$22.53	$22.06	$19.89	$20.16	$20.46	$19.89	$21.28	$19.41	$17.96
Volume (thousands)	127	198	374	139	327	150	280	125	250	125	47	68
Preferred Shares Series 43												
High	$24.96	$24.69	$24.99	$24.60	$24.50	$23.82	$23.00	$23.00	$21.70	$22.53	$22.10	$20.98
Low	$24.60	$24.00	$24.00	$23.90	$23.25	$20.51	$21.23	$21.02	$20.30	$21.60	$20.31	$18.91
Volume (thousands)	164	203	73	71	196	146	89	59	110	65	67	109
Preferred Shares Series 45												
High	$25.50	$25.45	$25.40	$25.31	$25.35	$25.09	$25.09	$25.23	$25.00			
Low	$25.26	$25.19	$25.20	$25.06	$24.92	$24.91	$24.84	$24.94	$24.95	Redeemed July 29, 2022		
Volume (thousands)	298	234	169	725	1,162	929	379	1,864	1,576			
Preferred Shares Series 47												
High	$25.49	$25.21	$25.35	$25.20	$24.81	$24.35	$24.21	$24.55	$23.99	$24.25	$24.25	$23.45
Low	$25.10	$24.51	$24.79	$24.49	$24.10	$22.10	$22.80	$22.99	$22.90	$23.76	$23.20	$21.55
Volume (thousands)	170	174	184	410	380	196	159	417	334	177	289	259
Preferred Shares Series 49												
High	$26.78	$26.74	$26.70	$26.47	$26.59	$25.97	$25.65	$25.66	$25.50	$25.97	$25.44	$24.35
Low	$26.10	$25.88	$25.81	$25.70	$25.71	$24.58	$24.90	$24.92	$24.80	$25.20	$23.56	$23.56
Volume (thousands)	169	42	68	132	243	105	354	122	241	61	116	101
Preferred Shares Series 51												
High	$26.92	$26.75	$27.32	$26.89	$26.74	$26.00	$25.85	$26.07	$25.96	$25.92	$25.65	$24.65
Low	$26.21	$25.82	$26.11	$25.81	$25.76	$24.75	$25.00	$25.01	$24.80	$25.35	$23.75	$23.65
Volume (thousands)	48	79	63	352	396	174	184	111	105	60	83	98

(1) Data from the TSX Historical Data Access.
(2) On April 7, 2022, CIBC shareholders approved a two-for-one share split (Share Split) of CIBC's issued and outstanding common shares. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and volume amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.

Prior Sales

CIBC sold two issues of subordinated indebtedness, and two issues of Class A Preferred Shares during the year ended October 31, 2022 which are not listed or quoted on an exchange:

- $1.0 billion 4.20% Debentures due April 7, 2032 (NVCC) (subordinated indebtedness) were issued on April 7, 2022, at a price of 100%.
- $800 million Limited Recourse Capital Notes were issued on June 15, 2022 at a price of 100%, which are supported by the $800 million Preferred Shares Series 55 (NVCC) issued on June 13, 2022 to the Limited Recourse Trust at a price of 100%.
- $600 million Preferred Shares Series 56 (NVCC) issued on September 16, 2022, at a price of 100%.

Escrowed Securities and Securities Subject to Contractual Restriction on Transfer

The following securities were held in escrow or subject to contractual restriction on transfer as at October 31, 2022.

Designation of class	Number of securities held in escrow or that are subject to a contractual restriction on transfer	Percentage of class
Preferred Shares Series 53 (1)	750,000	0.894 %
Preferred Shares Series 54 (1)	750,000	0.894 %
Preferred Shares Series 55 (1)	800,000	0.954 %

(1) The Preferred Shares Series 53, Series 54 and Series 55 are held by the Limited Recourse Trust in connection with the issuance of the Limited Recourse Capital Notes. The Preferred Shares Series 53, Series 54 and Series 55 are distributable to holders of such Notes upon certain events. See "Certain Conditions of the Limited Recourse Capital Notes – Limited Recourse" section above.

DIRECTORS AND OFFICERS

Directors and Board Committees

Information concerning the directors and board committees of CIBC is found on page 201 of the 2022 Annual Report.

All of the directors have held their principal occupation indicated on page 201 of the 2022 Annual Report for the past five years with the exception of the following:

(i) William F. Morneau was Canada's Minister of Finance and a member of Parliament for Toronto Centre and Governor at the International Monetary Fund and the World Bank from 2015 to 2020.
(ii) Christine E. Larsen was previously Senior Advisor to the Chief Executive Officer at First Data Corporation from December 2018 to March 2019 and Executive Vice-President and Chief Operations Officer from 2013 to 2018.
(iii) Martine Turcotte was previously Vice Chair at BCE Inc. and Bell Canada from July 2011 to January 2020.
(iv) Mary Lou K. Maher was previously the Canadian Managing Partner, Quality and Risk Management of KPMG Canada, and Global Head of Inclusion and Diversity of KPMG International from December 2017 to March 2021; Business Unit Leader, GTA Audit from 2014 to 2017; and Chief Inclusion Officer from 2014 and 2017 of KPMG Canada.

Directors are elected annually. Under the *Bank Act* (Canada) and CIBC's by-laws, a director's term expires at the close of the next annual meeting of shareholders, which is scheduled for April 4, 2023.

Executive Officers

The following are CIBC's executive officers, their titles and their municipalities of residence, as at November 30, 2022:

Name	Title	Municipality of Residence
Victor G. Dodig	President and Chief Executive Officer	Toronto, Ontario, Canada
Shawn Beber	Senior Executive Vice-President and Group Head, U.S. Region; President and CEO, CIBC Bank USA	Toronto, Ontario, Canada
Frank Guse	Senior Executive Vice-President and Chief Risk Officer	Toronto, Ontario, Canada
Harry Culham	Senior Executive Vice-President and Group Head, Capital Markets and Direct Financial Services	Toronto, Ontario, Canada
Laura Dottori-Attanasio	Senior Executive Vice-President and Group Head, Personal and Business Banking, Canada	Toronto, Ontario, Canada
Jon Hountalas	Senior Executive Vice-President and Group Head, Commercial Banking and Wealth Management, Canada	Toronto, Ontario, Canada
Christina Kramer	Senior Executive Vice-President and Group Head, Technology, Infrastructure and Innovation	Toronto, Ontario, Canada
Kikelomo Lawal	Executive Vice-President and Chief Legal Officer	Mississauga, Ontario, Canada
Hratch Panossian	Senior Executive Vice-President and Chief Financial Officer	Toronto, Ontario, Canada
Sandy Sharman	Senior Executive Vice-President and Group Head, People, Culture and Brand	Burlington, Ontario, Canada

All of the executive officers have held their present position or another executive position in CIBC for more than five years except for Kikelomo Lawal who was Chief Legal Officer, Ombudsman and Corporate Secretary at Interac Corporation from 2008 to 2020.

Shareholdings of Directors and Executive Officers

To CIBC's knowledge, as at October 31, 2022, the directors and executive officers of CIBC as a group, beneficially owned, directly or indirectly, or exercised control or direction over less than 1% of the outstanding common shares of CIBC or FirstCaribbean International Bank Limited.

Corporate Cease Trade Orders or Bankruptcies

Except as set out below, to CIBC's knowledge, in the last 10 years, no director or executive officer of CIBC is or has been a director, chief executive officer or chief financial officer of a company that: (i) while that person was acting in that capacity, was the subject of a cease trade or similar order or an order that denied the company access to any exemption under securities legislation, for a period of more than 30 consecutive days; or (ii) was subject to such an order that was issued, after that person ceased to be a director or 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. Except as set out below, to CIBC's knowledge, in the last 10 years, no director or executive officer of CIBC is or has been a director or executive officer of a company that, while that person was acting in that capacity or within a year of that 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.

- Ms. Jane L. Peverett, a director of CIBC, was a director of Postmedia Network Canada Corp. (Postmedia) between April 2013 and January 2016. On October 5, 2016, Postmedia completed a recapitalization transaction (the recapitalization transaction) pursuant to a court approved plan of arrangement under the *Canada Business Corporations Act*. As part of the recapitalization transaction, approximately US $268.6 million of debt was exchanged for shares that represented approximately 98% of the outstanding shares at that time. Additionally, Postmedia repaid, extended and amended the terms of its outstanding debt obligations pursuant to the recapitalization transaction.

Penalties or Sanctions

To CIBC's knowledge, no director or executive officer of CIBC: (i) has been subject to 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 (ii) has been subject to 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.

Personal Bankruptcies

To CIBC's knowledge, in the last 10 years, no director or executive officer has become 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 the assets of the director or executive officer.

Conflicts of Interest

To CIBC's knowledge, no director or executive officer of CIBC or its subsidiaries has an existing or potential material conflict of interest with CIBC or any of its subsidiaries.

LEGAL PROCEEDINGS AND REGULATORY ACTIONS

A description of significant legal proceedings to which CIBC is a party is provided under the heading "Contingent liabilities and provisions" on pages 182 to 185 of the 2022 Annual Report.

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

To CIBC's knowledge, no director or executive officer of CIBC, or any of their associates has any material interest, directly or indirectly, in any transaction within the three most recently completed financial years that has materially affected or is reasonably expected to materially affect CIBC.

TRANSFER AGENT AND REGISTRAR

The addresses for CIBC's transfer agent and registrar are provided on page 200 of the 2022 Annual Report.

EXPERTS

Ernst & Young LLP, Chartered Professional Accountants, Licensed Public Accountants, Toronto, Ontario, audited our Annual Consolidated Financial Statements, which comprise the consolidated balance sheets as at October 31, 2022 and 2021, and the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for the years then ended, including the related notes and the effectiveness of our internal control over financial reporting as of October 31, 2022. Ernst & Young LLP is the independent public accountant with respect to the Bank within the meaning of the Rules of Professional Conduct of the Chartered Professional Accountants of Ontario and the rules and regulations adopted by the U.S. Securities and Exchange Commission (SEC) and the Public Company Accounting Oversight Board (United States).

AUDIT COMMITTEE

The Audit Committee Mandate as approved by the Board is included in Appendix B. The members of the Audit Committee are listed below. Each member of the Audit Committee is independent and financially literate as defined by Canadian securities laws. At least one member of the Audit Committee has been designated by the Board as an "audit committee financial expert" as defined by the rules of the SEC.

Education and Experience

This section describes the education and experience of CIBC's Audit Committee members that is relevant to the performance of their responsibilities.

Each member of the Audit Committee currently is, or has previously been, in charge of, or an advisor or a consultant to, a significant business operation, often as president, chief executive officer, chief financial officer or chief operating officer of a large public company. Given the breadth and complexity of a financial institution's accounting issues, the Audit Committee members participate from time to time in internal or external sessions related to accounting matters or developments. Travel and attendance costs are paid by CIBC. Further detail on the education and experience of each Audit Committee member is set out below.

Michelle L. Collins

Ms. Collins has been President of Cambium LLC, a Chicago-based advisory firm serving small and medium-sized businesses, since 2007. From 1998 to 2007, Ms. Collins was Managing Director of Svoboda Capital Partners LLC, a private equity firm and is currently a member of its advisory board. From 1992 to 1998, Ms. Collins was a principal in Corporate Finance at William Blair & Company LLC. She is currently a member of the advisory board of Cedar Street Asset Management and 5th Century Partners, LLC. Ms. Collins has served on the Audit Committees of several publicly traded companies across a wide range of industries. She is currently a director and Chair of the Audit Committees of CIBC Bancorp USA Inc. and CIBC Bank USA, and a director, member of the Audit Committee and Compensation Committee of Ulta Beauty, Inc. She is also a director and member of the Audit Committee of Ryan Specialty Group Holdings, Inc. She has previously served on the Audit Committees of Integrys Energy Group, Inc., Molex, Inc., and Bucyrus International. Ms. Collins holds a Bachelor of Arts degree in Economics from Yale University and a Master of Business Administration degree from Harvard Graduate School of Business.

Nicholas D. Le Pan

Mr. Le Pan has extensive experience in financial services matters. He was Superintendent of Financial Institutions for Canada from 2001 to 2006 and led the OSFI supervision sector including the supervision programs for banks and other deposit-taking institutions from 1997 to 2000. Mr. Le Pan has held various roles with the federal government, Department of Finance including as a Special Advisor and as the Assistant Deputy Minister, Financial Sector Policy Branch. He has been a member of the Board of Directors of the Canada Deposit Insurance Corporation; Chairman of the Basel Accord Implementation Group; Vice Chairman of the Basel Committee on Banking Supervision; Chairman of the Independent Review Committee of Brandes Investment Funds; Chair of the Basel Committee Accounting Task Force; Member of the Canadian Accounting Standards Oversight Council and previous chair of the Canadian Public Accountability Board, which regulates auditors of public companies. Mr. Le Pan received a Bachelor of Arts degree (Honours) in Economics from Carleton University and a Master of Arts degree in Economics from the University of Toronto.

Mary Lou Maher *(Chair of the Audit Committee)*

Ms. Maher was Canadian Managing Partner, Quality and Risk, KPMG Canada from 2017 to February 2021. She was also Global Head of Inclusion and Diversity KPMG International for the same period. Ms. Maher was with KPMG since 1983, in various executive and governance roles including Chief Financial Officer and Chief Human Resources Officer. In addition to the public company directorships listed below, Ms. Maher was a member of the World Economic Forum focused on Human Rights — the business perspective and has served on other not-for-profit boards, including as Chair of Women's College Hospital and member of CPA Ontario Council, and is a member of the Board of Governors of McMaster University. Ms. Maher created KPMG Canada's first ever National Diversity Council and was the executive sponsor of pride@kpmg. Ms. Maher received the Wayne C. Fox Distinguished Alumni Award from McMaster University in recognition of her work on inclusion and diversity, was inducted into the Hall of Fame for the WXN 100 Top Most Powerful Women in Canada, received a Lifetime Achievement Award from Out on Bay Street (Proud Strong), and the Senior Leadership Award for Diversity from the Canadian Centre for Diversity and Inclusion. Ms. Maher is a director and member of the Audit Committee of CAE Inc. and Magna International Inc. Ms. Maher completed the Competent Board for ESG Program, she holds a Bachelor of Commerce degree from McMaster University and holds the designation of FCPA, FCA.

Jane L. Peverett, FCMA, ICD.D

Ms. Peverett was President and Chief Executive Officer of British Columbia Transmission Corporation (BCTC) from 2005 to 2009 and Chief Financial Officer of BCTC from 2003 to 2005. Prior to joining BCTC, Ms. Peverett was with Westcoast Energy Inc., from 1988 to 2003, where she held progressively senior finance, regulatory and executive roles. From 2001 to 2003, Ms. Peverett was President and Chief Executive Officer of Union Gas Limited. Ms. Peverett is a director and Chair of the Audit and Finance Committee of CP Rail, Chair of the Audit Committee of Northwest Natural Gas Company, and a director of Capital Power Corporation. She is a Certified Management Accountant and a Fellow of the Society of Management Accountants and a member of the Institute of Corporate Directors with the designation ICD.D. Ms. Peverett holds a Bachelor of Commerce degree from McMaster University and a Master of Business Administration degree from Queen's University.

PRE-APPROVAL POLICIES AND PROCEDURES

The Audit Committee has adopted the CIBC Policy on the Scope of Services of the Shareholders' Auditor (the Scope of Services Policy) to provide a consistent approach for the engagement of the shareholders' auditor. The Scope of Services Policy requires that work performed by the shareholders' auditor for CIBC or its subsidiaries be pre-approved by the Audit Committee, along with the related fee for that work. The Audit Committee may establish pre-approval policies and procedures that are specific to a particular service. Under the Scope of Services Policy, the shareholders' auditor will only perform audit, audit-related and tax work, and other work if pre-approved by the Audit Committee. The Audit Committee may approve exceptions to the Scope of Services Policy if it determines that such an exception is in the overriding best interests of CIBC, and the exception does not impair the independence of the shareholders' auditor. However, certain non-audit activities set out in the Scope of Services Policy are generally prohibited and will not be considered for exception from the Policy. On a quarterly basis, the Audit Committee is presented with a summary report of all engagements of the shareholders' auditor that are currently underway or have been completed since the prior quarter's report, including engagements entered into pursuant to pre-approved limits. The summary report will describe the nature of each engagement, confirm that each engagement is in compliance with the Scope of Services Policy and state the fees received by the shareholders' auditor for each engagement. The Scope of Services Policy also sets out ongoing relationship standards and requires that the shareholders' auditor annually certify compliance with the Policy.

FEES FOR SERVICES PROVIDED BY SHAREHOLDERS' AUDITOR

The information on professional service fees paid to the shareholders' auditor is provided on page 100 of the 2022 Annual Report.

ADDITIONAL INFORMATION

Additional information with respect to CIBC, including directors' and officers' remuneration and indebtedness, principal holders of CIBC's securities and securities authorized for issuance under equity compensation plans, where applicable, is contained in CIBC's management proxy circular for its most recent annual meeting of shareholders that included in its proceedings the election of directors. Additional financial information is provided in the 2022 Annual Report. These documents, as well as additional information relating to CIBC, are available on SEDAR at www.sedar.com.

For a description of Canadian bank resolution powers and the consequent risk factors attaching to certain liabilities of CIBC, reference is made to "Total loss absorbing capacity requirements" on page 43 and the "Outstanding share data" on page 45 of the 2022 Annual Report and https://www.cibc.com/content/dam/about_cibc/investor_relations/pdfs/debt_info/canadian-bail-in-website-disclosure-en.pdf. The information on our website does not form a part of this AIF.

Appendix A
Rating Definitions

DBRS

Short-term debt — **Rating: R-1 (high)**

Short-term debt ratings provide an opinion on the risk that an issuer will not be able to meet its short-term financial obligations in a timely manner. Short-term debt rated R-1 (high) is of the highest credit quality, indicative of an entity with an exceptionally high capacity to repay its short-term financial obligations. R-1 is the highest of six short-term debt rating categories. The R-1 and R-2 categories are further denoted with "high", "middle" and "low" subcategories.

Long-term issuer rating — **Rating: AA**
Legacy senior debt(1) — **Rating: AA**
Senior debt(2) — **Rating: AA (low)**

Long-term issuer and senior debt ratings provide an assessment of the risk that an issuer will not be able to meet its financial obligations in accordance with the terms under which an obligation has been issued. Issuers and senior debt rated AA is ranked in the second highest of 10 categories. It is considered to be of superior credit quality, with capacity for payment considered to be high. The credit quality of issuers and obligations rated AA differs from the highest AAA category only to a small degree and is unlikely to be significantly susceptible to future events. The AA category is further denoted by the subcategories "high" and "low". The absence of a "high" or "low" indicates a rating in the middle of the category.

Subordinated indebtedness — **Rating: A (high)**
Subordinated indebtedness – NVCC — **Rating: A (low)**

Long-term debt rated A is ranked in the third highest of 10 categories. It is considered to be of good credit quality, with substantial capacity for payment. The A category is further denoted by the subcategories "high" and "low". The absence of a "high" or "low" indicates a rating in the middle of the category.

Limited recourse capital notes – NVCC — **Rating: BBB (high)**

Long-term debt rated BBB is ranked in the fourth highest of 10 categories. It is considered to be of adequate credit quality with acceptable capacity for payment. The BBB category is further denoted by the subcategories "high" and "low". The absence of a "high" or "low" indicates a rating in the middle of the category.

Preferred shares – NVCC — **Rating: Pfd-2**

Preferred share ratings provide an assessment of the risk that an issuer will not be able to meet its dividend and principal obligations in accordance with the terms under which the preferred shares have been issued. Preferred shares rated Pfd-2 are of good credit quality with substantial protection of dividends and principal. A Pfd-2 rating is the second highest of six categories for preferred shares. Each category is further denoted by the subcategories "high" and "low". The absence of a "high" or "low" indicates a rating in the middle of the category.

Fitch

Short-term debt — **Rating: F1+**

The F1 category is for obligations of the highest short-term credit quality and indicates strong capacity to meet near-term obligations. The F1 rating is the highest of seven categories used for short-term debt; a "+" may be added to indicate very strong capacity to meet near-term obligations.

Derivative counterparty rating — **Rating: AA**
Legacy senior debt(1) — **Rating: AA**
Issuer default rating — **Rating: AA-**
Senior debt(2) — **Rating: AA-**

Derivative counterparty ratings reflect a bank's relative vulnerability to default, due to an inability to pay on any derivative contract with third-party, non-government counterparties. Ratings of individual securities or financial obligations of a corporate issuer address relative vulnerability to default on an ordinal scale. In addition, for financial obligations in corporate finance, a measure of recovery given default on that liability is also included in the rating assessment. Issuer default ratings (IDR) opine on an entity's relative vulnerability to default on financial obligations. The threshold default risk addressed by the IDR is generally that of the financial obligations whose non-payment would best reflect the uncured failure of that entity. AA is the second highest of 11 rating categories for long-term obligations and indicates an assessment of very low default risk. This rating indicates a very strong capacity for payment of financial commitments that is not significantly susceptible to foreseeable events.

Subordinated indebtedness — **Rating: A**
Subordinated indebtedness – NVCC — **Rating: A**

The A category is the third highest of the rating categories for long-term obligations and indicates an assessment of low default risk. The capacity for payment is considered strong but may be more susceptible to adverse business or economic conditions than that of higher rating categories.

The designation "+" or "-" may be used to denote relative position within certain major long-term rating categories, while the absence of such a modifier indicates a rating in the middle of the category.

(1) Includes senior debt issued prior to September 23, 2018 as well as senior debt issued on or after September 23, 2018 that is not subject to the bail-in regulations.
(2) Comprises liabilities that are subject to conversion under the bail-in regulations.

Moody's

Short-term debt **Rating: P-1**

Short-term debt ratings are assessments of an issuer's ability to repay obligations with an original maturity of 13 months or less. Moody's has four categories of short-term ratings with the P-1 category being the highest credit quality. Borrowers rated P-1 have a superior ability to repay short-term debt obligations.

Counterparty Risk Rating **Rating: Aa2**
Legacy senior debt(1) **Rating: Aa2**

Counterparty risk ratings (CRR) are opinions of the ability of entities to honour their non-debt financial liabilities to unrelated counterparties such as derivatives and sale and repurchase transactions. CRRs also reflect the expected financial losses not covered by collateral, in the event such liabilities are not honoured.

Long-term debt ratings assess both the likelihood of default on contractual payments and the expected loss in the event of default on obligations with an original maturity of 11 months or more.

The Aa rating category is the second highest of nine categories and includes obligations judged to be high quality and subject to very low credit risk.

Senior debt(2) **Rating: A2**

The A rating category is the third highest of nine categories and includes obligations judged to be upper medium grade and subject to low credit risk.

Subordinated indebtedness **Rating: Baa1**
Subordinated indebtedness – NVCC **Rating: Baa1**
Limited recourse capital notes – NVCC **Rating: Baa3**
Preferred shares – NVCC **Rating: Baa3**

The Baa rating category is the fourth highest of nine categories on the long-term rating scale and includes obligations judged to be medium grade and subject to moderate credit risk and as such may possess certain speculative characteristics.

The modifiers 1, 2 and 3 are used with certain long-term rating categories to indicate that an obligation ranks in the higher, middle or lower range of the rating category respectively.

S&P

Short-term debt **Rating: A-1**

The A-1 category is the highest of six categories used by S&P for short-term debt. An obligation rated A-1 indicates that the borrower's capacity to meet its financial commitment with respect to the obligation is strong.

Issuer credit rating **Rating: A+**
Legacy senior debt(1) **Rating: A+**
Senior debt(2) **Rating: A-**
Subordinated indebtedness **Rating: A-**

Issuer credit ratings are a forward-looking opinion about an obligor's overall creditworthiness. This opinion focuses on the obligor's capacity and willingness to meet its financial commitments as they come due. It does not apply to any specific financial obligation, as it does not take into account the nature of and provisions of the obligation, its standing in bankruptcy or liquidation, statutory preferences, or the legality and enforceability of the obligation. Debt ratings are a forward-looking opinion about the creditworthiness of an obligor with respect to a specific financial obligation, a specific class of financial obligations, or a specific financial program (including ratings on medium-term note programs and commercial paper programs). It takes into consideration the creditworthiness of guarantors, insurers, or other forms of credit enhancement on the obligation and takes into account the currency in which the obligation is denominated.

The A rating category is the third highest of 10 categories used by S&P for long-term debt obligations. Although the obligor's ability to meet its financial commitment is strong, obligations rated A are somewhat more vulnerable to the negative effects of changes in circumstances and economic conditions when compared to obligations in higher rating categories.

Subordinated indebtedness – NVCC **Rating: BBB+**
Limited recourse capital notes – NVCC **Rating: BBB-**

The BBB rating category is the fourth highest of 10 categories used by S&P for long-term debt obligations. The obligor's ability to meet its financial commitment is adequate, however, negative economic conditions or changes in circumstances are more likely to lead to a weakening of this capacity.

A "+" or "-" may be used to denote the relative standing of a rating within each category.

Preferred shares – NVCC (Canadian Preferred Share Scale) **Rating: P-3 (high)**

P-3 is the third highest of the eight categories used by S&P in its Canadian Preferred Share Scale, which is a forward-looking opinion about the creditworthiness of the issuer with respect to a specific preferred share obligation issued in Canada. A "high" or "low" modifier may be used to indicate the relative standing of a credit within a particular rating category, while the absence of such a modifier indicates a rating in the middle of the category.

(1) Includes senior debt issued prior to September 23, 2018 as well as senior debt issued on or after September 23, 2018 that is not subject to the bail-in regulations.
(2) Comprises liabilities that are subject to conversion under the bail-in regulations.

Appendix B

Canadian Imperial Bank of Commerce

Audit Committee Mandate

1. Purpose

(1) The primary functions of the Committee are to: (i) fulfill its responsibilities for reviewing the integrity of CIBC's financial statements, related management's discussion and analysis (MD&A) and internal control over financial reporting; (ii) monitor the system of internal control; (iii) monitor CIBC's compliance with legal and regulatory requirements; (iv) select the external auditors for shareholder approval; (v) review the qualifications, independence and service quality of the external auditors and the performance of CIBC's internal auditors; and (vi) act as the audit committee for certain federally regulated subsidiaries.

2. Responsibilities

(1) Financial Reporting

The Committee will be responsible for overseeing senior management concerning the establishment and maintenance of a system of processes and controls to ensure the integrity, accuracy and reliability of financial information. The Committee will review and recommend Board approval of the following items:

(a) the annual consolidated audited financial statements of CIBC, the related MD&A and the external auditors' report on the consolidated financial statements;

(b) the interim consolidated financial statements of CIBC, the related MD&A and the external auditors' review report on the interim consolidated financial statements;

(c) the Annual Information Form of CIBC, the Form 40-F of CIBC, financial disclosure in a news release disclosing financial results and any other material financial disclosure; and

(d) such other periodic disclosure documents as requested by regulators or that may be required by law.

(2) Review Considerations

In conducting its review of the annual consolidated financial statements or the interim financial statements, and the related MD&A, the Committee will:

(a) meet with management and the external auditors to discuss the financial statements and MD&A;

(b) review the disclosures in the financial statements and the MD&A and satisfy itself that the financial statements, present fairly, in all material respects in accordance with International Financial Reporting Standards (IFRS), the financial position, results of operations and cash flows of CIBC;

(c) review the reports prepared by the external auditors for the Committee summarizing their key findings and required communications in respect of the annual audit and the interim reviews;

(d) discuss with management, the external auditors and internal legal counsel, as requested, any litigation claim or other contingency that could have a material effect on the financial statements;

(e) review key areas of risk for material misstatement of the financial statements including critical accounting policies, models and estimates and other areas of measurement uncertainty or judgment underlying the financial statements and the MD&A as presented by management;

(f) review areas of significant auditor judgment as it relates to their evaluation of accounting policies, accounting estimates and financial statement disclosures; discuss and review estimates with management and the external auditor, whether the external auditor considers estimates/models to be within an acceptable range and in accordance with IFRS;

(g) review any material effects of regulatory and accounting changes, significant or unusual transactions, and the impact of material subsequent events between the reporting date and the approval date of the financial statements and the MD&A as presented by management;

(h) review management's and the external auditors' reports on the effectiveness of internal control over financial reporting;

(i) review correspondence between the external auditor and management related to any substantive matters in the external auditors' findings and any difficult or contentious matters noted by the external auditor;

(j) review results of CIBC's whistleblowing program; and

(k) review any other matters, related to the financial statements and the MD&A, that are brought forward by the internal auditors, external auditors, management or which are required to be communicated to the Committee under auditing standards or applicable law.

(3) External Auditors

(a) *General —* The Committee will be responsible for overseeing the work of the external auditors in auditing and reviewing CIBC's financial statements and internal control over financial reporting.

(b) *Appointment and Compensation —* The Committee will recommend the appointment of the external auditors for shareholder approval and approve the annual audit engagement letter and recommend the audit fee for Board approval.

The Committee will satisfy itself that the level of the audit fees are commensurate with the scope of work undertaken and conducive to a quality audit. The Committee will also assess whether any proposed change to the external auditor's materiality level and/or scope continues to ensure a quality audit.

(c) *Audit Plan —* At least annually, and as required, the Committee will review and approve the external auditors' scope, terms of engagement and annual audit plan to ensure that it is risk based and addresses all relevant activities. The Committee will review any material changes to the scope of the plan and the coordination of work between the internal and external auditors.

(d) *Independence of External Auditors —* At least annually, and before the external auditors issue their report on the annual financial statements, the Committee will review a formal written statement from the external auditors confirming their objectivity and independence, including their compliance with lead audit partner rotation requirements, and delineating all relationships between the external auditors and CIBC consistent with the rules of professional conduct adopted by the provincial institute or order of chartered professional accountants to which they belong or other regulatory bodies, as applicable. The Committee will also ensure that any concern raised by regulators or other stakeholders about the external auditors' independence are appropriately reviewed and addressed.

(e) *Annual and Periodic Comprehensive Review of External Auditors —* At least annually, the Committee will assess the qualifications, independence, application of professional skepticism and service quality of the external auditors. The Committee will review a report by the external auditors describing: (i) their internal quality-control procedures; and (ii) any material issues raised by their most recent internal quality-control review or peer review of the external auditors, or by any inquiry or investigation by governmental or professional authorities within the preceding five years respecting one or more independent audits carried out by the external auditors and any steps taken to deal with any findings. The Committee will also review additional reports or communications of the external auditors as required by the Canadian Public Accountability Board, Office of the Superintendent of Financial Institutions, and the Public Company Accounting Oversight Board (United States). At least every five years, the Committee will conduct a periodic comprehensive review of the external auditors.

(f) *Pre-Approval of Audit and Non-Audit Services —* The Committee will pre-approve any retainer of the external auditors for any audit and non-audit service to CIBC or its subsidiaries in accordance with law and Board approved policies and procedures. The Chair of the Committee may pre-approve on behalf of the Committee and may delegate pre-approval authority to a member of the Committee. The Committee may also establish pre-approval policies and procedures that are specific to a particular service and will review these policies or procedures annually to verify they continue to be appropriate. The decisions of any member of the Committee to whom this authority has been delegated, as well as any pre-approvals of a particular service must be presented to the full Committee for ratification at its next scheduled Committee meeting.

(g) *Hiring Practices —* The Committee will review and approve policies regarding the hiring of employees or former employees of the current or former external auditors.

(4) Internal Audit Function

The Committee will be responsible for overseeing the performance of the Internal Audit function.

(a) *Organizational Framework —* At least annually, the Committee will review and approve the Internal Audit organizational framework (Charter) having regard to its role as an independent control function.

(b) *Chief Auditor —* The Chief Auditor will have unfettered access to the Committee. Further, the Committee will review and recommend Board approval of the appointment, reappointment or removal of the Chief Auditor. At least annually, the Committee will review the goals and review and approve the mandate of the Chief Auditor and review an assessment of the effectiveness and performance of the Chief Auditor.

(c) *Effectiveness Review —* At least annually, the Committee will:

(i) review and recommend Board approval of the Internal Audit function's financial plan and staff resources;

(ii) review management's assessment of the independence and effectiveness of the Internal Audit function;

(iii) review any difficulties encountered by the Chief Auditor in the course of internal audits; and

(iv) review the compliance of Internal Audit with professional standards.

On a periodic basis, the Committee will engage an independent third party to assess the Internal Audit function in accordance with professional standards and the Committee will review the results of that assessment.

(d) *Audit Plan —* At least annually, the Committee will review and approve the audit plan including the audit scope and the overall risk assessment methodology presented by the Chief Auditor to ensure that it is risk based and addresses all relevant activities over a measurable cycle. On a quarterly basis, the Committee will review with the Chief Auditor the status of the audit plan and any changes needed, including a review of:

(i) the results of audit activities, including any significant issues reported to management and management's response and/or corrective actions;

(ii) the status of identified control weaknesses; and

(iii) the overall design and operating effectiveness of the system of internal control, risk management, governance systems and processes.

At least annually, the Committee will review a report from the Chief Auditor with Internal Audit's assessment of CIBC's risk governance framework and its assessment of the oversight by Finance, Risk Management and Compliance.

(e) *Succession Planning —* At least annually, the Committee will review succession plans for the Chief Auditor.

(5) Finance Function

(a) *Organizational Framework —* At least annually, the Committee will review and approve the Finance organizational framework, having regard to its role as an independent control function.

(b) *Chief Financial Officer —* The Chief Financial Officer (CFO) will have unfettered access to the Committee. The Committee will review and approve the appointment or removal of the CFO. At least annually, the Committee will review the goals, approve the mandate of the CFO and review an assessment of the effectiveness of the CFO.

(c) *Effectiveness Review —* At least annually, the Committee will:

(i) review and recommend Board approval of the Finance function's financial plan and staff resources; and

(ii) review management's assessment of the effectiveness of the Finance function.

On a periodic basis, the Committee will engage an independent third party to assess the Finance function.

(d) *Succession Planning —* At least annually, the Committee will review succession plans for the CFO.

(6) Internal Control

(a) *General —* The Committee will monitor the system of internal control and ensure that senior management establishes and maintains adequate and effective internal control systems and processes, including systems and processes that are designed to detect and prevent fraud.

(b) *Establishment, Review and Approval —* The Committee will require management to implement and maintain appropriate policies and systems of internal control in accordance with applicable laws, regulations and guidance, including internal control over financial reporting and disclosure and to review, evaluate and approve these policies and systems of internal control. The Committee will review management's annual report on internal control over financial reporting and the external auditors' report on internal control over financial reporting. As part of this review at least annually, the Committee will consider and review the following with management, the external auditors and the Chief Auditor:

(i) the effectiveness of, or weaknesses or deficiencies in: the design or operation of CIBC's internal controls; the overall control environment for managing business risks, accounting, financial and disclosure controls, operational controls, and legal and regulatory controls and the impact of any identified weaknesses in internal controls on management's conclusions;

(ii) any significant changes in internal control over financial reporting that are disclosed, or considered for disclosure;

(iii) any material issues raised by any inquiry or investigation by CIBC's regulators as they pertain to responsibilities under this mandate;

(iv) CIBC's fraud prevention and detection program (including anti-bribery and anti-corruption), including deficiencies in internal controls that may impact the integrity of financial information, or may expose CIBC to other significant internal or external fraud losses and the extent of those losses and any disciplinary action in respect of fraud taken against management or other employees who have a significant role in financial reporting;

(v) any related significant issues and recommendations of the external auditors and internal auditors together with management's responses thereto; and

(vi) consideration of matters that may be jointly addressed with other committees of the Board.

(7) Certain Federally Regulated Subsidiaries — The Committee will be the audit committee for certain federally regulated subsidiaries of CIBC that require an audit committee under applicable law.

(8) Regulatory Reports and Returns — The Committee will provide or review, as applicable, all reports and returns required of the Committee under applicable law.

(9) Compliance with Legal and Regulatory Requirements — The Committee will review reports from management, the external auditor and the Chief Auditor on the assessment of compliance with applicable laws as they pertain to responsibilities under this mandate, and management's plans to remediate any deficiencies identified. The Committee will report any material findings to the Board and recommend changes it considers appropriate.

(10) Whistleblowing Procedures — The Committee will ensure that procedures are established for the receipt, retention and treatment of complaints received by CIBC from employees or others, confidentially and anonymously, regarding accounting, internal accounting controls, or auditing matters. The Committee will review management reports on the procedures.

(11) Adverse Investments and Transactions — The Committee will review any investments and transactions that could adversely affect the well-being of CIBC.

(12) Committee Disclosure — The Committee will review and approve any audit committee disclosures required by securities regulators in CIBC's disclosure documents.

(13) **Environmental, Social and Governance —** The Committee will oversee the establishment and maintenance by management of a system of processes and controls to ensure the integrity, accuracy and reliability of data to support the quality of ESG information disclosed in the Annual Report, related MD&A and consolidated financial statements, as well as the Sustainability Report.

3. Membership

(1) **Number —** The Committee will consist of at least three Board members.

(2) **Appointment or Removal of Members —** The Board will appoint Committee members annually until the member's resignation, disqualification or removal from the Committee or the Board. The Board may fill a vacancy in Committee membership.

(3) **Chair —** The Board will appoint a Committee Chair from among the Committee members to preside over meetings; coordinate fulfilment of the Committee's mandate; and oversee development of meeting agendas and workplans. The Chair may vote on any matter requiring a vote but does not have a second vote in the case of a tie. If the Chair is not available for a Committee meeting, Committee members may appoint a Chair from among the members who are present.

(4) **Qualifications —** Each Committee member will meet the independence standards approved by the Board. No Committee member may be an officer or employee of the Bank or of an affiliate of the Bank. Committee membership will reflect a balance of experience and expertise required to fulfill the Committee's mandate, notably relevant financial industry and risk management expertise.

Each Committee member will be financially literate or become financially literate within a reasonable period after appointment to the Committee. At least one member will be an "audit committee financial expert" in accordance with legal requirements.

(5) **Service on Multiple Audit Committees —** No member of the Audit Committee may serve on the audit committees of more than two other public companies, unless the Board determines that this simultaneous service would not impair the ability of the member to effectively serve on the Audit Committee.

4. Meetings

(1) **Meetings —** The Committee will hold at least four meetings annually and any other meetings as required to fulfill its mandate. Meetings may be called by the Committee Chair or a Committee member, the Chair of the Board, external auditors, Chief Auditor, Chief Financial Officer or the Chief Executive Officer. The external auditors are entitled to attend and be heard at each Committee meeting. CIBC management members and others may attend meetings as the Committee Chair considers appropriate.

(2) **Notice of Meeting —** Notice of a meeting may be given in writing or by telephone or electronic means, at least 24 hours before the time fixed for the meeting, at the member's contact information recorded with the Corporate Secretary. A member may waive notice of a meeting in any manner and attendance at a meeting is waiver of notice of the meeting, except where a member attends for the express purpose of objecting to the transaction of any business on the grounds that the meeting is not lawfully called.

(3) **Written Resolution —** A resolution in writing signed by all members entitled to vote on that resolution at a Committee meeting will be as valid as if it had been passed at a Committee meeting.

(4) **Secretary and Minutes —** The Corporate Secretary or any other person the Committee requests, will act as secretary at Committee meetings. The Corporate Secretary will record meeting minutes for Committee approval.

(5) **Quorum —** A quorum for meetings is a majority of Committee members. If a quorum cannot be obtained, Board members who qualify as Committee members may, at the request of the Committee Chair, serve as Committee members for that meeting.

(6) **Access to Management and Outside Advisors —** The Committee will have unrestricted access to the external auditors, management and employees of CIBC and authority to retain and terminate external counsel and other advisors to assist it in fulfilling its responsibilities. CIBC will provide funding, as determined by the Committee, for the service of an advisor. The Committee will be responsible for the appointment, compensation and oversight of an advisor. The Committee will hold portions of regularly scheduled meetings to meet separately with the Chief Auditor, the Chief Financial Officer and the external auditors.

(7) **Meetings Without Management —** The Committee will hold portions of regularly scheduled meetings to meet without management members present.

(8) **Access to Other Committees —** The Committee Chair or a member may request input of another Board committee on any responsibility in the Committee's mandate. The Committee may also invite other directors to attend Committee meetings to leverage their skills, such as risk or compensation expertise, to support the Committee in carrying out its mandate.

(9) **Delegation —** The Committee may designate a sub-committee to review any matter within the Committee's mandate.

5. Reporting to the Board

The Committee Chair will report to the Board on recommendations and material matters arising at Committee meetings.

6. Committee Member Development and Performance Review

The Committee Chair will co-ordinate orientation and continuing director development programs relating to the Committee's mandate. At least annually, the Committee will evaluate and review its performance and the adequacy of the Committee's mandate.

7. Currency of the Committee Mandate

This mandate was last revised and approved by the Board on May 26, 2022.

Exhibit B.3(b): **Audited consolidated financial statements for the year ended October 31, 2022 excerpted from pages 108-109 and 116-193 of the 2022 Annual Report of Canadian Imperial Bank of Commerce ("CIBC") and the report of independent registered public accounting firm to shareholders with respect to the report on financial statements related to the consolidated balance sheets as at October 31, 2022 and 2021, and the consolidated statements of income, comprehensive income, changes in equity and cash flows for the years then ended and the report of independent registered public accounting firm on internal control over financial reporting under standards of the Public Company Accounting Oversight Board (United States) as of October 31, 2022 from pages 113-115 of the 2022 Annual Report of CIBC**

Consolidated financial statements

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Financial reporting responsibility

Management of Canadian Imperial Bank of Commerce (CIBC) is responsible for the preparation, presentation, accuracy and reliability of the Annual Report, which includes the consolidated financial statements and management's discussion and analysis (MD&A). The consolidated financial statements have been prepared in accordance with Section 308(4) of the *Bank Act* (Canada), which requires that the financial statements be prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB). The MD&A has been prepared in accordance with the requirements of applicable securities laws.

The consolidated financial statements and MD&A contain items that reflect the best estimates and judgments of the expected effects of current events and transactions with appropriate consideration to materiality. Financial information appearing throughout the Annual Report is consistent with the consolidated financial statements.

Management has developed and maintained effective systems, controls and procedures to ensure that information used internally and disclosed externally is reliable and timely. CIBC's system of internal controls and supporting procedures are designed to provide reasonable assurance that transactions are authorized, assets are safeguarded and proper records are maintained. These internal controls and supporting procedures include the communication of policies and guidelines, the establishment of an organizational structure that provides appropriate and well-defined responsibilities and accountability, and the careful selection and training of qualified staff. Management has assessed the effectiveness of CIBC's internal control over financial reporting as at year-end using the Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based upon this assessment, we have determined that internal control over financial reporting is effective in all material respects and CIBC is in compliance with the requirements set by the U.S. Securities and Exchange Commission (SEC) under the U.S. Sarbanes-Oxley Act.

CIBC's Chief Executive Officer and Chief Financial Officer have certified CIBC's annual filings with the SEC under the U.S. Sarbanes-Oxley Act and with the Canadian Securities Administrators under Canadian securities laws.

The Internal Audit department reviews and reports on the effectiveness of CIBC's internal control, risk management and governance systems and processes, including accounting and financial controls, in accordance with the audit plan approved by the Audit Committee. Our Chief Auditor has unfettered access to the Audit Committee.

The Board of Directors oversees management's responsibilities for financial reporting through the Audit Committee, which is composed of independent directors. The Audit Committee reviews CIBC's interim and annual consolidated financial statements and MD&A and recommends them for approval by the Board of Directors. Other key responsibilities of the Audit Committee include monitoring CIBC's system of internal control, and reviewing the qualifications, independence and service quality of the shareholders' auditor and the performance of CIBC's internal auditors.

Ernst & Young LLP, the shareholders' auditor, obtains an understanding of CIBC's internal controls and procedures for financial reporting to plan and conduct such tests and other audit procedures as they consider necessary in the circumstances to express their opinions in the reports that follow. Ernst & Young LLP has unrestricted access to the Audit Committee to discuss their audit and related matters.

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

Victor G. Dodig
President and Chief Executive Officer

Hratch Panossian
Chief Financial Officer

November 30, 2022

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Report of independent registered public accounting firm

To the shareholders and directors of Canadian Imperial Bank of Commerce

Opinion on the consolidated financial statements

We have audited the accompanying consolidated balance sheets of Canadian Imperial Bank of Commerce (CIBC) as of October 31, 2022 and 2021, the related consolidated statements of income, comprehensive income, changes in equity and cash flows for the years then ended, and the related notes (collectively referred to as the "consolidated financial statements").

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

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), CIBC's internal control over financial reporting as of October 31, 2022, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated November 30, 2022 expressed an unqualified opinion thereon.

Basis for opinion

These consolidated financial statements are the responsibility of CIBC's management. Our responsibility is to express an opinion on CIBC's 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 CIBC 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 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.

Allowance for credit losses

Description of the matter

As described in Note 1 and Note 5 to the consolidated financial statements, CIBC has recognized $3.3 billion in expected credit loss (ECL) allowances on its consolidated balance sheet. ECL allowances represent an unbiased and probability-weighted amount, which is determined by evaluating a range of possible outcomes and reasonable and supportable information about past events, current conditions, and forecasts of future economic conditions. Forward-looking information (FLI), which involves significant judgment, is explicitly incorporated into the estimation of ECL allowances. ECL allowances are measured at amounts equal to either (i) 12-month ECL; or (ii) lifetime ECL for those financial instruments that have experienced a significant increase in credit risk (SICR) since initial recognition or when there is objective evidence of impairment.

Auditing the allowance for credit losses was complex, involved significant auditor judgment, and required the involvement of specialists due to the inherent complexity of the models, the large volume of data used, assumptions, judgments, and the interrelationship of these variables in measuring the ECL. Significant assumptions and judgments with respect to the estimation of the allowance for credit losses include (i) the determination of when a loan has experienced a SICR; (ii) the forecast of FLI for multiple economic scenarios and the probability weighting of those scenarios; (iii) the calculation of both 12-month and lifetime credit losses; and (iv) the application of expert credit judgment. Management has applied a heightened use of judgment in the areas noted above, when assessing the impact of the uncertain macroeconomic environment on the allowance for credit losses.

How we addressed the matter in our audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of management's controls over the allowance for credit losses, with the assistance of our internal specialists. The controls we tested included, amongst others, controls over technology, model development, validation and monitoring, economic forecasting, data completeness and accuracy, the determination of internal risk ratings for non-retail loans, and the governance and oversight controls over the review of the overall ECL, including the application of expert credit judgment.

To test the allowance for credit losses, amongst other procedures, we assessed, with the assistance of our credit risk specialists, whether the methodology and assumptions used in significant models that estimate ECL are consistent with the requirements of IFRS and industry standards. For a sample of models, our credit risk specialists reperformed the model validation and monitoring tests performed by management. This included an assessment of the thresholds used to determine a SICR. For a sample of FLI variables, with the assistance of our economic specialists, we evaluated management's forecasting methodology and compared management's FLI to independently derived forecasts and publicly available information. We also evaluated the scenario probability weights used in the ECL models. With the assistance of our credit risk specialists, we also evaluated management's methodology and governance over the application of expert credit judgment by evaluating that the amounts recorded were reflective of underlying credit and/or economic conditions. We tested the completeness and accuracy of data used in the measurement of the ECL by agreeing to documents and systems and evaluated a sample of non-retail borrower risk ratings against CIBC's risk rating scale. On a sample basis, we recalculated the ECL to test the mathematical accuracy of management's models. We also assessed the adequacy of the allowance for credit loss financial statement note disclosures.

Fair value measurement of derivatives

Description of the matter

As described in Note 2 and Note 12 of the consolidated financial statements, CIBC has recognized $43.0 billion in derivative assets and $52.3 billion in derivative liabilities. The portfolio of derivative instruments is presented by level within the fair value hierarchy, with the majority of the portfolio classified as Level 2. While derivative instruments classified as Level 1 have quoted market prices, those classified as Level 2 and 3 require valuation techniques that use observable and non-observable market inputs and involve the application of management judgment.

Auditing the valuation of certain derivatives was complex and required the application of significant auditor judgment and involvement of valuation specialists where the fair value was determined based on complex models and/or significant non-observable market inputs, including any significant valuation adjustments. The inputs and modelling assumptions used to determine fair value that were subject to significant auditor judgment included, amongst others, correlations, volatilities and credit spreads. The valuation of derivatives is sensitive to these inputs as they are forward-looking and could be affected by future economic and market conditions.

How we addressed the matter in our audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of management's controls over the valuation of CIBC's derivatives portfolio, with the assistance of our internal specialists. The controls we tested included, amongst others, controls over technology, the development and validation of models used to determine the fair value of derivatives, controls over the independent price verification process, including the integrity of significant inputs described above, and controls over significant valuation adjustments applied.

To test the valuation of these derivatives, our audit procedures included, amongst others, an evaluation of the methodologies and significant inputs used by CIBC. With the assistance of our valuation specialists, we performed an independent valuation for a sample of derivatives and valuation adjustments to assess the modelling assumptions and significant inputs used by CIBC to estimate the fair value. We independently obtained significant inputs and assumptions from external market data in performing our independent valuation. For a sample of models, and with the assistance of our valuation specialists, we assessed the valuation methodologies used by CIBC to determine fair value. We also assessed the adequacy of the disclosures related to the fair value measurement of derivatives.

Measurement of uncertain tax provisions

Description of the matter

As described in Note 1 and Note 19 of the consolidated financial statements, CIBC has disclosed its significant accounting judgments, estimates and assumptions in relation to accounting for uncertainty in income taxes. CIBC operates in a tax environment with constantly evolving and complex tax legislation for financial institutions. Uncertainty in tax positions may arise as tax legislation is subject to interpretation. Estimating uncertain tax provisions requires management judgment to be applied in the interpretation of tax laws across the various jurisdictions in which CIBC operates. This includes significant judgment in the determination of whether it is probable that CIBC's tax filing positions will be sustained relating to certain complex tax positions and the measurement of such provision when recognized.

Auditing CIBC's uncertain tax provisions required the involvement of our tax professionals and the application of judgment, including the interpretation of applicable tax legislation and jurisprudence.

How we addressed the matter in our audit

With the assistance of our tax professionals, we obtained an understanding, evaluated the design and tested the operating effectiveness of management's controls over CIBC's uncertain tax provisions. This included, amongst others, controls over management's assessment of the technical merits of tax positions and the process related to the measurement of any related income tax provisions.

With the assistance of our tax professionals, our audit procedures included, amongst others, an assessment of the technical merits of income tax positions taken by CIBC and the measurement of any related uncertain tax provisions recorded. We inspected and evaluated correspondence from the relevant income tax authorities, income tax advice obtained by CIBC from external advisors including income tax opinions, CIBC's interpretations of tax laws and the assessment thereof with respect to uncertain tax positions. We evaluated the reasonability of CIBC's treatment of any new information received during the year relating to the amounts recorded. We also assessed the adequacy of the disclosures related to uncertain tax positions.

/s/ Ernst & Young LLP
Chartered Professional Accountants
Licensed Public Accountants

We have served as CIBC's auditor since 2002.

Toronto, Canada
November 30, 2022

Report of independent registered public accounting firm

To the shareholders and directors of Canadian Imperial Bank of Commerce

Opinion on internal control over financial reporting

We have audited Canadian Imperial Bank of Commerce's (CIBC) internal control over financial reporting as of October 31, 2022, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, CIBC maintained, in all material respects, effective internal control over financial reporting as of October 31, 2022, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of CIBC as of October 31, 2022 and 2021, and the related consolidated statements of income, comprehensive income, changes in equity and cash flows for the years then ended, and the related notes and our report dated November 30, 2022 expressed an unqualified opinion thereon.

Basis for opinion

CIBC'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 *Management's annual report on internal control over financial reporting* section contained in the accompanying Management's Discussion and Analysis. Our responsibility is to express an opinion on CIBC'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 CIBC 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 included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and 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.

/s/ Ernst & Young LLP
Chartered Professional Accountants
Licensed Public Accountants
Toronto, Canada
November 30, 2022

Consolidated balance sheet

Millions of Canadian dollars, as at October 31	2022	2021
ASSETS		
Cash and non-interest-bearing deposits with banks	**$ 31,535**	$ 34,573
Interest-bearing deposits with banks	**32,326**	22,424
Securities (Note 4)	**175,879**	161,401
Cash collateral on securities borrowed	**15,326**	12,368
Securities purchased under resale agreements	**69,213**	67,572
Loans (Note 5)		
Residential mortgages	**269,706**	251,526
Personal	**45,429**	41,897
Credit card	**16,479**	11,134
Business and government	**188,542**	150,213
Allowance for credit losses	**(3,073)**	(2,849)
	517,083	451,921
Other		
Derivative instruments (Note 12)	**43,035**	35,912
Customers' liability under acceptances	**11,574**	10,958
Property and equipment (Note 7)	**3,377**	3,286
Goodwill (Note 8)	**5,348**	4,954
Software and other intangible assets (Note 8)	**2,592**	2,029
Investments in equity-accounted associates and joint ventures (Note 25)	**632**	658
Deferred tax assets (Note 19)	**480**	402
Other assets (Note 9)	**35,197**	29,225
	102,235	87,424
	$ 943,597	$ 837,683
LIABILITIES AND EQUITY		
Deposits (Note 10)		
Personal	**$ 232,095**	$ 213,932
Business and government	**397,188**	344,388
Bank	**22,523**	20,246
Secured borrowings	**45,766**	42,592
	697,572	621,158
Obligations related to securities sold short	**15,284**	22,790
Cash collateral on securities lent	**4,853**	2,463
Obligations related to securities sold under repurchase agreements	**77,171**	71,880
Other		
Derivative instruments (Note 12)	**52,340**	32,101
Acceptances	**11,586**	10,961
Deferred tax liabilities (Note 19)	**45**	38
Other liabilities (Note 11)	**28,072**	24,923
	92,043	68,023
Subordinated indebtedness (Note 14)	**6,292**	5,539
Equity		
Preferred shares and other equity instruments (Note 15)	**4,923**	4,325
Common shares (Note 15)	**14,726**	14,351
Contributed surplus	**115**	110
Retained earnings	**28,823**	25,793
Accumulated other comprehensive income (AOCI)	**1,594**	1,069
Total shareholders' equity	**50,181**	45,648
Non-controlling interests	**201**	182
Total equity	**50,382**	45,830
	$ 943,597	$ 837,683

The accompanying notes and shaded sections in "MD&A – Management of risk" are an integral part of these consolidated financial statements.

Victor G. Dodig
President and Chief Executive Officer

Mary Lou Maher
Director

Consolidated statement of income

Millions of Canadian dollars, except as noted, for the year ended October 31	2022	2021
Interest income (Note 29) [1]		
Loans	$ 16,874	$ 12,150
Securities	3,422	2,141
Securities borrowed or purchased under resale agreements	1,175	319
Deposits with banks	708	131
	22,179	14,741
Interest expense (Note 29)		
Deposits	7,887	2,651
Securities sold short	380	236
Securities lent or sold under repurchase agreements	943	208
Subordinated indebtedness	203	122
Other	125	65
	9,538	3,282
Net interest income	12,641	11,459
Non-interest income		
Underwriting and advisory fees	557	713
Deposit and payment fees	880	797
Credit fees	1,286	1,152
Card fees	437	460
Investment management and custodial fees	1,760	1,621
Mutual fund fees	1,776	1,772
Insurance fees, net of claims	351	358
Commissions on securities transactions	378	426
Gains (losses) from financial instruments measured/designated at fair value through profit or loss (FVTPL), net	1,172	607
Gains (losses) from debt securities measured at fair value through other comprehensive income (FVOCI) and amortized cost, net	35	90
Foreign exchange other than trading (FXOTT)	242	276
Income from equity-accounted associates and joint ventures (Note 25)	47	55
Other	271	229
	9,192	8,556
Total revenue	21,833	20,015
Provision for credit losses (Note 5)	1,057	158
Non-interest expenses		
Employee compensation and benefits	7,157	6,450
Occupancy costs	853	916
Computer, software and office equipment	2,297	2,030
Communications	352	318
Advertising and business development	334	237
Professional fees	313	277
Business and capital taxes	123	111
Other (Notes 3 and 8)	1,374	1,196
	12,803	11,535
Income before income taxes	7,973	8,322
Income taxes (Note 19)	1,730	1,876
Net income	$ 6,243	$ 6,446
Net income attributable to non-controlling interests	$ 23	$ 17
Preferred shareholders and other equity instrument holders	$ 171	$ 158
Common shareholders	6,049	6,271
Net income attributable to equity shareholders	$ 6,220	$ 6,429
Earnings per share (EPS) (in dollars) (Note 20) [2]		
Basic	$ 6.70	$ 6.98
Diluted	6.68	6.96
Dividends per common share (in dollars) (Note 15) [2]	3.270	2.920

(1) Interest income included $20.0 billion for the year ended October 31, 2022 (2021: $13.2 billion) calculated based on the effective interest rate method.

(2) On April 7, 2022, CIBC shareholders approved atwo-for-one share split (Share Split) of CIBC's issued and outstanding common shares. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and per common share amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.

The accompanying notes and shaded sections in "MD&A – Management of risk" are an integral part of these consolidated financial statements.

Consolidated statement of comprehensive income

Millions of Canadian dollars, for the year ended October 31	2022	2021
Net income	$ 6,243	$ 6,446
Other comprehensive income (loss) (OCI), net of income tax, that is subject to subsequent reclassification to net income		
Net foreign currency translation adjustments		
Net gains (losses) on investments in foreign operations	4,043	(2,610)
Net gains (losses) on hedges of investments in foreign operations	(2,290)	1,495
	1,753	(1,115)
Net change in debt securities measured at FVOCI		
Net gains (losses) on securities measured at FVOCI	(784)	(50)
Net (gains) losses reclassified to net income	(25)	(66)
	(809)	(116)
Net change in cash flow hedges		
Net gains (losses) on derivatives designated as cash flow hedges	(1,351)	178
Net (gains) losses reclassified to net income	552	(315)
	(799)	(137)
OCI, net of income tax, that is not subject to subsequent reclassification to net income		
Net gains (losses) on post-employment defined benefit plans	198	917
Net gains (losses) due to fair value change of fair value option (FVO) liabilities attributable to changes in credit risk	262	12
Net gains (losses) on equity securities designated at FVOCI	(35)	100
	425	1,029
Total OCI [1]	570	(339)
Comprehensive income	$ 6,813	$ 6,107
Comprehensive income attributable to non-controlling interests	$ 23	$ 17
Preferred shareholders and other equity instrument holders	$ 171	$ 158
Common shareholders	6,619	5,932
Comprehensive income attributable to equity shareholders	$ 6,790	$ 6,090

(1) Includes $218 million of losses for 2022 (2021: $43 million of losses) relating to our investments in equity-accounted associates and joint ventures.

Millions of Canadian dollars, for the year ended October 31	2022	2021
Income tax (expense) benefit allocated to each component of OCI		
Subject to subsequent reclassification to net income		
Net foreign currency translation adjustments		
Net gains (losses) on investments in foreign operations	$ (136)	$ 45
Net gains (losses) on hedges of investments in foreign operations	131	(53)
	(5)	(8)
Net change in debt securities measured at FVOCI		
Net gains (losses) on securities measured at FVOCI	160	(11)
Net (gains) losses reclassified to net income	9	23
	169	12
Net change in cash flow hedges		
Net gains (losses) on derivatives designated as cash flow hedges	482	(64)
Net (gains) losses reclassified to net income	(197)	112
	285	48
Not subject to subsequent reclassification to net income		
Net gains (losses) on post-employment defined benefit plans	(97)	(311)
Net gains (losses) due to fair value change of FVO liabilities attributable to changes in credit risk	(93)	(4)
Net gains (losses) on equity securities designated at FVOCI	9	(34)
	(181)	(349)
	$ 268	$ (297)

The accompanying notes and shaded sections in "MD&A – Management of risk" are an integral part of these consolidated financial statements.

Consolidated statement of changes in equity

Millions of Canadian dollars, for the year ended October 31	2022	2021
Preferred shares and other equity instruments (Note 15)		
Balance at beginning of year	$ **4,325**	$ 3,575
Issue of preferred shares and limited recourse capital notes (LRCNs)	**1,400**	750
Redemption of preferred shares	**(800)**	–
Treasury shares	**(2)**	–
Balance at end of year	$ **4,923**	$ 4,325
Common shares (Note 15)		
Balance at beginning of year	$ **14,351**	$ 13,908
Issue of common shares	**401**	458
Purchase of common shares for cancellation	**(29)**	–
Treasury shares	**3**	(15)
Balance at end of year	$ **14,726**	$ 14,351
Contributed surplus		
Balance at beginning of year	$ **110**	$ 117
Compensation expense arising from equity-settled share-based awards	**24**	19
Exercise of stock options and settlement of other equity-settled share-based awards	**(20)**	(43)
Other	**1**	17
Balance at end of year	$ **115**	$ 110
Retained earnings		
Balance at beginning of year	$ **25,793**	$ 22,119
Net income attributable to equity shareholders	**6,220**	6,429
Dividends and distributions (Note 15)		
Preferred and other equity instruments	**(171)**	(158)
Common	**(2,954)**	(2,622)
Premium on purchase of common shares for cancellation	**(105)**	–
Realized gains (losses) on equity securities designated at FVOCI reclassified from AOCI	**45**	27
Other	**(5)**	(2)
Balance at end of year	$ **28,823**	$ 25,793
AOCI, net of income tax		
AOCI, net of income tax, that is subject to subsequent reclassification to net income		
Net foreign currency translation adjustments		
Balance at beginning of year	$ **58**	$ 1,173
Net change in foreign currency translation adjustments	**1,753**	(1,115)
Balance at end of year	$ **1,811**	$ 58
Net gains (losses) on debt securities measured at FVOCI		
Balance at beginning of year	$ **193**	$ 309
Net change in debt securities measured at FVOCI	**(809)**	(116)
Balance at end of year	$ **(616)**	$ 193
Net gains (losses) on cash flow hedges		
Balance at beginning of year	$ **137**	$ 274
Net change in cash flow hedges	**(799)**	(137)
Balance at end of year	$ **(662)**	$ 137
AOCI, net of income tax, that is not subject to subsequent reclassification to net income		
Net gains (losses) on post-employment defined benefit plans		
Balance at beginning of year	$ **634**	$ (283)
Net change in post-employment defined benefit plans	**198**	917
Balance at end of year	$ **832**	$ 634
Net gains (losses) due to fair value change of FVO liabilities attributable to changes in credit risk		
Balance at beginning of year	$ **(28)**	$ (40)
Net change attributable to changes in credit risk	**262**	12
Balance at end of year	$ **234**	$ (28)
Net gains (losses) on equity securities designated at FVOCI		
Balance at beginning of year	$ **75**	$ 2
Net gains (losses) on equity securities designated at FVOCI	**(35)**	100
Realized (gains) losses on equity securities designated at FVOCI reclassified to retained earnings	**(45)**	(27)
Balance at end of year	$ **(5)**	$ 75
Total AOCI, net of income tax	$ **1,594**	$ 1,069
Non-controlling interests		
Balance at beginning of year	$ **182**	$ 181
Net income attributable to non-controlling interests	**23**	17
Dividends	**(8)**	(9)
Other	**4**	(7)
Balance at end of year	$ **201**	$ 182
Equity at end of year	$ **50,382**	$ 45,830

The accompanying notes and shaded sections in "MD&A – Management of risk" are an integral part of these consolidated financial statements.

Consolidated statement of cash flows

Millions of Canadian dollars, for the year ended October 31	2022	2021
Cash flows provided by (used in) operating activities		
Net income	**$ 6,243**	$ 6,446
Adjustments to reconcile net income to cash flows provided by (used in) operating activities:		
Provision for credit losses	**1,057**	158
Amortization and impairment (1)	**1,047**	1,017
Stock options and restricted shares expense	**24**	19
Deferred income taxes	**(46)**	(41)
Losses (gains) from debt securities measured at FVOCI and amortized cost	**(35)**	(90)
Net losses (gains) on disposal of property and equipment	**(6)**	–
Other non-cash items, net	**(1,126)**	927
Net changes in operating assets and liabilities		
Interest-bearing deposits with banks	**(9,902)**	(3,437)
Loans, net of repayments	**(65,000)**	(46,883)
Deposits, net of withdrawals	**74,511**	47,521
Obligations related to securities sold short	**(7,506)**	6,827
Accrued interest receivable	**(959)**	46
Accrued interest payable	**1,228**	(419)
Derivative assets	**(7,073)**	(3,172)
Derivative liabilities	**20,622**	1,582
Securities measured at FVTPL	**4,949**	(9,552)
Other assets and liabilities measured/designated at FVTPL	**9,404**	7,277
Current income taxes	**(809)**	543
Cash collateral on securities lent	**2,390**	639
Obligations related to securities sold under repurchase agreements	**3,680**	(2,248)
Cash collateral on securities borrowed	**(2,958)**	(3,821)
Securities purchased under resale agreements	**(1,641)**	(1,977)
Other, net	**(5,379)**	(4,694)
	22,715	(3,332)
Cash flows provided by (used in) financing activities		
Issue of subordinated indebtedness	**1,000**	1,000
Redemption/repurchase/maturity of subordinated indebtedness	**(2)**	(1,008)
Issue of preferred shares and limited recourse capital notes, net of issuance cost	**1,395**	748
Redemption of preferred shares	**(800)**	–
Issue of common shares for cash	**228**	284
Purchase of common shares for cancellation	**(134)**	–
Net sale (purchase) of treasury shares	**1**	(15)
Dividends and distributions paid	**(2,972)**	(2,649)
Repayment of lease liabilities	**(326)**	(305)
	(1,610)	(1,945)
Cash flows provided by (used in) investing activities		
Purchase of securities measured/designated at FVOCI and amortized cost	**(70,954)**	(49,896)
Proceeds from sale of securities measured/designated at FVOCI and amortized cost	**23,183**	23,917
Proceeds from maturity of debt securities measured at FVOCI and amortized cost	**27,574**	23,312
Acquisition of Canadian Costco credit card portfolio (Note 3)	**(3,085)**	–
Net sale (purchase) of property, equipment, software and other intangible assets	**(1,109)**	(839)
	(24,391)	(3,506)
Effect of exchange rate changes on cash and non-interest-bearing deposits with banks	**248**	(175)
Net increase (decrease) in cash and non-interest-bearing deposits with banks during the year	**(3,038)**	(8,958)
Cash and non-interest-bearing deposits with banks at beginning of year	**34,573**	43,531
Cash and non-interest-bearing deposits with banks at end of year (2)	**$ 31,535**	$ 34,573
Cash interest paid	**$ 8,310**	$ 3,701
Cash interest received	**20,120**	13,890
Cash dividends received	**1,100**	897
Cash income taxes paid	**2,585**	1,374

(1) Comprises amortization and impairment of buildings,right-of-use assets, furniture, equipment, leasehold improvements, software and other intangible assets, and goodwill.
(2) Includes restricted cash of $493 million (2021: $446 million) and interest-bearing demand deposits with Bank of Canada.

The accompanying notes and shaded sections in "MD&A – Management of risk" are an integral part of these consolidated financial statements.

Notes to the consolidated financial statements

Canadian Imperial Bank of Commerce (CIBC) is a diversified financial institution governed by the *Bank Act* (Canada). CIBC was formed through the amalgamation of the Canadian Bank of Commerce and Imperial Bank of Canada in 1961. Through our four strategic business units (SBUs) – Canadian Personal and Business Banking, Canadian Commercial Banking and Wealth Management, U.S. Commercial Banking and Wealth Management, and Capital Markets – CIBC provides a full range of financial products and services to 13 million personal banking, business, public sector and institutional clients in Canada, the United States (U.S.) and around the world. Refer to Note 30 for further details on our business units. CIBC is incorporated and domiciled in Canada, with our registered and principal business offices located at CIBC SQUARE, Toronto, Ontario.

Note 1 | Basis of preparation and summary of significant accounting policies

Basis of preparation

The consolidated financial statements of CIBC have been prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB). These consolidated financial statements also comply with Section 308(4) of the *Bank Act* (Canada) and the requirements of the Office of the Superintendent of Financial Institutions (OSFI).

CIBC has consistently applied the same accounting policies throughout all periods presented.

These consolidated financial statements are presented in millions of Canadian dollars, unless otherwise indicated.

These consolidated financial statements were authorized for issue by the Board of Directors (the Board) on November 30, 2022.

Summary of significant accounting policies

The following paragraphs describe our significant accounting policies.

Use of estimates and assumptions

The preparation of the consolidated financial statements in accordance with IFRS requires management to make estimates and assumptions that affect the recognized and measured amounts of assets, liabilities, net income, comprehensive income and related disclosures. Significant estimates and assumptions are made in the areas of the valuation of financial instruments, allowance for credit losses, the evaluation of whether to consolidate structured entities (SEs), leases, asset impairment, income taxes, provisions and contingent liabilities, post-employment and other long-term benefit plan assumptions and the valuation of self-managed loyalty points programs. Actual results could differ from these estimates and assumptions.

Basis of consolidation

We consolidate entities over which we have control. We have control over another entity when we have: (i) power to direct relevant activities of the entity; (ii) exposure, or rights, to variable returns from our involvement with the entity; and (iii) the ability to affect those returns through our power over the entity.

Subsidiaries

Subsidiaries are entities over which CIBC has control. Generally, CIBC has control of its subsidiaries through a shareholding of more than 50% of the voting rights, and has significant exposure to the subsidiaries based on its ownership interests of more than 50%. The effects of potential voting rights that CIBC has the practical ability to exercise are considered when assessing whether control exists. Subsidiaries are consolidated from the date control is obtained by CIBC and are deconsolidated from the date control is lost. Consistent accounting policies are applied for all consolidated subsidiaries. Details of our significant subsidiaries are provided in Note 26.

Structured entities

A SE is an entity that has been designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, such as when any voting rights relate to administrative tasks only and the significant relevant activities are directed by contractual arrangements. SEs often have some or all of the following features or attributes: (i) restricted activities; (ii) a narrow and well-defined objective, such as to securitize our own financial assets or third-party financial assets to provide sources of funding or to provide investment opportunities for investors by passing on risks and rewards associated with the assets of the SE to investors; (iii) insufficient equity to permit the SE to finance its activities without subordinated financial support; or (iv) financing in the form of multiple contractually linked instruments to investors that create concentrations of credit or other risks. Examples of SEs include securitization vehicles, asset-backed financings, and investment funds.

When voting rights are not relevant in deciding whether CIBC has power over an entity, particularly for complex SEs, the assessment of control considers all facts and circumstances, including the purpose and design of the investee, its relationship with other parties and each party's ability to make decisions over significant activities, and whether CIBC is acting as a principal or as an agent.

We do not have control over an investee when we are acting as the agent for a third-party. In assessing whether we are an agent we determine (i) the scope of our decision-making authority, (ii) the rights held by other parties, (iii) the remuneration to which we are entitled and (iv) our exposure to variability of returns from other interests that we hold in the investee.

Consolidation conclusions are reassessed whenever there is a change in the specific facts and circumstances relevant to one or more of the three elements of control. Factors that trigger the reassessment include, but are not limited to, significant changes in ownership structure of the entities, changes in contractual or governance arrangements, provision of a liquidity facility beyond the original terms, transactions with the entities that were not contemplated originally and changes in the financing structure of the entities.

Transactions eliminated on consolidation

All intercompany transactions, balances and unrealized gains and losses on transactions are eliminated on consolidation.

Non-controlling interests

Non-controlling interests are presented on the consolidated balance sheet as a separate component of equity that is distinct from CIBC's shareholders' equity. The net income attributable to non-controlling interests is presented separately in the consolidated statement of income.

Associates and joint ventures

We classify investments in entities over which we have significant influence, and that are neither subsidiaries nor joint ventures, as associates. Significant influence is presumed to exist where we hold, either directly or indirectly, between 20% and 50% of the voting rights of an entity, or, in the case of a limited partnership, where CIBC is a co-general partner. Significant influence also may exist where we hold less than 20% of the voting rights of an entity, for example if we have influence over policy-making processes through representation on the entity's Board of Directors, or by other means. Where we are a party to a contractual arrangement whereby we undertake an economic activity that is subject to joint control together with one or more parties, we classify our interest in the venture as a joint venture.

Investments in associates and interests in joint ventures are accounted for using the equity method. Under the equity method, such investments are initially measured at cost, including attributable goodwill and intangible assets, and are adjusted thereafter for the post-acquisition change in our share of the net assets of the investment.

In applying the equity method for an investment that has a different reporting period from that of CIBC, adjustments are made for the effects of any significant events or transactions that occur between the reporting date of the investment and CIBC's reporting date.

Foreign currency translation

Monetary assets and liabilities and non-monetary assets and liabilities measured at fair value that are denominated in foreign currencies are translated into the functional currencies of operations at prevailing exchange rates at the date of the consolidated balance sheet. Revenue and expenses are translated using average monthly exchange rates. Realized and unrealized gains and losses arising from translation into functional currencies are included in the consolidated statement of income, with the exception of unrealized foreign exchange gains and losses on FVOCI equity securities, which are included in AOCI.

Assets and liabilities of foreign operations with a functional currency other than the Canadian dollar, including goodwill and fair value adjustments arising on acquisition, are translated into Canadian dollars at the exchange rates prevailing as at the consolidated balance sheet date, while revenue and expenses of these foreign operations are translated into Canadian dollars at the average monthly exchange rates. Exchange gains and losses arising from the translation of these foreign operations and from the results of hedging the net investment in these foreign operations, net of applicable taxes, are included in Net foreign currency translation adjustments, in AOCI.

Any accumulated exchange gains and losses, including the impact of hedging, and any applicable taxes in AOCI are reclassified into the consolidated statement of income when there is a disposal of a foreign operation, including a partial disposal of a foreign operation that involves the loss of control. On partial disposal of a foreign operation that does not involve the loss of control, the proportionate share of the accumulated exchange gains and losses, including the impact of hedging, and any applicable taxes previously recognized in AOCI are reclassified into the consolidated statement of income.

Accounting for financial instruments

Classification and measurement of financial instruments

All financial assets must be classified at initial recognition as financial instruments mandatorily measured at FVTPL (trading and non-trading), financial instruments measured at amortized cost, debt financial instruments measured at FVOCI, equity financial instruments designated at FVOCI, or financial instruments designated at FVTPL (fair value option), based on the contractual cash flow characteristics of the financial assets and the business model under which the financial assets are managed. All financial assets and derivatives are required to be measured at fair value with the exception of financial assets measured at amortized cost. Financial assets are required to be reclassified when and only when the business model under which they are managed has changed. All reclassifications are to be applied prospectively from the reclassification date.

The classification and measurement model requires that all debt instrument financial assets that do not meet a "solely payment of principal and interest" (SPPI) test, including those that contain embedded derivatives, be classified at initial recognition as FVTPL. The SPPI test is conducted to identify whether the contractual cash flows of a financial instrument are "solely payments of principal and interest" such that any variability in the contractual cash flows is consistent with a "basic lending arrangement". "Principal" for the purpose of this test is defined as the fair value of the financial asset at initial recognition and may change over the life of the financial asset, for example, due to repayments of principal or amortization of the premium/discount. "Interest" for the purpose of this test is defined as the consideration for the time value of money and credit risk, which are the most significant elements of interest within a lending arrangement. Contractual terms that introduce a more than de minimis exposure to risks or volatility in the contractual cash flows that are unrelated to a basic lending arrangement do not give rise to contractual cash flows that are solely payments of principal and interest on the amount outstanding. The intent of the SPPI test is to ensure that debt instruments that contain non-basic lending features, such as conversion options and equity-linked payouts, are measured at FVTPL.

For debt instrument financial assets that meet the SPPI test, classification at initial recognition is determined based on the business model under which these instruments are managed. Debt instruments that are managed on a "held for trading" or "fair value" basis are classified as FVTPL. Debt instruments that are managed on a "hold to collect and for sale" basis are classified as FVOCI for debt. Debt instruments that are managed on a "hold to collect" basis are classified as amortized cost. We consider the following in our determination of the applicable business model for financial assets:

I) The business purpose of the portfolio;
II) The risks that are being managed and the type of business activities that are being carried out on a day-to-day basis to manage the risks;
III) The basis on which performance of the portfolio is being evaluated; and
IV) The frequency and significance of sales activity.

All equity instrument financial assets are classified at initial recognition as FVTPL unless they are not held with the intent for short-term profit-taking and an irrevocable designation is made to classify the instrument as FVOCI for equities.

Financial liabilities, other than derivatives, obligations related to securities sold short and FVO liabilities, are measured at amortized cost. Derivatives, obligations related to securities sold short and FVO financial liabilities are measured at fair value.

Derivatives are measured at FVTPL, except to the extent that they are designated in a hedging relationship, in which case the International Accounting Standard (IAS) 39 "Financial Instruments: Recognition and Measurement" (IAS 39) hedge accounting requirements continue to apply.

Financial instruments mandatorily measured at FVTPL (trading and non-trading)

Trading financial instruments are mandatorily measured at FVTPL as they are held for trading purposes or are part of a managed portfolio with a pattern of short-term profit-taking. Non-trading financial assets are also mandatorily measured at fair value if their contractual cash flow characteristics do not meet the SPPI test or if they are managed together with other financial instruments on a fair value basis.

Trading and non-trading financial instruments mandatorily measured at FVTPL are remeasured at fair value as at the consolidated balance sheet date. Gains and losses realized on disposition and unrealized gains and losses from changes in fair value are included in Non-interest income as Gains (losses) from financial instruments measured/designated at FVTPL, net. Interest income and dividends earned on trading and non-trading securities and dividends and interest expense incurred on securities sold short are included in Interest income and Interest expense, respectively.

Financial instruments designated at FVTPL (fair value option)

Financial instruments designated at FVTPL are those that we voluntarily designate at initial recognition as instruments that we will measure at fair value through the consolidated statement of income that would otherwise fall into a different accounting category. The FVO designation, once made, is irrevocable and can only be applied if reliable fair values are available, when doing so eliminates or significantly reduces the measurement inconsistency that would otherwise arise from measuring assets or liabilities on a different basis and if certain OSFI requirements pertaining to certain loans are met. Financial liabilities may also be designated at FVTPL when they are part of a portfolio which is managed on a fair value basis, in accordance with our investment strategy, and are reported internally on that basis. Designation at FVTPL may also be applied to financial liabilities that have one or more embedded derivatives that would otherwise require bifurcation. We apply the FVO to certain mortgage commitments.

Gains and losses realized on dispositions and unrealized gains and losses from changes in the fair value of FVO financial instruments are treated in the same manner as financial instruments which are mandatorily measured at FVTPL, except that changes in the fair value of FVO liabilities that are attributable to changes in own credit risk are recognized in OCI. Dividends and interest earned, and interest expense incurred on FVO assets and liabilities are included in Interest income and Interest expense, respectively.

Financial assets measured at amortized cost

Financial assets measured at amortized cost are debt financial instruments with contractual cash flows that meet the SPPI test and are managed on a "hold to collect" basis. These financial assets are recognized initially at fair value plus or minus direct and incremental transaction costs, and are subsequently measured at amortized cost, using the effective interest rate method, net of an allowance for expected credit losses (ECL).

Loans measured at amortized cost include residential mortgages, personal loans, credit cards and most business and government loans. Certain portfolios of treasury securities that are managed on a "hold to collect" basis are also classified as amortized cost. Most deposits with banks, securities purchased under resale agreements, cash collateral on securities borrowed and most customers' liability under acceptances are accounted for at amortized cost.

Debt financial assets measured at FVOCI

Debt financial instruments measured at FVOCI are non-derivative financial assets with contractual cash flows that meet the SPPI test and are managed on a "hold to collect and for sale" basis.

FVOCI debt instruments are measured initially at fair value, plus direct and incremental transaction costs. Subsequent to initial recognition, FVOCI debt instruments are remeasured at fair value, with the exception that changes in ECL allowances in addition to related foreign exchange gains or losses are recognized in the consolidated statement of income. Cumulative gains and losses previously recognized in OCI are transferred from AOCI to the consolidated statement of income when the debt instrument is sold. Realized gains and losses on sale, determined on an average cost basis, and changes in ECL allowances, are included in Gains (losses) from debt securities measured at FVOCI and amortized cost, net in the consolidated statement of income. Interest income from FVOCI debt instruments is included in Interest income. FVOCI debt instruments include our treasury securities which are managed on a "hold to collect and for sale" basis.

A debt financial instrument is classified as impaired (stage 3) when one or more events that have a detrimental impact on the estimated future cash flows of that financial instrument have occurred after its initial recognition. Evidence of impairment includes indications that the borrower is experiencing significant financial difficulty, or a default or delinquency has occurred.

Equity financial instruments designated at FVOCI

Equity financial instruments are measured at FVTPL unless an irrevocable designation is made to measure them at FVOCI. Gains or losses from changes in the fair value of equity instruments designated at FVOCI, including any related foreign exchange gains or losses, are recognized in OCI. Amounts recognized in OCI will not be subsequently recycled to profit or loss, with the exception of dividends that are not considered a return of capital, which are recognized as interest income when received in the consolidated statement of income. Instead, cumulative gains or losses upon derecognition of the equity instrument will be transferred within equity from AOCI to retained earnings and presented in Realized gains (losses) on equity securities designated at FVOCI reclassified to retained earnings in the consolidated statement of changes in equity. Financial assets designated as FVOCI include non-trading equity securities, primarily related to our investment in private companies and certain limited partnerships.

Impairment of financial assets

ECL allowances are recognized on all financial assets that are debt instruments classified either as amortized cost or FVOCI and for all loan commitments and financial guarantees that are not measured at FVTPL. ECL allowances represent credit losses that reflect an unbiased and probability-weighted amount which is determined by evaluating a range of possible outcomes, the time value of money and reasonable and supportable information about past events, current conditions and forecasts of future economic conditions. Forward-looking information is explicitly incorporated into the estimation of ECL allowances, which involves significant judgment (see Note 5 for additional details).

ECL allowances for loans and acceptances are included in Allowance for credit losses on the consolidated balance sheet. ECL allowances for FVOCI debt securities are included as a component of the carrying value of the securities, which are measured at fair value. ECL allowances for other financial assets are included in the carrying value of the instrument. ECL allowances for guarantees and loan commitments are included in Other liabilities.

ECL allowances are measured at amounts equal to either: (i) 12-month ECL; or (ii) lifetime ECL for those financial instruments which have experienced a significant increase in credit risk (SICR) since initial recognition or when there is objective evidence of impairment.

The calculation of ECL allowances is based on the expected value of three probability-weighted scenarios to measure the expected cash shortfalls, discounted at the effective interest rate. A cash shortfall is the difference between the contractual cash flows that are due and the cash flows that we expect to receive. The key inputs in the measurement of ECL allowances are as follows:

- The probability of default (PD) is an estimate of the likelihood of default over a given time horizon;
- The loss given default (LGD) is an estimate of the loss arising in the case where a default occurs at a given time; and
- The exposure at default (EAD) is an estimate of the exposure at a future default date.

Lifetime ECL is the expected credit losses that result from all possible default events over the expected life of a financial instrument. 12-month ECL is the portion of lifetime expected credit losses that represent the expected credit losses that result from default events on the financial instrument that are possible within the 12 months after the reporting date.

Stage migration and significant increase in credit risk

As a result of the requirements above, financial instruments subject to ECL allowances are categorized into three stages.

For performing financial instruments:

Stage 1 is comprised of all performing financial instruments which have not experienced a SICR since initial recognition. We recognize 12 months of ECL for stage 1 financial instruments. In assessing whether credit risk has increased significantly, we compare the risk of a default occurring on the financial instrument as at the reporting date with the risk of a default occurring on the financial instrument as at the date of its initial recognition.

Stage 2 is comprised of all performing financial instruments which have experienced a SICR since initial recognition. We recognize lifetime ECL for stage 2 financial instruments. In subsequent reporting periods, if the credit risk of the financial instrument improves such that there is no longer a SICR since initial recognition, then we revert to recognizing 12 months of ECL as the financial instrument has migrated back to stage 1.

We determine whether a financial instrument has experienced a SICR since its initial recognition on an individual financial instrument basis. Changes in the required ECL allowance, including the impact of financial instruments migrating between stage 1 and stage 2, are recorded in Provision for credit losses in the consolidated statement of income. Significant judgment is required in the application of SICR (see Note 5 for additional details).

Stage 3 financial instruments are those that we have classified as impaired. We recognize lifetime ECL for all stage 3 financial instruments. We classify a financial instrument as impaired when one or more events that have a detrimental impact on the estimated future cash flows of that financial instrument have occurred after its initial recognition. Evidence of impairment includes indications that the borrower is experiencing significant financial difficulties, or a default or delinquency has occurred. All financial instruments on which repayment of principal or payment of interest is contractually 90 days in arrears are automatically considered impaired, except for credit card loans, which are classified as impaired and are fully written off when payments are contractually 180 days in arrears or at the earlier of the notice of bankruptcy, settlement proposal, or enlistment of credit counselling services.

A financial instrument is no longer considered impaired when all past due amounts, including interest, have been recovered, and it is determined that the principal and interest are fully collectable in accordance with the original contractual terms or revised market terms of the financial instrument with all criteria for the impaired classification having been remedied.

Financial instruments are written off, either partially or in full, against the related allowance for credit losses when we judge that there is no realistic prospect of future recovery in respect of those amounts. When financial instruments are secured, this is generally after all collateral has been realized or transferred to CIBC, or in certain circumstances, when the net realizable value of any collateral and other available information suggests that there is no reasonable expectation of further recovery. In subsequent periods, any recoveries of amounts previously written off are credited to the provision for credit losses.

Purchased loans

Both purchased performing and purchased credit-impaired loans are initially measured at their acquisition date fair values. As a result of recording these loans at fair value, no allowance for credit losses is recognized in the purchase equation at the acquisition date. Fair value is determined by estimating the principal and interest cash flows expected to be collected and discounting those cash flows at a market rate of interest. At the acquisition date, we classify a loan as performing where we expect timely collection of all amounts in accordance with the original contractual terms of the loan and as credit-impaired where it is probable that we will not be able to collect all contractually required payments.

For purchased performing loans, the acquisition date fair value adjustment on each loan is amortized to interest income over the expected remaining life of the loan using the effective interest rate method. The remaining unamortized amounts relating to those loans are recorded in income in the period that the loan is repaid. ECL allowances are established in Provision for credit losses in the consolidated statement of income immediately after the acquisition date based on classifying each loan in stage 1, since the acquisition date is established as the initial recognition date of purchased performing loans for the purpose of assessing whether a SICR has occurred. Subsequent to the acquisition date, ECL allowances are estimated in a manner consistent with our SICR and impairment policies that we apply to loans that we originate.

For purchased credit-impaired loans, the acquisition date fair value adjustment on each loan consists of management's estimate of the shortfall of principal and interest cash flows expected to be collected and the time value of money. The time value of money component of the fair value adjustment is amortized to interest income over the expected remaining life of the loan using the effective interest rate method. Subsequent to the acquisition date, we regularly re-estimate the expected cash flows for purchased credit-impaired loans. Decreases in the expected cash flows will result in an increase in our ECL allowance. Increases in the expected cash flows will result in a recovery of the ECL allowance. ECL allowances for purchased credit-impaired loans are reported in stage 3.

Originated credit-impaired financial assets

The accounting for originated credit-impaired financial assets operates in a similar manner to the accounting for purchased credit-impaired loans in that originated credit-impaired assets are initially recognized at fair value with no initial ECL allowance as concerns about the collection of future cash flows are instead reflected in the origination date discount. The time value of money component of the discount is amortized to interest income over the expected remaining life of the financial asset using the effective interest rate method. Changes in expectation regarding the contractual cash flows for loans are recognized immediately in Provision for credit losses and for securities are recognized in Gains (losses) from debt securities measured at FVOCI and amortized cost, net.

This accounting generally applies to financial assets that result from debt restructuring arrangements in which a previously impaired financial asset is exchanged for a new financial asset that is either recognized at a fair value that represents a deep discount to par or for which there are significant concerns over the ability to collect the contractual cash flows.

Determination of fair value

Fair value is the price that would be received to sell an asset or paid to transfer a liability between market participants in an orderly transaction in the principal market at the measurement date under current market conditions (i.e., the exit price). Fair value measurements are categorized into three levels within a fair value hierarchy (Level 1, 2 or 3) based upon the market observability of the valuation inputs used in measuring the fair value. See Note 2 for more details about fair value measurement subsequent to initial recognition by type of financial instrument.

Transaction costs

Transaction costs relating to financial instruments mandatorily measured or designated at FVTPL are expensed as incurred. Transaction costs are amortized over the expected life of the instrument using the effective interest rate method for instruments measured at amortized cost, and debt instruments measured at FVOCI. For equity instruments designated at FVOCI, transaction costs are included in the instrument's carrying value.

Date of recognition of securities

We account for all securities transactions on our consolidated balance sheet using settlement date accounting.

Effective interest rate

Interest income and expense for all financial instruments measured at amortized cost and for debt securities measured at FVOCI are recognized in Interest income and Interest expense using the effective interest rate method. The effective interest rate is the rate that exactly discounts estimated future cash receipts or payments through the expected life of the financial instrument to the net carrying value of the financial asset or liability upon initial recognition. When calculating the effective interest rate, we estimate future cash flows considering all contractual terms of the financial instrument, but not future credit losses.

Fees relating to loan origination, including commitment, restructuring and renegotiation fees, are considered an integral part of the yield earned on the loan and are accounted for using the effective interest rate method. Fees received for commitments that are not expected to result in a loan are included in Non-interest income over the commitment period. Loan syndication fees are included in Non-interest income on completion of the syndication arrangement, provided that the yield on the portion of the loan we retain is at least equal to the average yield earned by the other lenders involved in the financing; otherwise, an appropriate portion of the fee is deferred as unearned income and amortized to interest income using the effective interest rate method.

Interest income is recognized on stage 1 and stage 2 financial assets measured at amortized cost by applying the effective interest rate to the gross carrying amount of the financial instrument. For stage 3 financial instruments, interest income is recognized using the rate of interest used to discount the estimated future cash flows for the purpose of measuring the impairment loss and applied to the net carrying value of the financial instrument.

Securitizations and derecognition of financial assets

Securitization of our own assets provides us with an additional source of liquidity. As we generally retain substantially all of the risks and rewards of the transferred assets, assets remain on the consolidated balance sheet and funding from these transactions is accounted for as Deposits – secured borrowings.

Securitizations to non-consolidated SEs are accounted for as sales, with the related assets being derecognized, only where:

- Our contractual right to receive cash flows from the assets has expired;
- We transfer our contractual rights to receive the cash flows of the financial asset, and have: (i) transferred substantially all the risks and rewards of ownership, or (ii) neither retained nor transferred substantially all the risks and rewards, but have not retained control; or
- The transfer meets the criteria of a qualifying pass-through arrangement.

Derecognition of financial liabilities

A financial liability is derecognized when the obligation under the liability is discharged, cancelled or expires. If an existing financial liability is replaced by another liability from the same lender on substantially different terms, or the terms of the existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and a recognition of a new liability, and the difference in the respective carrying values is recognized in the consolidated statement of income. The repurchase of a debt instrument is considered an extinguishment of that debt instrument even if we intend to resell the instrument in the near term.

Financial guarantees

Financial guarantees are financial contracts that require the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument.

Financial guarantee contracts issued by CIBC that are not classified as insurance contracts are initially recognized as a liability at fair value, adjusted for transaction costs that are directly attributable to the issuance of the guarantees, which is generally the premium received or receivable on the date the guarantee was given. Subsequently, financial guarantee liabilities are measured at the higher of the initial fair value, less cumulative amortization, and the applicable ECL allowances. A financial guarantee that qualifies as a derivative is remeasured at fair value as at each reporting date and reported as Derivative instruments in assets or liabilities, as appropriate.

Mortgage commitments

Mortgage interest rate commitments are extended to our retail clients in contemplation of borrowing to finance the purchase of homes under mortgages to be funded by CIBC in the future. These commitments are usually for periods of up to 120 days and generally entitle the borrower to receive funding at the lower of the interest rate at the time of the commitment and the rate applicable at the funding date. We use financial instruments, such as interest rate derivatives, to economically hedge our exposure to an increase in interest rates. Based on our estimate of the commitments expected to be exercised, a financial liability would be recognized on our consolidated balance sheet, to which we apply the FVO. We also carry the associated economic hedges at fair value on the consolidated balance sheet. Changes in the fair value of the FVO commitment liability and the associated economic hedges are included in Gains (losses) from financial instruments measured/designated at FVTPL, net. In addition, since the fair value of the commitments is priced into the mortgage, the difference between the mortgage amount and its fair value at funding is recognized in the consolidated statement of income to offset the carrying value of the mortgage commitment that is released upon its expiry.

Offsetting of financial assets and financial liabilities

Financial assets and financial liabilities are offset, and the amount presented net, when we have a legally enforceable right to set off the recognized amounts and intend to settle on a net basis or to realize the asset and settle the liability simultaneously.

Acceptances and customers' liability under acceptances

Acceptances constitute a liability of CIBC on negotiable instruments issued to third parties by our customers. We earn a fee for guaranteeing and then making the payment to the third parties. The amounts owed to us by our customers in respect of these guaranteed amounts are reflected in assets as Customers' liability under acceptances.

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

Securities purchased under resale agreements are treated as collateralized lending transactions as they represent the purchase of securities affected with a simultaneous agreement to sell them back at a future date at a fixed price, which is generally near term. Securities subject to these transactions include certain loans that are readily securitizable. The agreements include certain total return swap arrangements that are economically equivalent to resale agreements. These transactions are classified and measured at amortized cost, as they meet the SPPI criteria and are managed under a hold to collect business model, unless they were classified at FVTPL or designated under the FVO. For Securities purchased under resale agreements that are classified at amortized cost, an ECL is applied. Interest income is accrued using the effective interest rate method and is included in Interest income – Securities borrowed or purchased under resale agreements in the consolidated statement of income.

Similarly, securities sold under agreements to repurchase are treated as collateralized borrowing transactions at amortized cost with interest expense accrued using the effective interest rate method and are included in Interest expense – Securities lent or sold under repurchase agreements in the consolidated statement of income. Certain obligations related to securities sold under repurchase agreements are designated at FVTPL under the FVO.

Cash collateral on securities borrowed and securities lent

The right to receive back cash collateral paid and the obligation to return cash collateral received on borrowing and lending of securities, which is generally near term, is recognized as cash collateral on securities borrowed and securities lent, respectively. These transactions are classified and measured at amortized cost as they meet the SPPI criteria and are managed under a hold to collect business model. For Cash collateral on securities borrowed classified at amortized cost, an ECL is applied. Interest income on cash collateral paid and interest expense on cash collateral received together with the security borrowing fees and security lending income are included in Interest income – Securities borrowed or purchased under resale agreements and Interest expense – Securities lent or sold under repurchase agreements, respectively. For securities borrowing and lending transactions where securities are pledged or received as collateral, securities pledged by CIBC remain on the consolidated balance sheet and securities received by CIBC are not recognized on the consolidated balance sheet.

Derivatives

We use derivative instruments for both asset/liability management (ALM) and trading purposes. The derivatives used for ALM purposes allow us to manage financial risks, such as movements in interest and foreign exchange rates, while our derivative trading activities are primarily driven by client activities. We may also take proprietary trading positions within prescribed risk limits with the objective of earning income.

All derivative instruments are recognized initially, and are measured subsequently, at fair value and are reported as assets where they have a positive fair value and as liabilities where they have a negative fair value, in both cases as derivative instruments. Any realized and unrealized gains or losses on derivatives used for trading purposes are recognized immediately in Gains (losses) from financial instruments measured/designated at FVTPL, net. The accounting for derivatives used for ALM purposes depends on whether they qualify for hedge accounting as discussed below.

Fair values of exchange-traded derivatives are based on quoted market prices. Fair values of over-the-counter (OTC) derivatives, including OTC derivatives that are centrally cleared, are obtained using valuation techniques, including discounted cash flow models and option pricing models. See Note 12 for further information on the valuation of derivatives.

Derivatives used for ALM purposes that qualify for hedge accounting

As permitted at the time of transition to IFRS 9 "Financial Instruments" (IFRS 9), we previously elected to continue to apply the hedge accounting requirements of IAS 39.

We apply hedge accounting for derivatives held for ALM purposes that meet specified criteria. There are three types of hedges: fair value, cash flow and hedges of net investments in foreign operations (NIFOs). When hedge accounting is not applied, the change in the fair value of the derivative is recognized in the consolidated statement of income (see "Derivatives used for ALM purposes that are not designated for hedge accounting" below).

In order for derivatives to qualify for hedge accounting, the hedge relationship must be designated and formally documented at its inception in accordance with IAS 39. The particular risk management objective and strategy, the specific asset, liability or cash flow being hedged, as well as how hedge effectiveness is assessed, are documented. Hedge effectiveness requires a high correlation of changes in fair values or cash flows between the hedged and hedging items.

We assess the effectiveness of derivatives in hedging relationships, both at inception and on an ongoing basis. Ineffectiveness results to the extent that the change in the fair value of the hedging derivative differs from the change in the fair value of the hedged risk in the hedged item, or the cumulative change in the fair value of the hedging derivative exceeds the cumulative change in the fair value of expected future cash flows of the hedged item. The amount of ineffectiveness of hedging instruments is recognized immediately in the consolidated statement of income.

Interest Rate Benchmark Reform

In response to interest rate benchmark reform, the IASB issued "Interest Rate Benchmark Reform: Amendments to IFRS 9, IAS 39 and IFRS 7" (Phase 1 amendments) in September 2019, and "Interest Rate Benchmark Reform: Phase 2 Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4, and IFRS 16" (Phase 2 amendments) in August 2020. Only the amendments to the classification and measurement sections of IFRS 9, the hedge accounting sections of IAS 39 "Financial Instruments: Recognition and Measurement" (IAS 39), IFRS 7 "Financial Instruments: Disclosures", IFRS 4 "Insurance Contracts", and IFRS 16 "Leases" apply to us since we elected to continue to apply the hedge accounting requirements of IAS 39 upon the adoption of IFRS 9 "Financial Instruments" (IFRS 9). We adopted the Phase 1 and Phase 2 amendments effective November 1, 2019 and November 1, 2020, respectively.

During the period prior to the replacement of Interbank Offered Rates (IBORs), the Phase 1 amendments allow us to continue hedge accounting by assuming that the interest rate benchmarks which are the basis for the hedged risk, the cash flows of the hedged item or the hedging instrument are not altered as a result of the reform. For the bank's cash flow hedges of forecast transactions that are directly impacted by IBOR reform, for the purpose of assessing whether a forecast transaction is highly probable or expected to occur, the amendments allow us to assume that the benchmark interest rate on which the hedged cash flows are based is not altered as a result of IBOR reform. Phase 1 amendments also provide temporary exceptions to allow hedge accounting to continue if a hedge relationship does not meet certain hedge effectiveness assessment solely as a result of IBOR reform.

The Phase 2 amendments address issues once an existing rate is replaced with an alternative rate. The amendments provide temporary relief that allows for hedging relationships to continue upon the replacement of an existing interest rate benchmark with an alternative rate under certain

qualifying conditions. The amendments also allow us to redefine the hedged risk to an alternative rate, and to amend the description of the hedged item and the hedging instrument, and the description of how we will assess hedge effectiveness to reflect changes required by the reform without discontinuing the hedge relationship. The amendments also provide temporary relief that allows us to designate an alternative rate as a risk component to hedge provided that we reasonably expect that the alternative rate will become separately identifiable within 24 months of its first designation.

See the "Interest Rate Benchmark Reform" section below for further detail.

Fair value hedges

We designate fair value hedges primarily as part of interest rate risk management strategies that use derivatives to hedge changes in the fair value of financial instruments with fixed interest rates. Changes in fair value attributed to the hedged interest rate risk are accounted for as basis adjustments to the hedged financial instruments and are included in Net interest income. Changes in fair value from the hedging derivatives are also included in Net interest income. Any differences between the two represent hedge ineffectiveness that is included in Net interest income.

Similarly, for hedges of foreign exchange risk, changes in the fair value from the hedging derivatives and non-derivatives are included in FXOTT. Changes in the fair value of the hedged item from the hedged foreign exchange risk are accounted for as basis adjustments and are also included in FXOTT. Any difference between the two represents hedge ineffectiveness.

If the hedging instrument expires or is sold, terminated or exercised, or where the hedge no longer meets the criteria for hedge accounting, the hedge relationship is terminated and the basis adjustment applied to the hedged item is amortized over the remaining term of the hedged item. If the hedged item is derecognized, the unamortized basis adjustment is recognized immediately in the consolidated statement of income.

Cash flow hedges

We designate cash flow hedges as part of interest rate risk management strategies that use derivatives to mitigate our risk from variable cash flows by effectively converting certain variable-rate financial instruments to fixed-rate financial instruments, and as part of foreign exchange rate risk management strategies to hedge forecasted foreign currency denominated cash flows. We also designate cash flow hedges to hedge changes in CIBC's share price in respect of certain cash-settled share-based payment awards.

The effective portion of the change in fair value of the derivative instrument is recognized in OCI until the variability in cash flows being hedged is recognized in the consolidated statement of income in future accounting periods, at which time an appropriate portion of the amount that was in AOCI is reclassified into the consolidated statement of income. The ineffective portion of the change in fair value of the hedging derivative is included in Net interest income, FXOTT, or Non-interest expenses immediately as it arises.

If the hedging instrument expires or is sold, terminated or exercised, or where the hedge no longer meets the criteria for hedge accounting, the hedge relationship is terminated. Upon termination of the hedge relationship, any remaining amount in AOCI remains therein until it is recognized in the consolidated statement of income when the variability in cash flows hedged or the hedged forecast transaction is ultimately recognized in the consolidated statement of income. When the forecasted transaction is no longer expected to occur, the related cumulative gain or loss in AOCI is recognized immediately in the consolidated statement of income.

Hedges of NIFOs with a functional currency other than the Canadian dollar

We may designate NIFO hedges to mitigate the foreign exchange risk on our NIFOs with a functional currency other than the Canadian dollar.

These hedges are accounted for in a similar manner to cash flow hedges. The change in fair value of the hedging instrument relating to the effective portion is recognized in OCI. The change in fair value of the hedging instrument attributable to the forward points and relating to the ineffective portion is recognized immediately in FXOTT. Gains and losses in AOCI are reclassified to the consolidated statement of income upon the disposal or partial disposal of the investment in the foreign operation that involves the loss of control, as explained in the "Foreign currency translation" policy above.

Derivatives used for ALM purposes that are not designated for hedge accounting

The change in fair value of the derivatives not designated as accounting hedges but used to economically hedge FVO assets or liabilities is included in Gains (losses) from financial instruments measured/designated at FVTPL, net. The change in fair value of other derivatives not designated as accounting hedges but used for other economic hedging purposes is included in Non-interest income as FXOTT or Other, as appropriate, or in the case of economic hedges of cash-settled share-based payment obligations, in compensation expense.

Embedded derivatives

Derivatives embedded in financial liabilities are accounted for as separate derivatives when their economic characteristics and risks are not closely related to those of the host instrument and the terms of the embedded derivative represent those of a freestanding derivative in situations where the combined instrument is not classified as FVTPL or FVO. These embedded derivatives, which are classified together with the host instrument on the consolidated balance sheet, are measured at fair value, with changes therein included in the consolidated statement of income. The residual amount of the host liability is accreted to its maturity value through Interest income and Interest expense, respectively, using the effective interest rate method.

Gains at inception on derivatives embedded in financial instruments bifurcated for accounting purposes are not recognized at inception; instead they are recognized over the life of the residual host instrument. Where an embedded derivative is separable from the host instrument but the fair value, as at the acquisition or reporting date, cannot be reliably measured separately or is otherwise not bifurcated, the entire combined contract is measured at FVTPL.

Financial assets with embedded derivatives are classified in their entirety into the appropriate classification at initial recognition through an assessment of the contractual cash flow characteristics of the asset and the business model under which it is managed.

Accumulated other comprehensive income

AOCI is included on the consolidated balance sheet as a separate component of total equity, net of income tax. It includes net unrealized gains and losses on FVOCI debt and equity securities, the effective portion of gains and losses on derivative instruments designated within effective cash flow hedges under IAS 39, unrealized foreign currency translation gains and losses on foreign operations with a functional currency other than the Canadian dollar net of gains or losses on related hedges, net gains (losses) related to fair value changes of FVO liabilities attributable to changes in own credit risk, and net gains (losses) on post-employment defined benefit plans.

Treasury shares

Where we repurchase our own equity instruments, these instruments are treated as treasury shares and are deducted from equity at their cost with any gain or loss recognized in Contributed surplus or Retained earnings as appropriate. No gain or loss is recognized in the consolidated statement

of income on the purchase, sale, issue or cancellation of our own equity instruments. Any difference between the carrying value and the consideration, if reissued, is also included in Contributed surplus.

Liabilities and equity

We classify financial instruments as a liability or equity based on the substance of the contractual arrangement. An instrument is classified as a liability if it is a contractual obligation to deliver cash or another financial asset, or to exchange financial assets or financial liabilities at potentially unfavourable terms. A contract is also classified as a liability if it is a non-derivative and could obligate us to deliver a variable number of our own shares or it is a derivative other than one that can be settled by the delivery of a fixed amount of cash or another financial asset for a fixed number of our own equity instruments. An instrument is classified as equity if it evidences a residual interest in our assets after deducting all liabilities. The components of a compound financial instrument are classified and accounted for separately as assets, liabilities, or equity as appropriate. Incremental costs directly attributable to the issuance of equity instruments are shown in equity, net of income tax.

Property and equipment

Land is recognized initially at cost and is subsequently measured at cost less any accumulated impairment losses. Buildings, furniture, equipment and leasehold improvements are recognized initially at cost and are subsequently measured at cost less accumulated depreciation and any accumulated impairment losses.

Depreciation commences when the assets are available for use and is recognized on a straight-line basis to depreciate the cost of these assets to their estimated residual value over their estimated useful lives. The estimated useful lives are as follows:

- Buildings – 40 years
- Computer equipment – 3 to 7 years
- Office furniture, equipment and other – 4 to 15 years
- Leasehold improvements – over the lesser of the estimated useful life of the asset and the lease term, including reasonably assured renewal periods

Depreciation methods, useful lives and residual values are reviewed at each annual reporting date and are adjusted if appropriate.

Gains and losses on disposal are included in Non-interest income – Other.

Leases

As a lessee, we recognize a right-of-use asset and a corresponding lease liability based on the present value of future lease payments, less any lease incentives receivable, when the lessor makes the leased asset available for use to CIBC, based on the non-cancellable portion of the lease term, adjusted for any renewal or termination options that are reasonably certain to be exercised. Measurement of the right-of-use asset also includes any initial direct costs of procuring the lease, any lease payments made or lease incentives received prior to lease commencement, and the estimated cost of remediating the underlying asset at the end of the lease term. Discount rates are based on the rate implicit in the lease, if determinable, or on CIBC's incremental borrowing rate. Where a property lease contains both a lease and non-lease component, we have elected not to allocate the consideration in the contract to each of the components. Subsequent to initial measurement, CIBC measures the lease liability by increasing the carrying amount to reflect interest on the lease liability based on the discount rate at the time of recognition and reducing the carrying amount to reflect lease payments made during the period, net of any remeasurements for lease reassessment or modifications. The right-of-use asset is measured using the cost model, and amortized on a straight-line basis over the lease term. Right-of-use assets and the corresponding lease liabilities, including asset retirement obligations, are recognized in Property and equipment and Other liabilities, respectively, on our consolidated balance sheet.

The right-of-use asset and the corresponding lease liability are remeasured when there is a change in lease term, a change in the assessment of an option to purchase a leased asset, a change in the expected residual value guarantee (if any), or a change in future lease payments due to a change in the index or rate applicable to the payment. Right-of-use assets are tested for impairment as required under IAS 36 "Impairment of Assets" (IAS 36). Refer to the "Impairment of non-financial assets" policy below. In addition, the evaluation of the useful life for depreciation is assessed under IAS 16 "Property, Plant and Equipment" (IAS 16).

Lease payments for low-value assets, short-term leases and variable leases are systematically recognized in Non-interest expenses based on the nature of the expense.

As an intermediate lessor, we classify a sublease as an operating or finance sublease based on whether substantially all of the risks and rewards related to the underlying right-of-use asset are transferred to the sub-lessee. If classified as a finance sublease, the related right-of-use asset is derecognized and an investment in sublease is recognized, with the difference recognized in the consolidated statement of income as a gain or loss. In measuring the investment in sublease, we apply the head lease discount rate unless the rate implicit in the sublease is determinable. Where a finance sublease includes lease and non-lease components, we allocate the total consideration in the contract to each component based on the standalone prices for each of these components. The investment in sublease is recognized in Other assets on our consolidated balance sheet, and is subsequently measured using the effective interest rate method, with interest income recognized over the term of the sublease. Rental income from operating subleases is recognized on a systematic basis over the lease term.

Goodwill, software and other intangible assets

Goodwill represents the excess of the purchase price over the fair value of the net identifiable assets, liabilities and contingent liabilities acquired in business combinations. Identifiable intangible assets are recognized separately from goodwill when they are separable or arise from contractual or other legal rights, and have fair values that can be reliably measured.

Goodwill is not amortized, but is subject to impairment review at least annually or more frequently if there are indicators that the goodwill may be impaired. Refer to the "Impairment of non-financial assets" policy below.

Intangible assets represent software and customer relationships, core deposit intangibles, investment management contracts, and brand names recognized as part of past acquisitions. Intangible assets with definite useful lives are measured at cost less accumulated amortization and accumulated impairment losses. Each intangible asset is assessed for legal, regulatory, contractual, competitive or other factors to determine if the useful life is definite. Intangible assets with definite useful lives are amortized over their estimated useful lives, which are as follows:

- Software – 5 to 10 years
- Contract-based intangibles – 8 to 15 years
- Core deposit and customer relationship intangibles – 3 to 16 years

Intangible assets with indefinite useful lives are measured at cost less any accumulated impairment losses. Indefinite-life intangible assets are tested for impairment at least annually and whenever there is an indication that the asset may be impaired. Refer to the "Impairment of non-financial assets" policy below.

Impairment of non-financial assets

The carrying values of non-financial assets with definite useful lives, including right-of-use assets, buildings and equipment, and intangible assets with definite useful lives are reviewed to determine whether there is any indication of impairment. Goodwill and intangible assets with indefinite useful lives are tested for impairment at least annually, and whenever there is an indication that the asset may be impaired. If any such indication of impairment exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss, if any.

For the purpose of reviewing non-financial assets with definite useful lives for impairment, asset groups are reviewed at their lowest level for which identifiable cash inflows are largely independent of cash inflows of other assets or groups of assets. This grouping is referred to as a cash-generating unit (CGU).

Corporate assets do not generate separate cash inflows. Corporate assets are tested for impairment at the minimum collection of CGUs to which the corporate asset can be allocated reasonably and consistently.

The recoverable amount is the greater of fair value less costs to sell and value in use. Value in use is the present value of the future cash flows expected to be derived from the asset or CGU. When the carrying value exceeds its recoverable amount, an impairment loss equal to the difference between the two amounts is recognized in the consolidated statement of income. If an impairment subsequently reverses, the carrying value of the asset is increased to the extent that the carrying value of the underlying assets does not exceed the carrying value that would have been determined, net of depreciation or amortization, if no impairment had been recognized. Any impairment reversal is recognized in the consolidated statement of income in the period in which it occurs.

Goodwill is assessed for impairment based on the group of CGUs expected to benefit from the synergies of the business combination, and the lowest level at which management monitors the goodwill. Any potential goodwill impairment is identified by comparing the recoverable amount of the CGU grouping to which the goodwill is allocated to its carrying value including the allocated goodwill. If the recoverable amount is less than its carrying value, an impairment loss is recognized in the consolidated statement of income in the period in which it occurs. Impairment losses on goodwill are not subsequently reversed if conditions change.

Income taxes

Income tax comprises current tax and deferred tax. Income tax is recognized in the consolidated statement of income, except to the extent that it relates to items recognized in OCI or directly in equity, in which case it is recognized accordingly.

Current tax is the tax expected to be payable on the taxable profit for the year, calculated using tax rates enacted or substantively enacted as at the reporting date, and any adjustment to tax payable in respect of previous years. Current tax assets and liabilities are offset when CIBC intends to settle on a net basis and the legal right to offset exists.

Deferred tax is recognized on temporary differences between the carrying value of assets and liabilities on the consolidated balance sheet and the corresponding amounts attributed to such assets and liabilities for tax purposes. Deferred tax liabilities are generally recognized for all taxable temporary differences unless the temporary differences relate to our NIFOs and will not reverse in the foreseeable future. Deferred tax assets, other than those arising from our NIFOs, are recognized to the extent that it is probable that future taxable profits will be available against which deductible temporary differences can be utilized. Deferred tax assets arising from our NIFOs are recognized for deductible temporary differences which are expected to reverse in the foreseeable future to the extent that it is probable that future taxable profits will be available against which these deductible temporary differences can be utilized. Deferred tax is not recognized for temporary differences on the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable income, or for taxable temporary differences arising on the initial recognition of goodwill.

Deferred tax is measured at the tax rates that are expected to be applied to the temporary differences when they reverse, based on the laws that have been enacted or substantively enacted as at the reporting date.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets and liabilities and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different taxable entities which intend to settle current tax liabilities and assets on a net basis or to realize the asset and settle the liability simultaneously.

We are subject to income tax laws in the various jurisdictions where we operate, and the tax laws in those jurisdictions are potentially subject to different interpretations by us and the relevant taxation authority, which gives rise to uncertainty. For tax positions where there is uncertainty regarding the ultimate determination of the tax impact, including positions which are under audit, dispute or appeal, we recognize provisions to consider this uncertainty based on our best estimate of the amount expected to be paid based on an assessment of the relevant factors.

Pension and other post-employment benefits

We are the sponsor of a number of employee benefit plans. These plans include both defined benefit and defined contribution pension plans, and various other post-employment benefit plans including post-retirement medical and dental benefits.

Defined benefit plans

The cost of pensions and other post-employment benefits earned by employees is actuarially determined separately for each plan using the projected unit credit method and our best estimate of salary escalation, retirement ages of employees, mortality and expected health-care costs. This represents CIBC's defined benefit obligation, which is measured as at the reporting date. The discount rate used to measure the defined benefit obligation is based on the yield of a portfolio of high-quality corporate bonds denominated in the same currency in which the benefits are expected to be paid and with terms to maturity that, on average, match the terms of the defined benefit obligation.

Plan assets are measured at fair value as at the reporting date.

The net defined benefit asset (liability) represents the present value of the defined benefit obligation less the fair value of plan assets. The net defined benefit asset (liability) is included in Other assets and Other liabilities, respectively.

Current service cost reflects the cost of providing post-employment benefits earned by employees in the current period. Current service cost is calculated as the present value of the benefits attributed to the current year of service and is recognized in the consolidated statement of income. The current service cost is calculated using a separate discount rate to reflect the longer duration of future benefit payments associated with the additional year of service to be earned by the plan's active participants.

Past service costs arising from plan amendments or curtailments are recognized in net income in the period in which they arise.

Net interest income or expense comprises interest income on plan assets and interest expense on the defined benefit obligation. Interest income is calculated by applying the discount rate to the plan assets, and interest expense is calculated by applying the discount rate to the defined benefit obligation. Net interest income or expense is recognized in the consolidated statement of income.

Actuarial gains and losses represent changes in the present value of the defined benefit obligation which result from changes in actuarial assumptions and differences between previous actuarial assumptions and actual experience, and from differences between the actual return on plan assets and assumed interest income on plan assets. Net actuarial gains and losses are recognized in OCI in the period in which they arise and are not subject to subsequent reclassification to net income. Cumulative net actuarial gains and losses are included in AOCI.

When the calculation results in a net defined benefit asset, 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). For plans where we do not have an unconditional right to a refund of surplus, we determine the asset ceiling by reference to future economic benefits available in the form of reductions in future contributions to the plan, in which case the present value of economic benefits is calculated giving consideration to minimum funding requirements for future service that apply to the plan. Where a reduction in future contributions to the plan is not currently realizable at the reporting date, we estimate whether we will have the ability to reduce contributions for future service at some point during the life of the plan by taking into account, among other things, expected future returns on plan assets. If it is anticipated that we will not be able to recover the value of the net defined benefit asset, after considering minimum funding requirements for future service, the net defined benefit asset is reduced to the amount of the asset ceiling.

When the payment in the future of minimum funding requirements related to past service would result in a net defined benefit surplus, or an increase in a net defined benefit surplus, the minimum funding requirements are recognized as a liability to the extent that the surplus would not be fully available as a refund or a reduction in future contributions. Any funded status surplus is limited to the present value of future economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan.

Defined contribution plans

Costs for defined contribution plans are recognized during the year in which the service is provided.

Other long-term employee benefits

CIBC previously sponsored a closed long-term disability income replacement plan that was classified as a long-term defined benefit arrangement before it was settled effective December 2021. CIBC also offers other medical and dental benefits to employees while on long-term disability.

The amount of other long-term employee benefits is actuarially calculated using the projected unit credit method. Under this method, the benefit is discounted to determine its present value. The methodology used to determine the discount rate used to value the long-term employee benefit obligation is consistent with that for pension and other post-employment benefit plans. Actuarial gains and losses and past service costs are recognized in the consolidated statement of income in the period in which they arise.

Share-based payments

We provide compensation to certain employees and directors in the form of share-based awards.

Compensation expense for share-based awards is recognized from the service commencement date to the earlier of the contractual vesting date or the employee's retirement eligible date. For grants regularly awarded in the annual incentive compensation cycle (annual incentive grant), the service commencement date is considered to be the start of the fiscal year that precedes the fiscal year in which the grant is made. The service commencement date in respect of special awards granted outside of the annual cycle is the grant date. The amount of compensation expense recognized is based on management's best estimate of the number of share-based awards expected to vest, including estimates of expected forfeitures, which are revised periodically as appropriate. For the annual incentive grant, compensation expense is recognized from the service commencement date based on the estimated fair value of the forthcoming grant with the estimated fair value adjusted to the actual fair value at the grant date.

Under the Restricted Share Award (RSA) plan, where grants are settled in the cash equivalent of common shares, changes in the obligation which arise from fluctuations in the market price of common shares, net of related hedges, are recognized in the consolidated statement of income as compensation expense in proportion to the award recognized.

Under the Performance Share Unit (PSU) plan, where grants are settled in the cash equivalent of common shares, changes in the obligation which arise from fluctuations in the market price of common shares, and revised estimates of the performance factor, net of related hedges, are recognized in the consolidated statement of income as compensation expense in proportion to the award recognized. The performance factor ranges from 75% to 125% of the initial number of units awarded based on CIBC's performance relative to the other major Canadian banks.

Compensation expense in respect of the Employee Stock Option Plan (ESOP) is based on the grant date fair value. Where the service commencement date precedes the grant date, compensation expense is recognized from the service commencement date based on the estimated fair value of the award at the grant date, with the estimated fair value adjusted to the actual fair value at the grant date. Compensation expense results in a corresponding increase to contributed surplus. If the ESOP award is exercised, the proceeds we receive, together with the amount recognized in Contributed surplus, are credited to common share capital. If the ESOP award expires unexercised, the compensation expense remains in Contributed surplus.

As part of our acquisition of Wellington Financial Fund V LP (Wellington Financial) in the first quarter of 2018, equity-settled awards in the form of exchangeable shares with specific service and non-market performance vesting conditions were issued to selected employees. Compensation expense in respect of the exchangeable shares is based on the grant date fair value, adjusted for changes in the estimated impact of the non-market performance conditions.

Compensation in the form of Deferred Share Units (DSUs) issued pursuant to the Deferred Share Unit Plan, the Deferred Compensation Plan (DCP), and the Directors' Plan entitles the holder to receive the cash equivalent of a CIBC common share. At the time DSUs are granted, the related expense in respect of the cash compensation that an employee or director would otherwise receive would have been fully recognized. Changes in the obligations which arise from fluctuations in the market price of common shares, net of related hedges, are recognized in the consolidated statement of income as compensation expense for employee DSUs and as Non-interest expense – Other for Directors' DSUs.

Our contributions under the Employee Share Purchase Plan (ESPP) are expensed as incurred.

The impact due to our changes in common share price in respect of cash-settled share-based compensation under the RSA and PSU plans is hedged through the use of derivatives. We designate these derivatives within cash flow hedge accounting relationships. The effective portion of the change in fair value of these derivatives is recognized in OCI and is reclassified into compensation expense, within the consolidated statement of income, over the period that the hedged awards impact the consolidated statement of income. The ineffective portion of the change in fair value of the hedging derivatives is recognized in the consolidated statement of income immediately as it arises.

Provisions and contingent liabilities

Provisions are liabilities of uncertain timing or amount. A provision is recognized when we have a present legal or constructive obligation as a result of a past event, it is probable that an outflow of economic benefits will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation. The provision is recognized as the best estimate of the amount required to settle the obligation at the reporting date,

taking into account the risk and uncertainties related to the obligation. Where material, provisions are discounted to reflect the time value of money, and the increase in the obligation due to the passage of time is presented as Interest expense in the consolidated statement of income.

Contingent liabilities are possible obligations that arise from past events whose existence will be confirmed only by the occurrence, or non-occurrence, of one or more uncertain future events not wholly within the control of CIBC, or are present obligations that have arisen from past events but are not recognized because it is not probable that settlement will require the outflow of economic benefits.

Provisions and contingent liabilities are disclosed in the consolidated financial statements.

Earnings per share

We present basic and diluted EPS for our common shares.

Basic EPS is computed by dividing net income for the period attributable to CIBC common shareholders by the weighted-average number of common shares outstanding during the period. The net income attributable to CIBC common shareholders is determined after deducting the after-tax amount of dividends on preferred shares and distributions on other equity instruments, which are accounted for in retained earnings, from the net income attributable to equity shareholders.

Diluted EPS is computed by dividing net income for the period attributable to CIBC common shareholders by the weighted-average number of diluted common shares outstanding for the period. Diluted common shares reflect the potential dilutive effect of the exercise of stock options based on the treasury stock method. For stock options, the treasury stock method determines the number of incremental common shares by assuming that outstanding stock options, whose exercise price is less than the average market price of common shares during the period, are exercised and then reduced by the number of common shares assumed to be repurchased with the exercise proceeds from the assumed exercise of the options. Instruments determined to have an antidilutive effect for the period are excluded from the calculation of diluted EPS.

Fee and commission income

The recognition of fee and commission income is determined by the purpose of the fee or commission and the terms specified in the contract with the customer. Revenue is recognized when, or as, a performance obligation is satisfied by transferring control of the service to the customer, in the amount of the consideration to which we expect to be entitled. Revenue may therefore be recognized at a point in time upon completion of the service or over time as the services are provided. When revenue is recognized over time, we are generally required to provide the services each period, such that control of the services is transferred evenly to the customer, and we therefore measure our progress towards completion of the service based upon the time elapsed. For contracts where the transaction price includes variable consideration, revenue is only recognized to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved, which typically occurs by the end of the reporting period. When another party is involved in providing a service to a customer, we determine whether the nature of our performance obligation is that of a principal or an agent. If we control the service before it is transferred to the customer, we are acting as the principal and present revenue separately from the amount paid to the other party; otherwise we are the agent and present revenue net of the amount paid to the other party. Consideration payable to a customer, including cash amounts payable to a customer, credits or other items that can be applied against amounts owing to us, is recognized as a reduction of revenue unless the payment to the customer is in exchange for a distinct good or service, in which case the purchase of the good or service is accounted for in the same way as for other purchases from suppliers. Our performance obligations typically have a term of one year or less, with payment received upon satisfaction of the performance obligation or shortly afterwards, and as a result there is no significant financing component and we do not typically capitalize the costs of obtaining contracts with our customers. Income which forms an integral part of the effective interest rate of a financial instrument is recognized as an adjustment to the effective interest rate.

In addition to these general principles, the following specific policies are also applied:

Underwriting and advisory fees are earned on debt and equity securities placements and transaction-based advisory services. Underwriting fees are typically recognized at the point in time when the transaction is completed. Advisory fees are generally recognized as revenue over the period of the engagement as the related services are provided or at the point in time when the transaction is completed.

Deposit and payment fees arise from personal and business deposit accounts and cash management services. Monthly and annual fees are recognized over the period that the related services are provided. Transactional fees are recognized at the point in time when the related services are provided.

Credit fees consist of loan syndication fees, loan commitment fees, letter of credit fees, banker's acceptance stamping fees, and securitization fees. Credit fees are generally recognized over the period that the related services are provided, except for loan syndication fees, which are typically recognized at the point in time that the financing placement is completed.

Card fees primarily include interchange income, overlimit fees, cash advance fees, and annual fees. Card fees are recognized at the point in time that the related services are provided, except for annual fees, which are recognized over the 12-month period to which they relate. The cost of credit card loyalty points is recognized as a reduction of interchange income when the loyalty points are issued for both self-managed and third-party loyalty points programs. Credit card loyalty point liabilities are recognized for self-managed loyalty point programs and are subject to periodic remeasurement to reflect the expected cost of redemption as this expectation changes over time.

Commissions on securities transactions include brokerage commissions for transactions executed on behalf of clients, trailer fees and mutual fund sales commissions. Brokerage commissions and mutual fund sales commissions are generally recognized at the point in time that the related transaction is executed. Trailer fees are typically calculated based upon the average daily net asset value of the mutual fund units held by clients and are recognized over time as the related services are provided.

Investment management fees are primarily based on the respective value of the assets under management (AUM) or assets under administration (AUA) and are recognized over the period that the related services are provided. Investment management fees relating to our asset management and private wealth management business are generally calculated based on point-in-time AUM balances, and investment management fees relating to our retail brokerage business are generally calculated based on point-in-time AUM or AUA balances. Custodial fees are recognized as revenue over the applicable service period, which is generally the contract term.

Mutual fund fees include management fees and administration fees, which are earned on fund management services and are recognized over the period that the mutual funds are managed based upon a specified percentage of the daily net asset values of the respective mutual funds. In certain circumstances, CIBC may, on a discretionary basis, elect to absorb certain expenses that would otherwise be payable by the mutual funds directly. These expenses are recognized in Non-interest expenses on the consolidated statement of income.

Interest Rate Benchmark Reform

Various interest rate and other indices that are deemed to be "benchmarks" including the London Interbank Offered Rate (LIBOR) are the subject of international regulatory guidance and proposals for reform. Regulators in various jurisdictions have advocated for the transition from Interbank Offered Rates (IBORs) to alternative benchmark rates (alternative rates), based upon risk-free rates determined using actual market transactions.

Following the previous announcements by various regulators, the publication of LIBOR settings for all sterling, Japanese yen, Swiss franc and euro, as well as 1-week and 2-month USD LIBOR settings was discontinued on December 31, 2021. The remaining USD LIBOR settings will cease to be published after June 30, 2023. In March 2022, the *Adjustable Interest Rate (LIBOR) Act* was enacted in the U.S., which allows for contracts that do not contain adequate fallback provisions to automatically transition to Secured Overnight Financing Rate (SOFR) upon the cessation of USD LIBOR. The enactment of this legislation is a positive step towards facilitating the remediation efforts for USD LIBOR exposures.

In December 2021, the Canadian Alternative Reference Rate working group (CARR) recommended to Refinitiv Benchmark Services (UK) Limited (RBSL), the Canadian Dollar Offered Rate (CDOR) administrator, to cease the calculation and publication of CDOR after June 30, 2024 and proposed a two-staged approach to the transition from CDOR to Canadian Overnight Repo Rate Average (CORRA). Following public consultation, on May 16, 2022, RBSL announced that it will permanently cease the publication and calculation of all remaining tenors of CDOR after June 28, 2024. Following this announcement, OSFI published its expectations for CDOR transition which is consistent with the two-stage transition approach proposed by CARR. OSFI expects all new derivatives and securities to transition to the alternative rates by June 30, 2023, with no new CDOR exposures after that date, with limited exceptions. OSFI also expects all loan agreements referencing CDOR to be transitioned by June 28, 2024, and federally regulated financial institutions to prioritize system and model updates to accommodate the use of CORRA prior to June 28, 2024.

IASB has addressed the impact of IBOR reform on financial reporting by issuing Phase 1 and Phase 2 amendments. We have adopted Phase 1 and Phase 2 amendments effective November 1, 2019 and November 1, 2020, respectively. Phase 1 amendments provide temporary relief for specific hedge accounting requirements to address uncertainties in the period prior to replacement of IBORs, and provide specific disclosure requirements for the affected hedging relationships. Phase 2 amendments address issues that affect financial reporting once an existing rate is replaced with an alternative rate and conclude the IASB's amendments to financial reporting standards due to the effects of interest rate benchmark reform. The Phase 2 amendments permit modifications of amortized cost financial assets and financial liabilities that are made as a direct consequence of IBOR reform and on an economically equivalent basis to be accounted for by updating the effective interest rate prospectively with no immediate gain or loss recognition. See "Derivatives used for ALM purposes that qualify for hedge accounting" for further details on temporary relief provided by IASB.

As IBORs are widely referenced by large volumes of derivative, loan and cash products, the transition presents a number of risks to us, and the industry as a whole. These transition risks include market risk (as new basis risks emerge), model risk, operational risk (as processes are changed or newly introduced), legal risk (as contracts are revised) and conduct risk (in ensuring clients are adequately informed/prepared). In response to the reforms to interest rate benchmarks, we have established an Enterprise IBOR Transition Program (Program), which is supported by a formal governance structure and dedicated working groups that include stakeholders from frontline businesses as well as functional groups such as Treasury, Technology and Operations, Risk Management, Legal and Finance, to manage and coordinate all aspects of the transition, including the identification and mitigation of the risks. An IBOR Steering Committee has been established with responsibility for oversight and execution of the Program. The IBOR Steering Committee manages the impact of the transition risks through appropriate mitigating actions. We also continue to engage with industry associations to incorporate recent developments into our project plan. The Program provides regular updates to the senior management including the Executive Committee, and the Board.

As a part of the Program and consistent with regulatory expectations, we have completed the transition of our non-USD LIBOR and 1-week and 2-month USD LIBOR referenced contracts, and no new USD LIBOR products were originated after December 31, 2021 with limited permitted exceptions. We are in the process of transitioning our remaining USD LIBOR based contracts to the alternative rates by incorporating appropriate fallback provisions or making amendments to contracts to reference alternative rates, and have developed business processes to support the transition. We are also working with clearing houses to prepare for the transition of our USD LIBOR referenced derivatives to alternative rates, ahead of the expected cessation of USD LIBOR. The Program is also assessing the impact of the cessation of CDOR on our operations and is developing plans to facilitate the transition of CDOR to alternative rates. As part of the Program, we continue to engage with industry associations on ongoing developments, and continue to incorporate these into our project plan and make information available to our clients, advising them on recent developments.

The following table presents the approximate notional amounts of our derivatives and the gross outstanding balances of our non-derivative financial assets and financial liabilities that are indexed to USD LIBOR and CDOR with a maturity date beyond June 30, 2023 for USD LIBOR, and June 28, 2024 for CDOR, that are expected to be affected by IBOR reform.

	Notional/gross outstanding amounts (1)(2)			
	October 31, 2022		October 31, 2021	
(billions of Canadian dollars)	**USD LIBOR**	**CDOR**	USD LIBOR	CDOR
	Maturing after June 30, 2023	**Maturing after June 28, 2024**	Maturing after June 30, 2023	Maturing after June 28, 2024
Non-derivative financial assets				
Securities	**$ 1.6**	**$ 3.4**	$ 1.6	$ 2.7
Loans and customers' liability under acceptances (3)	**33.6**	**20.0**	36.9	10.3
	35.2	**23.4**	38.5	13.0
Non-derivative financial liabilities				
Secured borrowing deposits and subordinated indebtedness (4)	**0.1**	**6.5**	0.1	6.3
Other deposits and acceptances (3)	**1.1**	**7.1**	1.0	3.8
	1.2	**13.6**	1.1	10.1
Derivatives (5)	**866.9**	**1,757.9**	735.7	1,341.6

(1) The table excludes undrawn loan commitments. As at October 31, 2022, the total outstanding undrawn loan commitments that are denominated in U.S. dollars and are potentially subject to USD LIBOR transition with a maturity date beyond June 30, 2023 are estimated to be $22.6 billion, and the total outstanding undrawn loan commitments that are denominated in Canadian dollars and are potentially subject to CDOR transition with a maturity date beyond June 28, 2024 are estimated to be $24.7 billion. A portion of these commitments can also be drawn in other benchmark rates.
(2) Includes exposures for which fallback provisions have been incorporated.
(3) Includes exposures referenced to the 1-month and 3-month Bankers' Acceptance rates.
(4) Includes subordinated indebtedness with redemption dates either prior to or after June 28, 2024, which will be repriced based on CDOR and mature after June 28, 2024 to the extent that they are not redeemed.
(5) As at October 31, 2022, the notional amount of our derivatives in designated hedge accounting relationships that are indexed to USD LIBOR with a maturity date beyond June 30, 2023 was approximately $6.2 billion and CDOR with a maturity date beyond June 28, 2024, was approximately $151.9 billion. For cross-currency swaps and basis swaps for which either leg is indexed to USD LIBOR or CDOR, the notional amount of each leg has been included in the table above and in the notional amount of our derivatives in designated hedge accounting relationships that are indexed to USD LIBOR or CDOR, respectively.

Conceptual Framework for Financial Reporting (Conceptual Framework)

The Conceptual Framework sets out the fundamental concepts that underlie the preparation and presentation of financial statements and serves to guide the IASB in developing IFRS standards. The Conceptual Framework is effective for annual periods beginning on or after January 1, 2020. As a result, CIBC adopted the Conceptual Framework as at November 1, 2020.

There was no impact to our consolidated financial statements and no changes in our accounting policies as a result of adopting the Conceptual Framework.

Note 2 | Fair value measurement

This note presents the fair values of financial instruments and explains how we determine those values. Note 1, "Basis of preparation and summary of significant accounting policies", sets out the accounting treatment for each measurement category of financial instruments.

Fair value is defined as the price that would be received to sell an asset, or paid to transfer a liability, between market participants in an orderly transaction in the principal market at the measurement date under current market conditions (i.e., the exit price). The determination of fair value requires judgment and is based on market information, where available and appropriate. Fair value measurements are categorized into three levels within a fair value hierarchy (Level 1, 2 or 3) based on the valuation inputs used in measuring the fair value, as outlined below.

- Level 1 – Unadjusted quoted market prices in active markets for identical assets or liabilities we can access at the measurement date. Bid prices, ask prices or prices within the bid and ask, which are the most representative of the fair value, are used as appropriate to measure fair value. Fair value is best evidenced by an independent quoted market price for the same instrument in an active market. An active market is one where transactions are occurring with sufficient frequency and volume to provide quoted prices on an ongoing basis.
- Level 2 – Quoted prices for identical assets or liabilities in markets that are inactive or observable market quotes for similar instruments, or use of valuation techniques where all significant inputs are observable. Inactive markets may be characterized by a significant decline in the volume and level of observed trading activity or through large or erratic bid/offer spreads. In instances where traded markets do not exist or are not considered sufficiently active, we measure fair value using valuation models.
- Level 3 – Non-observable or indicative prices or use of valuation techniques where one or more significant inputs are non-observable.

For a significant portion of our financial instruments, quoted market prices are not available because of the lack of traded markets, and even where such markets do exist, they may not be considered sufficiently active to be used as a final determinant of fair value. When quoted market prices in active markets are not available, we would consider using valuation models. The valuation model and technique we select maximizes the use of observable market inputs to the extent possible and appropriate in order to estimate the price at which an orderly transaction would take place at the measurement date. In an inactive market, we consider all reasonably available information, including any available pricing for similar instruments, recent arm's-length market transactions, any relevant observable market inputs, indicative dealer or broker quotations, and our own internal model-based estimates.

Valuation adjustments are an integral component of our fair valuation process. We apply judgment in establishing valuation adjustments that take into account various factors that may have an impact on the valuation. Such factors primarily include, but are not limited to, the bid-offer spreads, illiquidity due to lack of market depth, parameter uncertainty and other market risk, model risk and credit risk of our derivative assets and liabilities, as well as adjustments for valuing our uncollateralized derivative assets and liabilities based on an estimated market cost of funds curve.

Generally, the unit of account for a financial instrument is the individual instrument, and valuation adjustments are applied at an individual instrument level, consistent with that unit of account. In cases where we manage a group of financial assets and liabilities that consist of substantially similar and offsetting risk exposures, the fair value of the group of financial assets and liabilities is measured on the basis of the net open risks.

We apply judgment in determining the most appropriate inputs and the weighting we ascribe to each such input as well as in our selection of valuation methodologies. Regardless of the valuation technique we use, we incorporate assumptions that we believe market participants would make for credit, funding, and liquidity considerations. When the fair value of a financial instrument at inception is determined using a valuation technique that incorporates one or more significant inputs that are non-observable, no inception profit or loss (the difference between the determined fair value and the transaction price) is recognized at the time the asset or liability is initially recorded. Any gains or losses at inception are deferred and recognized only in future periods over the term of the instruments or when the inputs become significantly observable.

We have an ongoing process for evaluating and enhancing our valuation techniques and models. Where enhancements are made, they are applied prospectively, so that fair values reported in prior periods are not recalculated on the new basis. Valuation models used, including analytics for the construction of yield curves and volatility surfaces, are vetted and approved, consistent with our model risk policy.

To ensure that valuations are appropriate, we have established internal guidance on fair value measurement, which is reviewed periodically in recognition of the dynamic nature of markets and the constantly evolving pricing practices in the market. A number of policies and controls are put in place to ensure that the internal guidance on fair value measurement is being applied consistently and appropriately, including independent validation of valuation inputs to external sources such as exchange quotes, broker quotes or other management-approved independent pricing sources. Key model inputs, such as yield curves and volatilities, are independently verified. The results from the independent price validation and any valuation adjustments are reviewed by the Independent Price Verification Committee on a monthly basis. This includes, but is not limited to, reviewing fair value adjustments and methodologies, independent price verification results, limits and valuation uncertainty.

Due to the judgment used in applying a wide variety of acceptable valuation techniques and models, as well as the use of estimates inherent in this process, estimates of fair value for the same or similar assets may differ among financial institutions. The calculation of fair value is based on market conditions as at each consolidated balance sheet date and may not be reflective of ultimate realizable value.

Methods and assumptions

Financial instruments with fair value equal to carrying value

For financial instruments that are not carried on the consolidated balance sheet at fair value and where we consider the carrying value to be a reasonable approximation of fair value due to their short-term nature and generally negligible credit risk, the fair values disclosed for these financial instruments are assumed to equal their carrying values. These financial instruments are: cash and non-interest-bearing deposits with banks; short-term interest-bearing deposits with banks; cash collateral on securities borrowed; securities purchased under resale agreements; customers' liability under acceptances; cash collateral on securities lent; obligations related to securities sold under repurchase agreements; acceptances; deposits with demand features; and certain other financial assets and liabilities.

Securities
The fair value of debt or equity securities and obligations related to securities sold short is based on quoted bid or ask market prices where available in an active market.

Securities for which quotes in an active market are not available are valued using all reasonably available market information as described below.

The fair value of government issued or guaranteed securities that are not traded in an active market is calculated by applying valuation techniques such as discounted cash flow models using implied yields derived from the prices of actively traded government securities and most recently observable spread differentials.

The fair value of corporate debt securities is determined using the most recently executed transaction prices, and where appropriate, adjusted to the price of these securities obtained from independent dealers, brokers, and third-party multi-contributor consensus pricing sources. When observable price quotations are not available, fair value is determined based on discounted cash flow models using observable discounting curves such as benchmark and government yield curves and spread differentials observed through independent dealers, brokers, and third-party multi-contributor consensus pricing sources.

Asset-backed securities (ABS) and mortgage-backed securities (MBS) not issued or guaranteed by a government are valued using discounted cash flow models making maximum use of market observable inputs, such as broker quotes on identical or similar securities and other pricing information obtained from third-party pricing sources adjusted for the characteristics and the performance of the underlying collateral. Other key inputs used include prepayment and liquidation rates, credit spreads, and discount rates commensurate with the risks involved. These assumptions factor in information that is derived from actual transactions, underlying reference asset performance, external market research, and market indices, where appropriate.

Privately issued debt and equity securities are valued using recent market transactions, where available. Otherwise, fair values are derived from valuation models using a market or income approach. These models consider various factors, including projected cash flows, earnings, revenue or other third-party evidence as available. The fair value of limited partnership investments is based upon net asset values published by third-party fund managers and is adjusted for more recent information where available and appropriate. The carrying value of *Community Reinvestment Act* equity investments and Federal Home Loan Bank (FHLB) stock approximates fair value.

Loans
The fair value of variable-rate loans and loans for which interest rates are repriced or reset frequently is assumed to be equal to their carrying value. The fair value for fixed-rate loans is estimated using a discounted cash flow calculation that uses market interest rates.

The ultimate fair value of loans disclosed is net of the associated allowance for credit losses. The fair value of loans is not adjusted for the value of any credit derivatives used to manage the credit risk associated with them. The fair value of these credit derivatives is disclosed separately.

Securities purchased under resale agreements or sold under repurchase agreements
The fair values of these contracts are determined using valuation techniques such as the discounted cash flow method using interest rate curves as inputs.

Other assets and other liabilities
Other assets and other liabilities mainly comprise accrued interest receivable or payable, brokers' client accounts receivable or payable, derivative collateral receivable or payable, precious metals and accounts receivable or payable.

The fair values of other assets and other liabilities are primarily assumed to be at cost or amortized cost as we consider the carrying value to be a reasonable approximation of fair value, except for the fair value of precious metals, which is quoted in an active market. Other assets also include investment in bank-owned life insurance carried at the cash surrender value, which is assumed to be a reasonable approximation of fair value.

Deposits
The fair values of floating-rate deposits and demand deposits are assumed to be equal to their amortized cost. The fair value of fixed-rate deposits is determined by discounting the contractual cash flows using either current market interest rates with similar remaining terms or rates estimated using internal models and broker quotes. The fair value of deposit notes issued to CIBC Capital Trust is determined by reference to the quoted market prices of CIBC Tier 1 Notes – Series B issued by CIBC Capital Trust. The fair value of deposit liabilities with embedded optionality includes the fair value of those options. The fair value of equity- and commodity-linked notes includes the fair value of embedded equity and commodity derivatives.

Certain deposits designated at FVTPL are structured notes that have coupons or repayment terms linked to the performance of commodities, debt or equity securities or specific market indices. The fair value of these structured notes is estimated using internally vetted valuation models for the debt and embedded derivative portions of the notes by incorporating market observable prices of the referenced securities or comparable securities, and other inputs such as interest rate yield curves, equity prices or indices, market volatility levels, foreign exchange rates and changes in our own credit risk, where appropriate. Where observable prices or inputs are not available, management judgment is required to determine fair values by assessing other relevant sources of information such as historical data, proxy information from similar transactions, and through extrapolation and interpolation techniques. Appropriate market risk valuation adjustments for such inputs are assessed in all such instances.

The fair value of secured borrowings, which comprises liabilities issued by or as a result of activities associated with the securitization of residential mortgages, the Covered Bond Programme, and consolidated securitization vehicles, is based on identical or proxy market observable quoted bond prices or determined by discounting the contractual cash flows using maximum market observable inputs, such as market interest rates, or credit spreads implied by debt instruments of similar credit quality, as appropriate.

Subordinated indebtedness
The fair value of subordinated indebtedness is determined by reference to market prices for the same or similar debt instruments.

Derivative instruments

The fair value of exchange-traded derivatives such as options and futures is based on quoted market prices. OTC derivatives primarily consist of interest rate swaps, foreign exchange forwards, equity and commodity derivatives, interest rate and currency derivatives, and credit derivatives. For such instruments, where quoted market prices or third-party consensus pricing information are not available, valuation techniques are employed to estimate fair value on the basis of pricing models. Such vetted pricing models incorporate current market measures for interest rates, foreign exchange rates, equity and commodity prices and indices, credit spreads, corresponding market volatility levels, and other market-based pricing factors.

In order to reflect the observed market practice of pricing collateralized and uncollateralized derivatives, our valuation approach uses overnight indexed swap (OIS) curves as the discount rate for valuing collateralized derivatives and uses an estimated market cost of funds curve as the discount rate for valuing uncollateralized derivatives. Uncollateralized derivatives are valued based on an estimated market cost of funds curve, which reduces the fair value of uncollateralized derivative assets incremental to the reduction in fair value for credit risk already reflected through the credit valuation adjustment (CVA). In contrast, the use of a market cost of funds curve reduces the fair value of uncollateralized derivative liabilities in a manner that generally includes adjustments for our own credit. As market practices continue to evolve in regard to derivative valuation, further adjustments may be required in the future.

In addition to reflecting estimated market funding costs in our valuation of uncollateralized derivative receivables, we also consider whether a CVA is required to recognize the risk that any given derivative counterparty may not ultimately be able to fulfill its obligations. The CVA is driven off market-observed credit spreads or proxy credit spreads and our assessment of the net counterparty credit risk (CCR) exposure. In assessing this exposure, we also take into account credit mitigants such as collateral, master netting arrangements, and settlements through clearing houses. As noted above, the fair value of uncollateralized derivative liabilities based on market cost of funding generally includes adjustments for our own credit.

In determining the fair value of complex and customized derivatives, such as equity, credit, and commodity derivatives written in reference to indices or baskets of reference, we consider all reasonably available information including any relevant observable market inputs, third-party consensus pricing inputs, indicative dealer and broker quotations, and our own internal model-based estimates, which are vetted and approved in accordance with our model risk policy, and are regularly and periodically calibrated. The model calculates fair value based on inputs specific to the type of contract, which may include stock prices, correlation for multiple assets, interest rates, foreign exchange rates, yield curves, volatility surfaces, and the probability of early termination. Where observable prices or inputs are not available, management judgment is required to determine fair values by assessing other relevant sources of information such as historical data, proxy information from similar transactions, and through extrapolation and interpolation techniques. Appropriate parameter uncertainty and market risk valuation adjustments for such inputs and other model risk valuation adjustments are assessed in all such instances.

Mortgage commitments

The fair value of mortgage commitments designated at FVTPL is for fixed-rate residential mortgage commitments and is based on changes in market interest rates for the loans between the commitment and the consolidated balance sheet dates. The valuation model takes into account the expected probability that outstanding commitments will be exercised as well as the length of time the commitment is offered.

Fair value of financial instruments

$ millions, as at October 31		Carrying value						
		Amortized cost	Mandatorily measured at FVTPL	Designated at FVTPL	Fair value through OCI	Total	Fair value	Fair value over (under) carrying value
2022	**Financial assets**							
	Cash and deposits with banks	**$ 62,193**	**$ 1,668**	**$ –**	**$ –**	**$ 63,861**	**$ 63,861**	**$ –**
	Securities	**52,484**	**67,296**	**–**	**56,099**	**175,879**	**173,663**	**(2,216)**
	Cash collateral on securities borrowed	**15,326**	**–**	**–**	**–**	**15,326**	**15,326**	**–**
	Securities purchased under resale agreements	**53,626**	**15,587**	**–**	**–**	**69,213**	**69,213**	**–**
	Loans							
	Residential mortgages	**269,409**	**4**	**–**	**–**	**269,413**	**262,865**	**(6,548)**
	Personal	**44,527**	**–**	**–**	**–**	**44,527**	**44,394**	**(133)**
	Credit card	**15,695**	**–**	**–**	**–**	**15,695**	**15,775**	**80**
	Business and government	**186,485**	**758**	**205**	**–**	**187,448**	**186,967**	**(481)**
	Derivative instruments	**–**	**43,035**	**–**	**–**	**43,035**	**43,035**	**–**
	Customers' liability under acceptances	**11,574**	**–**	**–**	**–**	**11,574**	**11,574**	**–**
	Other assets	**26,387**	**–**	**–**	**–**	**26,387**	**26,387**	**–**
	Financial liabilities							
	Deposits							
	Personal	**$ 220,244**	**$ –**	**$ 11,851**	**$ –**	**$ 232,095**	**$ 231,532**	**$ (563)**
	Business and government	**383,502**	**–**	**13,686**	**–**	**397,188**	**397,145**	**(43)**
	Bank	**22,523**	**–**	**–**	**–**	**22,523**	**22,523**	**–**
	Secured borrowings	**44,110**	**–**	**1,656**	**–**	**45,766**	**45,507**	**(259)**
	Derivative instruments	**–**	**52,340**	**–**	**–**	**52,340**	**52,340**	**–**
	Acceptances	**11,586**	**–**	**–**	**–**	**11,586**	**11,586**	**–**
	Obligations related to securities sold short	**–**	**15,284**	**–**	**–**	**15,284**	**15,284**	**–**
	Cash collateral on securities lent	**4,853**	**–**	**–**	**–**	**4,853**	**4,853**	**–**
	Obligations related to securities sold under repurchase agreements	**73,084**	**–**	**4,087**	**–**	**77,171**	**77,171**	**–**
	Other liabilities	**19,830**	**102**	**22**	**–**	**19,954**	**19,954**	**–**
	Subordinated indebtedness	**6,292**	**–**	**–**	**–**	**6,292**	**6,329**	**37**
2021	**Financial assets**							
	Cash and deposits with banks	$ 56,701	$ 296	$ –	$ –	$ 56,997	$ 56,997	$ –
	Securities	35,159	72,192	53	53,997	161,401	161,712	311
	Cash collateral on securities borrowed	12,368	–	–	–	12,368	12,368	–
	Securities purchased under resale agreements	60,482	7,090	–	–	67,572	67,572	–
	Loans							
	Residential mortgages	251,230	16	–	–	251,246	249,786	(1,460)
	Personal	41,129	–	–	–	41,129	41,114	(15)
	Credit card	10,509	–	–	–	10,509	10,509	–
	Business and government (1)	123,054	25,651	332	–	149,037	148,960	(77)
	Derivative instruments	–	35,912	–	–	35,912	35,912	–
	Customers' liability under acceptances	10,958	–	–	–	10,958	10,958	–
	Other assets	21,054	–	–	–	21,054	21,054	–
	Financial liabilities							
	Deposits							
	Personal	$ 205,461	$ –	$ 8,471	$ –	$ 213,932	$ 213,949	$ 17
	Business and government	334,632	–	9,756	–	344,388	345,533	1,145
	Bank	20,246	–	–	–	20,246	20,246	–
	Secured borrowings	41,539	–	1,053	–	42,592	42,838	246
	Derivative instruments	–	32,101	–	–	32,101	32,101	–
	Acceptances	10,961	–	–	–	10,961	10,961	–
	Obligations related to securities sold short	–	22,790	–	–	22,790	22,790	–
	Cash collateral on securities len t	2,463	–	–	–	2,463	2,463	–
	Obligations related to securities sold under repurchase agreements	67,905	–	3,975	–	71,880	71,880	–
	Other liabilities	16,854	113	51	–	17,018	17,018	–
	Subordinated indebtedness	5,539	–	–	–	5,539	5,820	281

(1) Includes $24.8 billion of FVTPL loans that matured in 2022.

Fair value of derivative instruments

$ millions, as at October 31		2022			2021		
		Positive	**Negative**	**Net**	Positive	Negative	Net
Held for trading							
Interest rate derivatives							
Over-the-counter	– Forward rate agreements	**$ –**	**$ 1**	**$ (1)**	$ 127	$ 79	$ 48
	– Swap contracts	**6,688**	**12,762**	**(6,074)**	8,365	7,928	437
	– Purchased options	**491**	**–**	**491**	101	–	101
	– Written options	**–**	**354**	**(354)**	–	177	(177)
		7,179	**13,117**	**(5,938)**	8,593	8,184	409
Exchange-traded	– Futures contracts	**3**	**1**	**2**	–	–	–
	– Purchased options	**3**	**–**	**3**	3	–	3
		6	**1**	**5**	3	–	3
Total interest rate derivatives		**7,185**	**13,118**	**(5,933)**	8,596	8,184	412
Foreign exchange derivatives							
Over-the-counter	– Forward contracts	**10,650**	**11,798**	**(1,148)**	5,373	5,555	(182)
	– Swap contracts	**8,252**	**10,198**	**(1,946)**	5,214	3,600	1,614
	– Purchased options	**561**	**–**	**561**	293	–	293
	– Written options	**–**	**481**	**(481)**	–	203	(203)
Total foreign exchange derivatives		**19,463**	**22,477**	**(3,014)**	10,880	9,358	1,522
Credit derivatives							
Over-the-counter	– Credit default swap contracts – protection purchased	**53**	**12**	**41**	50	58	(8)
	– Credit default swap contracts – protection sold	**6**	**51**	**(45)**	3	45	(42)
Total credit derivatives		**59**	**63**	**(4)**	53	103	(50)
Equity derivatives							
Over-the-counter		**2,338**	**3,110**	**(772)**	1,842	5,356	(3,514)
Exchange-traded		**2,775**	**3,220**	**(445)**	4,650	3,422	1,228
Total equity derivatives		**5,113**	**6,330**	**(1,217)**	6,492	8,778	(2,286)
Precious metal and other commodity derivatives [1]							
Over-the-counter		**8,163**	**2,989**	**5,174**	8,283	2,495	5,788
Exchange-traded		**118**	**1,301**	**(1,183)**	343	1,122	(779)
Total precious metal and other commodity derivatives		**8,281**	**4,290**	**3,991**	8,626	3,617	5,009
Total held for trading		**40,101**	**46,278**	**(6,177)**	34,647	30,040	4,607
Held for ALM							
Interest rate derivatives							
Over-the-counter	– Forward rate agreements	**696**	**62**	**634**	148	37	111
	– Swap contracts	**391**	**1,194**	**(803)**	236	341	(105)
	– Purchased options	**1**	**–**	**1**	6	–	6
	– Written options	**–**	**10**	**(10)**	–	–	–
Total interest rate derivatives		**1,088**	**1,266**	**(178)**	390	378	12
Foreign exchange derivatives							
Over-the-counter	– Forward contracts	**29**	**129**	**(100)**	22	40	(18)
	– Swap contracts	**1,805**	**4,623**	**(2,818)**	805	1,641	(836)
Total foreign exchange derivatives		**1,834**	**4,752**	**(2,918)**	827	1,681	(854)
Credit derivatives							
Over-the-counter	– Credit default swap contracts – protection purchased	**–**	**–**	**–**	–	1	(1)
Total credit derivatives		**–**	**–**	**–**	–	1	(1)
Equity derivatives							
Over-the-counter		**12**	**44**	**(32)**	48	1	47
Total equity derivatives		**12**	**44**	**(32)**	48	1	47
Total held for ALM		**2,934**	**6,062**	**(3,128)**	1,265	2,061	(796)
Total fair value		**43,035**	**52,340**	**(9,305)**	35,912	32,101	3,811
Less: effect of netting		**(25,999)**	**(25,999)**	**–**	(16,585)	(16,585)	–
		$ 17,036	**$ 26,341**	**$ (9,305)**	$ 19,327	$ 15,516	$ 3,811

(1) Certain prior year information has been revised to conform to current year presentation.

Financial assets and liabilities not carried on the consolidated balance sheet at fair value

The table below presents the fair values by level within the fair value hierarchy for those financial instruments in which fair value is not assumed to equal the carrying value:

	Level 1		Level 2		Level 3			
	Quoted market price		Valuation technique – observable market inputs		Valuation technique – non-observable market inputs		**Total**	Total
$ millions, as at October 31	**2022**	2021	**2022**	2021	**2022**	2021	**2022**	2021
Financial assets								
Amortized cost securities	**$ –**	$ –	**$ 49,576**	$ 34,878	**$ 692**	$ 592	**$ 50,268**	$ 35,470
Loans								
Residential mortgages	**–**	–	**–**	–	**262,861**	249,770	**262,861**	249,770
Personal	**–**	–	**–**	–	**44,394**	41,114	**44,394**	41,114
Credit card	**–**	–	**–**	–	**15,775**	10,509	**15,775**	10,509
Business and government	**–**	–	**–**	–	**186,004**	122,977	**186,004**	122,977
Financial liabilities								
Deposits								
Personal	**$ –**	$ –	**$ 62,636**	$ 42,015	**$ 1,899**	$ 1,107	**$ 64,535**	$ 43,122
Business and government	**–**	–	**179,182**	146,442	**1,766**	2,222	**180,948**	148,664
Bank	**–**	–	**10,724**	9,751	**–**	–	**10,724**	9,751
Secured borrowings	**–**	–	**40,913**	40,050	**2,938**	1,735	**43,851**	41,785
Subordinated indebtedness	**–**	–	**6,329**	5,820	**–**	–	**6,329**	5,820

Financial instruments carried on the consolidated balance sheet at fair value

The table below presents the fair values of financial instruments by level within the fair value hierarchy:

	Level 1		Level 2		Level 3			
	Quoted market price		Valuation technique – observable market inputs		Valuation technique – non-observable market inputs		**Total**	Total
$ millions, as at October 31	**2022**	2021	**2022**	2021	**2022**	2021	**2022**	2021
Financial assets								
Deposits with banks	**$ –**	$ –	**$ 1,668**	$ 296	**$ –**	$ –	**$ 1,668**	$ 296
Debt securities mandatorily measured and designated at FVTPL								
Government issued or guaranteed	**2,611**	3,015	**25,539** [1]	24,737 [1]	**–**	–	**28,150**	27,752
Corporate debt	**–**	–	**3,609**	3,997	**2**	2	**3,611**	3,999
Mortgage- and asset-backed	**–**	–	**3,656** [2]	2,235 [2]	**207**	55	**3,863**	2,290
	2,611	3,015	**32,804**	30,969	**209**	57	**35,624**	34,041
Loans mandatorily measured at FVTPL								
Business and government	**–**	–	**276**	24,945	**687** [3]	1,038 [3]	**963**	25,983
Residential mortgages	**–**	–	**4**	16	**–**	–	**4**	16
	–	–	**280**	24,961	**687**	1,038	**967**	25,999
Debt securities measured at FVOCI								
Government issued or guaranteed	**4,888**	5,309	**42,200**	38,122	**–**	–	**47,088**	43,431
Corporate debt	**–**	–	**6,967**	7,833	**–**	–	**6,967**	7,833
Mortgage- and asset-backed	**–**	–	**1,522**	1,897	**–**	–	**1,522**	1,897
	4,888	5,309	**50,689**	47,852	**–**	–	**55,577**	53,161
Corporate equity mandatorily measured at FVTPL and designated at FVOCI [4]	**30,962**	38,106	**773**	538	**459**	396	**32,194**	39,040
Securities purchased under resale agreements measured at FVTPL	**–**	–	**15,587**	7,090	**–**	–	**15,587**	7,090
Derivative instruments								
Interest rate	**6**	3	**8,249**	8,948	**18**	35	**8,273**	8,986
Foreign exchange	**–**	–	**21,297**	11,707	**–**	–	**21,297**	11,707
Credit	**–**	–	**14**	4	**45**	49	**59**	53
Equity	**2,776**	4,650	**2,345**	1,877	**4**	13	**5,125**	6,540
Precious metal and other commodity [4]	**94**	343	**8,187**	8,283	**–**	–	**8,281**	8,626
	2,876	4,996	**40,092**	30,819	**67**	97	**43,035**	35,912
Total financial assets	**$ 41,337**	$ 51,426	**$ 141,893**	$ 142,525	**$ 1,422**	$ 1,588	**$ 184,652**	$ 195,539
Financial liabilities								
Deposits and other liabilities [5]	**$ –**	$ –	**$ (26,908)**	$ (18,702)	**$ (409)**	$ (742)	**$ (27,317)**	$ (19,444)
Obligations related to securities sold short	**(5,499)**	(11,226)	**(9,785)**	(11,564)	**–**	–	**(15,284)**	(22,790)
Obligations related to securities sold under repurchase agreements	**–**	–	**(4,087)**	(3,975)	**–**	–	**(4,087)**	(3,975)
Derivative instruments								
Interest rate	**(1)**	–	**(12,850)**	(8,426)	**(1,533)**	(136)	**(14,384)**	(8,562)
Foreign exchange	**–**	–	**(27,229)**	(11,039)	**–**	–	**(27,229)**	(11,039)
Credit	**–**	–	**(13)**	(50)	**(50)**	(54)	**(63)**	(104)
Equity	**(3,220)**	(3,422)	**(3,151)**	(5,280)	**(3)**	(77)	**(6,374)**	(8,779)
Precious metal and other commodity [4]	**(365)**	(1,122)	**(3,925)**	(2,495)	**–**	–	**(4,290)**	(3,617)
	(3,586)	(4,544)	**(47,168)**	(27,290)	**(1,586)**	(267)	**(52,340)**	(32,101)
Total financial liabilities	**$ (9,085)**	$ (15,770)	**$ (87,948)**	$ (61,531)	**$ (1,995)**	$ (1,009)	**$ (99,028)**	$ (78,310)

(1) Includes nil related to securities designated at FVTPL (2021: $49 million).
(2) Includes nil related to ABS designated at FVTPL (2021: $4 million).
(3) Includes $205 million related to loans designated at FVTPL (2021: $332 million).
(4) Certain prior year information has been reclassified to conform to the current year presentation.
(5) Comprises deposits designated at FVTPL of $26,802 million (2021: $18,530 million), net bifurcated embedded derivative liabilities of $391 million (2021: net bifurcated embedded derivative liabilities of $750 million), other liabilities designated at FVTPL of $22 million (2021: $51 million), and other financial liabilities measured at fair value of $02 million (2021: $113 million).

Transfers between levels in the fair value hierarchy are deemed to have occurred at the beginning of the year in which the transfer occurred. Transfers between levels can occur as a result of additional or new information regarding valuation inputs and changes in their observability. During the year, we transferred $1,287 million of securities mandatorily measured at FVTPL (2021: $19 million) from Level 1 to Level 2 and nil (2021: $2 million) from Level 2 to Level 1, $4,532 million of securities sold short (2021: nil) from Level 1 to Level 2 and nil of securities sold short (2021: nil) from Level 2 to Level 1 due to changes in the observability of the inputs used to value these securities. In addition, transfers between Level 2 and Level 3 were made during 2022 and 2021, primarily due to changes in the assessment of the observability of certain correlation, market volatility and probability inputs that were used in measuring the fair value of our fair value option liabilities and derivatives.

The following table presents the changes in fair value of financial assets and liabilities in Level 3. These instruments are measured at fair value utilizing non-observable market inputs. We often hedge positions with offsetting positions that may be classified in a different level. As a result, the gains and losses for assets and liabilities in the Level 3 category presented in the table below do not reflect the effect of offsetting gains and losses on the related hedging instruments that are classified in Level 1 and Level 2.

$ millions, for the year ended October 31	Opening balance	Net gains (losses) included in income [1] Realized [2]	Net gains (losses) included in income [1] Unrealized [2][3]	Net gains (losses) included in OCI [4]	Transfer in to Level 3	Transfer out of Level 3	Purchases/ Issuances	Sales/ Settlements	Closing balance
2022									
Debt securities mandatorily measured and designated at FVTPL									
Corporate debt	**$ 2**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ 2**
Mortgage- and asset-backed	**55**	**–**	**–**	**–**	**–**	**–**	**205**	**(53)**	**207**
Loans mandatorily measured at FVTPL									
Business and government	**1,038**	**–**	**(15)**	**59**	**–**	**–**	**58**	**(453)**	**687**
Corporate equity mandatorily measured at FVTPL and designated at FVOCI[5]	**396**	**11**	**53**	**(21)**	**–**	**–**	**102**	**(82)**	**459**
Derivative instruments									
Interest rate	**35**	**–**	**(46)**	**–**	**27**	**–**	**1**	**1**	**18**
Credit	**49**	**(8)**	**4**	**–**	**–**	**–**	**–**	**–**	**45**
Equity	**13**	**1**	**(2)**	**–**	**12**	**(21)**	**3**	**(2)**	**4**
Total assets	**$ 1,588**	**$ 4**	**$ (6)**	**$ 38**	**$ 39**	**$ (21)**	**$ 369**	**$ (589)**	**$ 1,422**
Deposits and other liabilities [6]	**$ (742)**	**$ (68)**	**$ 58**	**$ –**	**$ –**	**$ 3**	**$ (131)**	**$ 471**	**$ (409)**
Derivative instruments									
Interest rate	**(136)**	**–**	**(1,288)**	**–**	**–**	**11**	**(95)**	**(25)**	**(1,533)**
Credit	**(54)**	**8**	**(4)**	**–**	**–**	**–**	**–**	**–**	**(50)**
Equity	**(77)**	**4**	**(15)**	**–**	**(1)**	**75**	**(5)**	**16**	**(3)**
Total liabilities	**$ (1,009)**	**$ (56)**	**$ (1,249)**	**$ –**	**$ (1)**	**$ 89**	**$ (231)**	**$ 462**	**$ (1,995)**
2021									
Debt securities mandatorily measured and designated at FVTPL									
Corporate debt	$ 25	$ –	$ 13	$ –	$ –	$ –	$ 2	$ (38)	$ 2
Mortgage- and asset-backed	135	–	–	–	–	–	44	(124)	55
Loans mandatorily measured at FVTPL									
Business and government	626	–	(3)	(51)	–	–	556	(90)	1,038
Corporate equity mandatorily measured at FVTPL and designated at FVOCI[5]	256	–	(5)	80	–	–	160	(95)	396
Derivative instruments									
Interest rate	48	–	1	–	–	(2)	3	(15)	35
Credit	98	(22)	(27)	–	–	–	–	–	49
Equity	212	(3)	2	–	–	(32)	10	(176)	13
Total assets	$ 1,400	$ (25)	$ (19)	$ 29	$ –	$ (34)	$ 775	$ (538)	$ 1,588
Deposits and other liabilities [6]	$ 4	$ (340)	$ (541)	$ –	$ (15)	$ (14)	$ (93)	$ 257	$ (742)
Derivative instruments									
Interest rate	(28)	–	(28)	–	(26)	(6)	(31)	(17)	(136)
Credit	(107)	22	34	–	–	–	–	(3)	(54)
Equity	(163)	(41)	(6)	–	–	58	(69)	144	(77)
Total liabilities	$ (294)	$ (359)	$ (541)	$ –	$ (41)	$ 38	$ (193)	$ 381	$ (1,009)

(1) Cumulative AOCI gains or losses related to equity securities designated at FVOCI are reclassified from AOCI to retained earnings at the time of disposal or derecognition.
(2) Includes foreign currency gains and losses related to debt securities measured at FVOCI.
(3) Comprises unrealized gains and losses relating to these assets and liabilities held at the end of the reporting year.
(4) Foreign exchange translation on loans mandatorily measured at FVTPL held by foreign operations and denominated in the same currency as the foreign operations is included in OCI.
(5) Certain prior year information has been reclassified to conform to the current year presentation.
(6) Includes deposits designated at FVTPL of $70 million (2021: $90 million), net bifurcated embedded derivative liabilities of $17 million (2021: net bifurcated embedded derivative liabilities of $61 million) and other liabilities designated at FVTPL of $22 million (2021: $51 million).

Quantitative information about significant non-observable inputs

Valuation techniques using one or more non-observable inputs are used for a number of financial instruments. The following table discloses the valuation techniques and quantitative information about the significant non-observable inputs used in Level 3 financial instruments:

$ millions, as at October 31	2022	Valuation techniques	Key non-observable inputs	Range of inputs Low	Range of inputs High
Securities mandatorily measured and designated at FVTPL					
Corporate debt [1]	$ 2	Discounted cash flow	Discount rate	6.9 %	6.9 %
Mortgage- and asset-backed	207	Discounted cash flow	Credit spread	5.4 %	5.9 %
		Market proxy or direct broker quote	Market proxy or direct broker quote	0.5	0.5
Corporate equity mandatorily measured at FVTPL and designated at FVOCI					
Limited partnerships and private companies [1]	459	Adjusted net asset value [2]	Net asset value [3]	n/a	n/a
		Valuation multiple	Earnings multiple	7.9 x	9.8 x
		Proxy share price	Proxy share price	n/a	n/a
Loans mandatorily measured at FVTPL Business and government	687	Discounted cash flow	Credit spread	0.6 %	2.1 %
Derivative instruments					
Interest rate	18	Proprietary model [4]	n/a	n/a	n/a
		Option model	Market volatility	48.8 %	162.8 %
			Probability assumption	100.0 %	100.0 %
Credit	45	Market proxy or direct broker quote	Market proxy or direct broker quote	– %	40.0 %
Equity	4	Option model	Market correlation	46.8 %	98.2 %
Total assets	$ 1,422				
Deposits and other liabilities					
Deposits designated at FVTPL and net bifurcated embedded derivative liabilities	$ (387)	Option model	Market volatility	17.3 %	30.9 %
			Market correlation	(100.0)%	100.0 %
Other liabilities designated at FVTPL	(22)	Option model	Funding ratio	40.2 %	40.2 %
Derivative instruments					
Interest rate	(1,533)	Proprietary model [4]	n/a	n/a	n/a
		Option model	Market volatility	48.8 %	162.8 %
			Probability assumption	100.0 %	100.0 %
Credit	(50)	Market proxy or direct broker quote	Market proxy or direct broker quote	– %	40.0 %
Equity	(3)	Option model	Market correlation	35.4 %	98.2 %
Total liabilities	$(1,995)				

(1) Certain prior year information has been reclassified to conform to the current year presentation.
(2) Adjusted net asset value is determined using reported net asset values obtained from the fund manager or general partner of the limited partnership or the limited liability company and may be adjusted for current market levels where appropriate.
(3) The range of net asset value price or proxy share price has not been disclosed due to the wide range and diverse nature of the investments.
(4) Using valuation techniques that we consider to be non-observable.
n/a Not applicable.

Sensitivity of Level 3 financial assets and liabilities

The following section describes the significant non-observable inputs identified in the table above, the interrelationships between those inputs, where applicable, and the change in fair value if changing one or more of the non-observable inputs within a reasonably possible range would impact the fair value significantly.

The fair value of our limited partnerships is determined based on the net asset value provided by the fund managers, adjusted as appropriate. The fair value of limited partnerships is sensitive to changes in the net asset value, and by adjusting the net asset value within a reasonably possible range, the aggregate fair value of our limited partnerships would increase or decrease by $109 million (2021: $90 million).

While our standalone derivatives are recorded as derivative assets or derivative liabilities, our derivatives embedded in our structured note deposit liabilities or deposit liabilities designated at FVTPL are recorded within deposits and other liabilities. The determination of the fair value of certain Level 3 embedded derivatives and certain standalone derivatives requires significant assumptions and judgment to be applied to both the inputs and the valuation techniques employed. These derivatives are sensitive to long-dated market volatility and correlation inputs, which we consider to be non-observable. Market volatility is a measure of the anticipated future variability of a market price and is an important input for pricing options, which are inherent in many of our Level 3 derivatives. A higher market volatility generally results in a higher option price, with all else held constant, due to the higher probability of obtaining a greater return from the option, and results in an increase in the fair value of our Level 3 derivatives. Correlation inputs are used to value those derivatives where the payout is dependent upon more than one market price. For example, the payout of an equity basket option is based upon the performance of a basket of stocks, and the interrelationships between the price movements of those stocks. A positive correlation implies that two inputs tend to change the fair value in the same direction, while a negative correlation implies that two inputs tend to change the fair value in the opposite direction. Changes in market correlation could result in an increase or a decrease in the fair value of our Level 3 derivatives and embedded derivatives. By adjusting the non-observable inputs by reasonably alternative amounts, the fair value of our net Level 3 standalone derivatives and embedded derivatives would increase by $128 million or decrease by $127 million (2021: increase by $95 million or decrease by $86 million).

For certain interest rate derivatives, the probability of early termination was a significant Level 3 valuation input. By increasing the probability of early termination by 10%, the fair value of those derivatives in an asset position would decrease by less than $1 million, while the fair value of those derivatives in a liability position would decrease by up to $ 62 million.

Financial instruments designated at FVTPL
Financial assets designated at FVTPL include certain debt securities and loans that were designated at FVTPL on the basis of being managed together with derivatives to eliminate or significantly reduce financial risks.

Deposits and other liabilities designated at FVTPL include:
- Certain business and government deposit liabilities, certain secured borrowings and certain obligations related to securities sold under repurchase agreements that are economically hedged with derivatives and other financial instruments, and certain financial liabilities that have one or more embedded derivatives that significantly modify the cash flows of the host liability but are not bifurcated from the host instrument; and
- Our mortgage commitments to retail clients to provide mortgages at fixed rates that are economically hedged with derivatives and other financial instruments.

The carrying value of our securities designated at FVTPL represents our maximum exposure to credit risk related to these assets designated at FVTPL. The change in fair value attributable to change in credit risk of these assets designated at FVTPL during the year is insignificant (2021: insignificant). The fair value of a liability designated at FVTPL reflects the credit risk relating to that liability. For those liabilities designated at FVTPL for which we believe changes in our credit risk would impact the fair value from the note holders' perspective, the related fair value changes were recognized in OCI. Changes in fair value attributable to changes in our own credit are measured as the difference between: (i) the period-over-period change in the present value of the expected cash flows using a discount curve adjusted for our own credit; and (ii) the period-over-period change in the present value of the same expected cash flows using a discount curve based on the benchmark curve adjusted for our own credit as implied at inception of the liability designated at FVTPL. The pre-tax impact of changes in CIBC's own credit risk on our liabilities designated at FVTPL was gains of $355 million for the year and gains of $316 million cumulatively (2021: gains of $16 million for the year and losses of $39 million cumulatively). A net gain of $81 million, net of hedges (2021: a net gain of $50 million), was realized for assets designated at FVTPL and liabilities designated at FVTPL, which is included in the consolidated statement of income under Gains (losses) from financial instruments measured/designated at FVTPL, net.

The estimated contractual amount payable at maturity of deposits designated at FVTPL, which is based on the par value and the intrinsic value of the applicable embedded derivatives, is $3,576 million higher (2021: $872 million higher) than its fair value. The intrinsic value of the embedded derivatives reflects the structured payoff of certain FVO deposit liabilities, which we hedge economically with derivatives and other FVTPL financial instruments.

Note 3 | Significant transactions

2022

Acquisition of Canadian Costco credit card portfolio
On March 4, 2022, we completed the acquisition of the Canadian Costco credit card portfolio, which had an outstanding balance of $2.9 billion, for cash consideration of $3.1 billion. We have also entered into a long-term agreement under which we have become the exclusive issuer of Costco-branded MasterCard credit cards in Canada. The combined transaction was accounted for as an asset acquisition and included in our Canadian Personal and Business Banking SBU. On the acquisition date, we recognized credit card receivables at their fair value of $2.8 billion and an intangible asset for the purchased credit card relationships. During the fourth quarter of 2022, we finalized the purchase consideration and recognized a reduction in the intangible asset to its fair value of $236 million.

Sale of certain banking assets in the Caribbean
On February 25, 2022, FirstCaribbean International Bank Limited (CIBC FirstCaribbean) completed the sale of its banking assets in Aruba upon the satisfaction of the closing conditions.
The proposed sales of banking assets in St. Vincent and St. Kitts received regulatory approval in the third quarter of 2022 and are expected to close by the third quarter of 2023, subject to the satisfaction of closing conditions. In September 2022, CIBC FirstCaribbean announced that its operations in Dominica will cease on January 31, 2023. The impacts upon the closing of these transactions and closures are not expected to be material.

2021

Sale of CIBC FirstCaribbean
On November 8, 2019, we announced that we had entered into a definitive agreement to sell 66.73% of the outstanding shares of CIBC FirstCaribbean to GNB Financial Group Limited (GNB), subject to regulatory approvals. On February 3, 2021, we announced that the proposed sale of CIBC FirstCaribbean to GNB did not receive approval from CIBC FirstCaribbean's regulators and that the transaction will not proceed.

Note 4 | Securities

Securities

$ millions, as at October 31	2022	2021
Securities measured and designated at FVOCI [1]	$ 56,099	$ 53,997
Securities measured at amortized cost [2]	52,484	35,159
Securities mandatorily measured and designated at FVTPL	67,296	72,245
	$ 175,879	$ 161,401

(1) Certain prior year information has been reclassified to conform to the current year presentation.
(2) During the year, less than $1 million of amortized cost debt securities were disposed of, generally shortly before their maturity, resulting in a realized gain of less than $1 million (2021: a realized gain of less than $1 million).

	Residual term to contractual maturity													
	Within 1 year		1 to 5 years		5 to 10 years		Over 10 years		No specific maturity		2022 Total		2021 Total	
$ millions, as at October 31	Carrying value	Yield [1]	Carrying value	Yield [1]	Carrying value	Yield [1]	Carrying value	Yield [1]	Carrying value	Yield [1]	Carrying value	Yield [1]	Carrying value	Yield [1]
Debt securities measured at FVOCI														
Securities issued or guaranteed by:														
Canadian federal government	$ 2,222	2.9 %	$ 7,050	3.8 %	$ 1,367	3.6 %	$ –	– %	$ –	– %	$ 10,639	3.6 %	$ 8,340	0.9 %
Other Canadian governments	842	1.7	6,422	4.0	9,947	3.5	241	3.4	–	–	17,452	3.6	14,189	2.0
U.S. Treasury and agencies	3,524	2.0	8,300	1.5	135	3.4	–	–	–	–	11,959	1.7	14,127	0.5
Other foreign governments	3,792	2.5	3,047	3.0	176	5.4	23	6.1	–	–	7,038	2.8	6,775	0.7
Mortgage-backed securities [2]	67	2.5	193	3.4	322	2.7	581	3.8	–	–	1,163	3.3	1,545	1.4
Asset-backed securities	–	–	–	–	–	–	359	5.5	–	–	359	5.5	352	1.3
Corporate debt	1,583	3.4	4,549	3.2	819	3.4	16	4.0	–	–	6,967	3.2	7,833	0.5
	$ 12,030		$ 29,561		$ 12,766		$ 1,220		$ –		$ 55,577		$ 53,161	
Securities measured at amortized cost														
Securities issued or guaranteed by:														
Canadian federal government	$ –	– %	$ 2,159	1.8 %	$ 53	4.0 %	$ –	– %	$ –	– %	$ 2,212	1.8 %	$ 1,668	1.2 %
Other Canadian governments	1,102	4.0	8,879	3.2	4,033	4.0	458	4.2	–	–	14,472	3.5	12,020	1.8
U.S. Treasury and agencies	4,430	1.4	19,856	1.4	2,565	2.0	–	–	–	–	26,851	1.5	12,874	1.3
Other foreign governments	62	0.5	382	1.7	204	2.4	533	1.4	–	–	1,181	1.7	695	1.1
Mortgage-backed securities [3]	374	0.5	1,436	1.6	1,318	2.2	509	2.8	–	–	3,637	1.9	3,412	1.6
Asset-backed securities	–	–	103	2.4	347	4.6	40	8.3	–	–	490	4.4	309	2.3
Corporate debt	869	4.0	2,525	2.4	247	2.2	–	–	–	–	3,641	2.7	4,181	1.3
	$ 6,837		$ 35,340		$ 8,767		$ 1,540		$ –		$ 52,484		$ 35,159	
Securities mandatorily measured and designated at FVTPL														
Securities issued or guaranteed by:														
Canadian federal government	$ 2,850		$ 3,914		$ 2,323		$ 1,735		$ –		$ 10,822		$ 8,452	
Other Canadian governments	1,294		1,764		890		4,686		–		8,634		10,334	
U.S. Treasury and agencies	1,534		2,553		633		486		–		5,206		4,935	
Other foreign governments	2,485		894		66		43		–		3,488		4,031	
Mortgage-backed securities [4]	331		2,332		215		–		–		2,878		1,957	
Asset-backed securities	821		157		4		3		–		985		333	
Corporate debt	1,192		1,438		661		320		–		3,611		3,999	
	$ 10,507		$ 13,052		$ 4,792		$ 7,273		$ –		$ 35,624		$ 34,041	
Corporate equity mandatorily measured at FVTPL and designated at FVOCI (5)	$ –	– %	$ –	– %	$ –	– %	$ –	– %	$ 32,194	n/m	$ 32,194	n/m	$ 39,040	n/m
Total securities [6]	$ 29,374		$ 77,953		$ 26,325		$ 10,033		$ 32,194		$ 175,879		$ 161,401	

(1) Represents the weighted-average yield, which is determined by applying the weighted average of the yields of individual fixed income securities.
(2) Includes securities backed by mortgages insured by the Canada Mortgage and Housing Corporation (CMHC), with amortized cost of $92 million (2021: $301 million) and fair value of $93 million (2021: $303 million); securities issued by Federal National Mortgage Association (Fannie Mae), with amortized cost of $439 million (2021: $537 million) and fair value of $416 million (2021: $554 million); securities issued by Federal Home Loan Mortgage Corporation (Freddie Mac), with amortized cost of $190 million (2021: $235 million) and fair value of $180 million (2021: $243 million); and securities issued by Government National Mortgage Association, a U.S. government corporation (Ginnie Mae), with amortized cost of $381 million (2021: $443 million) and fair value of $374 million (2021: $445 million).
(3) Includes securities backed by mortgages insured by the CMHC, with amortized cost of $225 million (2021: $419 million) and fair value of $225 million (2021: $420 million); securities issued by Fannie Mae, with amortized cost of $806 million (2021: $838 million) and fair value of $743 million (2021: $851 million); securities issued by Freddie Mac, with amortized cost of $1,962 million (2021: $1,823 million) and fair value of $1,777 million (2021: $1,859 million); and securities issued by Ginnie Mae, with amortized cost of $7 million (2021: $39 million) and fair value of $2 million (2021: $40 million).
(4) Includes securities backed by mortgages insured by the CMHC of $2,877 million (2021: $1,954 million).
(5) Certain prior year information has been reclassified to conform to the current year presentation.
(6) Includes securities denominated in U.S. dollars with carrying value of $3.2 billion (2021: $0.2 billion) and securities denominated in other foreign currencies with carrying value of $8,851 million (2021: $4,611 million).
n/m Not meaningful.

Fair value of debt securities measured and equity securities designated at FVOCI

$ millions, as at October 31	2022				2021			
	Cost/ Amortized cost [1]	**Gross unrealized gains**	**Gross unrealized losses**	**Fair value**	Cost/ Amortized cost [1]	Gross unrealized gains	Gross unrealized losses	Fair value
Securities issued or guaranteed by:								
Canadian federal government	**$ 10,646**	**$ 10**	**$ (17)**	**$ 10,639**	$ 8,310	$ 31	$ (1)	$ 8,340
Other Canadian governments	**17,494**	**32**	**(74)**	**17,452**	14,007	182	–	14,189
U.S. Treasury and agencies	**12,305**	**5**	**(351)**	**11,959**	14,157	23	(53)	14,127
Other foreign governments	**7,048**	**21**	**(31)**	**7,038**	6,750	30	(5)	6,775
Mortgage-backed securities	**1,202**	**1**	**(40)**	**1,163**	1,516	29	–	1,545
Asset-backed securities	**375**	**–**	**(16)**	**359**	354	–	(2)	352
Corporate debt	**7,023**	**–**	**(56)**	**6,967**	7,820	15	(2)	7,833
	56,093	**69**	**(585)**	**55,577**	52,914	310	(63)	53,161
Corporate equity [2][3]	**525**	**31**	**(34)**	**522**	730	144	(38)	836
	$ 56,618	**$ 100**	**$ (619)**	**$ 56,099**	$ 53,644	$ 454	$ (101)	$ 53,997

(1) Net of allowance for credit losses for debt securities measured at FVOCI of $24 million (2021: $19 million).
(2) Includes restricted stock.
(3) Certain prior year information has been reclassified to conform to the current year presentation.

Fair value of equity securities designated at FVOCI that were disposed of during the year was $ 104 million (2021: $25 million) at the time of disposal. Net realized cumulative after-tax gains of $45 million for the year (2021: $27 million) were reclassified from AOCI to retained earnings, resulting from dispositions of equity securities designated at FVOCI and return on capital distributions from limited partnerships designated at FVOCI.

Dividend income recognized on equity securities designated at FVOCI that were still held as at October 31, 2022 was $ 7 million (2021: $5 million). Dividend income recognized on equity securities designated at FVOCI that were disposed of during the year was nil (2021: nil).

The table below presents profit or loss recognized on FVOCI debt securities:

$ millions, for the year ended October 31	**2022**	2021
Realized gains	**$ 57**	$ 91
Realized losses	**(23)**	(2)
(Provision for) reversal of credit losses on debt securities	**(2)**	2
	$ 32	$ 91

Allowance for credit losses

The following table provides a reconciliation of the opening balance to the closing balance of the ECL allowance for debt securities measured at FVOCI:

$ millions, as at or for the year ended October 31		**Stage 1** Collective provision 12-month ECL performing	**Stage 2** Collective provision lifetime ECL performing	**Stage 3** Collective and individual provision lifetime ECL credit-impaired	**Total**
2022	**Debt securities measured at FVOCI**				
	Balance at beginning of year	**$ 4**	**$ 15**	**$ –**	**$ 19**
	Provision for (reversal of) credit losses [1]	**–**	**2**	**–**	**2**
	Write-offs	**–**	**–**	**–**	**–**
	Foreign exchange and other	**–**	**3**	**–**	**3**
	Balance at end of year	**$ 4**	**$ 20**	**$ –**	**$ 24**
2021	**Debt securities measured at FVOCI**				
	Balance at beginning of year	$ 18	$ 4	$ –	$ 22
	Provision for (reversal of) credit losses [1]	(13)	11	–	(2)
	Write-offs	–	–	–	–
	Foreign exchange and other	(1)	–	–	(1)
	Balance at end of year	$ 4	$ 15	$ –	$ 19

(1) Included in the Gains (losses) from debt securities measured at FVOCI and amortized cost, net on our consolidated statement ofincome.

Note 5 | Loans[1][2]

$ millions, as at October 31	2022						2021					
	Gross amount	**Stage 3 allowance**	**Stages 1 and 2 allowance**	**Total allowance [3]**	**Net total**	**Allowances as a % of gross loans**	Gross amount	Stage 3 allowance	Stages 1 and 2 allowance	Total allowance [3]	Net total	Allowances as a % of gross loans
Residential mortgages [4]	**$ 269,706**	**$ 167**	**$ 126**	**$ 293**	**$ 269,413**	**0.1 %**	$ 251,526	$ 158	$ 122	$ 280	$ 251,246	0.1%
Personal	**45,429**	**146**	756	**902**	**44,527**	**2.0**	41,897	106	662	768	41,129	1.8
Credit card	**16,479**	–	**784**	**784**	**15,695**	**4.8**	11,134	–	625	625	10,509	5.6
Business and government [4]	**188,542**	**351**	**743**	**1,094**	**187,448**	**0.6**	150,213	508	668	1,176	149,037	0.8
	$ 520,156	**$ 664**	**$ 2,409**	**$ 3,073**	**$ 517,083**	**0.6 %**	$ 454,770	$ 772	$ 2,077	$ 2,849	$ 451,921	0.6%

(1) Loans are net of unearned income of $689 million (2021: $591 million).
(2) Includes gross loans of $111.8 billion (2021: $83.3 billion) denominated in U.S. dollars and $9.8 billion (2021: $9.3 billion) denominated in other foreign currencies.
(3) Includes ECL allowances for customers' liability under acceptances.
(4) Includes $4 million of residential mortgages (2021: $16 million) and $963 million of business and government loans (2021: $25,983 million) that are measuredand designated at FVTPL.

Allowance for credit losses

The following table provides a reconciliation of the opening balance to the closing balance of the ECL allowance:

$ millions, as at or for the year ended October 31	Stage 1	Stage 2	Stage 3	2022
	Collective provision 12-month ECL performing	Collective provision lifetime ECL performing	Collective and individual provision lifetime ECL credit-impaired	Total
Residential mortgages				
Balance at beginning of year	$ 59	$ 63	$ 158	$ 280
Originations net of repayments and other derecognitions	17	(7)	(25)	(15)
Changes in model	(4)	(1)	–	(5)
Net remeasurement (1)	(89)	85	85	81
Transfers (1)				
– to 12-month ECL	82	(77)	(5)	–
– to lifetime ECL performing	(9)	16	(7)	–
– to lifetime ECL credit-impaired	(1)	(12)	13	–
Provision for (reversal of) credit losses (2)	(4)	4	61	61
Write-offs (3)	–	–	(47)	(47)
Recoveries	–	–	2	2
Interest income on impaired loans	–	–	(16)	(16)
Foreign exchange and other	2	2	9	13
Balance at end of year	$ 57	$ 69	$ 167	$ 293
Personal				
Balance at beginning of year	$ 150	$ 547	$ 106	$ 803
Originations net of repayments and other derecognitions	37	(55)	(14)	(32)
Changes in model	1	19	–	20
Net remeasurement (1)	(349)	500	195	346
Transfers (1)				
– to 12-month ECL	336	(333)	(3)	–
– to lifetime ECL performing	(40)	52	(12)	–
– to lifetime ECL credit-impaired	–	(75)	75	–
Provision for (reversal of) credit losses (2)	(15)	108	241	334
Write-offs (3)	–	–	(274)	(274)
Recoveries	–	–	69	69
Interest income on impaired loans	–	–	(4)	(4)
Foreign exchange and other	2	1	8	11
Balance at end of year	$ 137	$ 656	$ 146	$ 939
Credit card				
Balance at beginning of year	$ 136	$ 517	$ –	$ 653
Originations net of repayments and other derecognitions (4)	76	(38)	–	38
Changes in model	–	–	–	–
Net remeasurement (1)	(437)	747	150	460
Transfers (1)				
– to 12-month ECL	436	(436)	–	–
– to lifetime ECL performing	(52)	52	–	–
– to lifetime ECL credit-impaired	–	(133)	133	–
Provision for (reversal of) credit losses (2)	23	192	283	498
Write-offs (3)	–	–	(397)	(397)
Recoveries	–	–	114	114
Interest income on impaired loans	–	–	–	–
Foreign exchange and other	–	–	–	–
Balance at end of year	$ 159	$ 709	$ –	$ 868
Business and government				
Balance at beginning of year	$ 277	$ 449	$ 508	$ 1,234
Originations net of repayments and other derecognitions	41	(12)	(34)	(5)
Changes in model	30	(4)	–	26
Net remeasurement (1)	(95)	89	149	143
Transfers (1)				
– to 12-month ECL	98	(91)	(7)	–
– to lifetime ECL performing	(34)	38	(4)	–
– to lifetime ECL credit-impaired	(1)	(7)	8	–
Provision for (reversal of) credit losses (2)	39	13	112	164
Write-offs (3)	–	–	(312)	(312)
Recoveries	–	–	33	33
Interest income on impaired loans	–	–	(15)	(15)
Foreign exchange and other	19	28	25	72
Balance at end of year	$ 335	$ 490	$ 351	$ 1,176
Total ECL allowance (5)	$ 688	$ 1,924	$ 664	$ 3,276
Comprises:				
Loans	$ 600	$ 1,809	$ 664	$ 3,073
Undrawn credit facilities and other off-balance sheet exposures (6)	88	115	–	203

(1) Transfers represent stage movements of prior year ECL allowances to the current year stage classification. Net remeasurement represents the current year change in ECL allowances for transfers, net write-offs, changes in forecasts of forward-looking information, parameter updates, and partial repayments in the year.
(2) Provision for (reversal of) credit losses for loans, and undrawn credit facilities and other off-balance sheet exposures is presented as Provision for (reversal of) credit losses on our consolidated statement of income.
(3) We generally continue to pursue collection on the amounts that were written off. The degree of collection efforts varies from one jurisdiction to another, depending on the local regulations and original agreements with customers.
(4) Includes ECL allowances of $63 million recognized immediately after the acquisition of the Canadian Costco credit card portfolio on March 4, 2022.
(5) See Note 4 for the ECL allowance on debt securities measured at FVOCI. The table above excludes the ECL allowance on debt securities classified at amortized cost of $5 million as at October 31, 2022 (2021: $5 million), $12 million of which was stage 3 ECL allowance on originated credit-impaired amortized cost debt securities (2021: $13 million). The ECL allowances for other financial assets classified at amortized cost were immaterial as at October 31, 2022 and October 31, 2021 and were excluded from the table above. Financial assets other than loans that are classified at amortized cost are presented on our consolidated balance sheet net of ECL allowances.
(6) Included in Other liabilities on our consolidated balance sheet.

$ millions, as at or for the year ended October 31	Stage 1	Stage 2	Stage 3	2021
	Collective provision 12-month ECL performing	Collective provision lifetime ECL performing	Collective and individual provision lifetime ECL credit-impaired	Total
Residential mortgages				
Balance at beginning of year	$ 51	$ 161	$ 151	$ 363
Originations net of repayments and other derecognitions	16	(13)	(21)	(18)
Changes in model	7	(8)	24	23
Net remeasurement [1]	(123)	22	68	(33)
Transfers [1]				
– to 12-month ECL	119	(104)	(15)	–
– to lifetime ECL performing	(9)	27	(18)	–
– to lifetime ECL credit-impaired	–	(16)	16	–
Provision for (reversal of) credit losses [2]	10	(92)	54	(28)
Write-offs [3]	–	–	(27)	(27)
Recoveries	–	–	3	3
Interest income on impaired loans	–	–	(17)	(17)
Foreign exchange and other	(2)	(6)	(6)	(14)
Balance at end of year	$ 59	$ 63	$ 158	$ 280
Personal				
Balance at beginning of year	$ 204	$ 546	$ 113	$ 863
Originations net of repayments and other derecognitions	37	(47)	(9)	(19)
Changes in model	(19)	33	–	14
Net remeasurement [1]	(309)	281	179	151
Transfers [1]				
– to 12-month ECL	287	(281)	(6)	–
– to lifetime ECL performing	(47)	62	(15)	–
– to lifetime ECL credit-impaired	(1)	(47)	48	–
Provision for (reversal of) credit losses [2]	(52)	1	197	146
Write-offs [3]	–	–	(266)	(266)
Recoveries	–	–	70	70
Interest income on impaired loans	–	–	(4)	(4)
Foreign exchange and other	(2)	–	(4)	(6)
Balance at end of year	$ 150	$ 547	$ 106	$ 803
Credit card				
Balance at beginning of year	$ 136	$ 572	$ –	$ 708
Originations net of repayments and other derecognitions	–	(66)	–	(66)
Changes in model	(14)	123	–	109
Net remeasurement [1]	(259)	373	83	197
Transfers [1]				
– to 12-month ECL	305	(305)	–	–
– to lifetime ECL performing	(31)	31	–	–
– to lifetime ECL credit-impaired	(1)	(211)	212	–
Provision for (reversal of) credit losses [2]	–	(55)	295	240
Write-offs [3]	–	–	(414)	(414)
Recoveries	–	–	119	119
Interest income on impaired loans	–	–	–	–
Foreign exchange and other	–	–	–	–
Balance at end of year	$ 136	$ 517	$ –	$ 653
Business and government				
Balance at beginning of year	$ 453	$ 683	$ 652	$ 1,788
Originations net of repayments and other derecognitions	31	(35)	(35)	(39)
Changes in model	(12)	(26)	1	(37)
Net remeasurement [1]	(302)	(19)	197	(124)
Transfers [1]				
– to 12-month ECL	198	(173)	(25)	–
– to lifetime ECL performing	(63)	79	(16)	–
– to lifetime ECL credit-impaired	(4)	(30)	34	–
Provision for (reversal of) credit losses [2]	(152)	(204)	156	(200)
Write-offs [3]	–	–	(279)	(279)
Recoveries	–	–	14	14
Interest income on impaired loans	–	–	(20)	(20)
Foreign exchange and other	(24)	(30)	(15)	(69)
Balance at end of year	$ 277	$ 449	$ 508	$ 1,234
Total ECL allowance [g]	$ 622	$ 1,576	$ 772	$ 2,970
Comprises:				
Loans	$ 551	$ 1,526	$ 772	$ 2,849
Undrawn credit facilities and other off-balance sheet exposures [g]	71	50	–	121

See previous page for footnote references.

Impact of acquisition of Canadian Costco credit card portfolio
No ECL allowance was recognized in the purchase equation on the acquisition date for the acquired Canadian Costco credit card portfolio as the purchased loans were initially measured at their acquisition date fair values. Instead, immediately after the acquisition date, ECL allowances were established in the Provision for credit losses in the interim consolidated statement of income based on classifying each acquired credit card receivable in stage 1, since the acquisition date is established as the initial recognition date of purchased performing loans for the purpose of assessing whether a SICR has occurred. On the date of acquisition, none of the acquired credit card receivables were considered to be impaired. Subsequent to the acquisition date, ECL allowances are estimated in a manner consistent with our SICR and impairment policies that we apply to loans that we originate. See Note 3 for further details on the acquisition of the Canadian Costco credit card portfolio.

Inputs, assumptions and model techniques
Our ECL allowances are estimated using complex models that incorporate inputs, assumptions and model techniques that involve a high degree of management judgment. In particular, the following ECL elements are subject to a high level of judgment that can have a significant impact on the level of ECL allowances provided:
- Determining when a SICR of a loan has occurred;
- Measuring both 12-month and lifetime credit losses; and
- Forecasting forward-looking information for multiple scenarios and determining the probability weighting of the scenarios driven by the changes in the macroeconomic environment.

In addition, the interrelationship between these elements is also subject to a high degree of judgment which can also have a significant impact on the level of ECL recognized.

Global economic activity has slowed over the second half of 2022 while we continue to operate in an uncertain macroeconomic environment. There is inherent uncertainty in estimating the impact that rising interest rates, inflation and supply chain disruptions exacerbated by the measures imposed in some countries to combat the spread of COVID-19 and geopolitical events, will have on the macroeconomic environment. As a result, a heightened level of judgment in estimating ECLs in respect of all these elements as discussed below, continued to be required.

Determining when a significant increase in credit risk has occurred
The determination of whether a loan has experienced a SICR has a significant impact on the level of ECL allowance as loans that are in stage 1 are measured at 12-month ECL, while loans in stage 2 are measured at lifetime ECL. Migration of loans between stage 1 and stage 2 can cause significant volatility in the amount of the recognized ECL allowances and the provision for credit losses in a particular period.

For the majority of our retail loan portfolios, we determine a SICR based on relative changes in the loan's lifetime PD since its initial recognition. The PDs used for this purpose are the expected value of our upside, downside and base case lifetime PDs. Significant judgment is involved in determining the upside, downside and base case lifetime PDs through the incorporation of forward-looking information into long-run PDs, in determining the probability weightings of the scenarios, and in determining the relative changes in PDs that are indicative of a SICR for our various retail products. Increases in the expected PDs or decreases in the thresholds for changes in PDs that are indicative of a SICR can cause significant migration of loans from stage 1 to stage 2, which in turn can cause a significant increase in the amount of ECL allowances recognized. In contrast, decreases in the expected PDs or increases in the thresholds for changes in PDs that are indicative of a SICR can cause significant migration of loans from stage 2 to stage 1.

For the majority of our business and government loan portfolios, we determine a SICR based on relative changes in internal risk ratings since initial recognition. Significant judgment is involved in the determination of the internal risk ratings. Deterioration or improvement in the risk ratings or adjustments to the risk rating downgrade thresholds used to determine a SICR can cause significant migration of loans and securities between stage 1 and stage 2, which in turn can have a significant impact on the amount of ECL allowances recognized.

While potentially significant to the level of ECL allowances recognized, the thresholds for changes in PDs that are indicative of a SICR for our retail portfolios and the risk rating downgrade thresholds used to determine a SICR for our business and government loan portfolios are not expected to change significantly over time.

All loans on which repayment of principal or payment of interest is contractually 30 days in arrears and all business and government loans that have migrated to the watch list risk rating are normally automatically migrated to stage 2 from stage 1.

As at October 31, 2022, if the ECL for the stage 2 performing loans were measured using stage 1 ECL as opposed to lifetime ECL, the ECLs would be $1,110 million lower than the total recognized IFRS 9 ECL on performing loans (2021: $731 million).

Measuring both 12-month and lifetime expected credit losses
Our ECL models leverage the PD, LGD, and EAD parameters, as well as the portfolio segmentation used to calculate Basel expected loss regulatory adjustments for the portion of our retail and business and government portfolios under the advanced internal ratings-based (AIRB) approach. Adjustments are made to the Basel parameters to meet IFRS 9 requirements, including the conversion of through-the-cycle and downturn parameters used in the Basel regulatory calculations to point-in-time parameters used under IFRS 9 that consider forward-looking information. For standardized business and government portfolios, available long-run PDs, LGDs and EADs are also converted to point-in-time parameters through the incorporation of forward-looking information for the purpose of measuring ECL under IFRS 9.

Significant judgment is involved in determining which forward-looking information variables are relevant for particular portfolios and in determining the extent by which through-the-cycle parameters should be adjusted for forward-looking information to determine point-in-time parameters. While changes in the set of forward-looking information variables used to convert through-the-cycle PDs, LGDs and EADs into point-in-time parameters can either increase or decrease ECL allowances in a particular period, changes to the mapping of forward-looking information variables to particular portfolios are expected to be infrequent. However, changes in the particular forward-looking information parameters used to quantify point-in-time parameters will be frequent as our forecasts are updated on a quarterly basis. Increases in the level of pessimism in the forward-looking information variables will cause increases in ECL, while increases in the level of optimism in the forward-looking information variables will cause decreases in ECL. These increases and decreases could be significant in any particular period and will start to occur in the period where our outlook of the future changes.

With respect to the lifetime of a financial instrument, the maximum period considered when measuring ECL is the maximum contractual period over which we are exposed to credit risk. For revolving facilities, such as credit cards, the lifetime of a credit card account is the expected behavioural life. Significant judgment is involved in the estimate of the expected behavioural life. Increases in the expected behavioural life will increase the amount of ECL allowances, in particular for revolving loans in stage 2.

Forecasting forward-looking information for multiple scenarios and determining the probability weighting of the scenarios

As indicated above, forward-looking information is incorporated into both our assessment of whether a financial asset has experienced a SICR since its initial recognition and in our estimate of ECL. From analysis of historical data, our risk management function has identified and reflected in our ECL allowance those relevant forward-looking information variables that contribute to credit risk and losses within our retail and business and government loan portfolios. Within our retail loan portfolio, key forward-looking information variables include Canadian unemployment rates, housing prices, gross domestic product (GDP) growth and household debt service ratios. In many cases these variables are forecasted at the provincial level. Housing prices are also forecasted at the municipal level in some cases. Within our business and government loan portfolio, key drivers that impact the credit performance of the entire portfolio include Standard & Poor's (S&P) 500 growth rates, business credit growth rates, unemployment rates and credit spreads, while forward-looking information variables such as commodity prices and mining activity are significant for certain portfolios, and U.S. unemployment rates and U.S. GDP growth are significant for our U.S. portfolios.

For the majority of our loan portfolios, our forecast of forward-looking information variables is established from a "base case" or most likely scenario that is used internally by management for planning and forecasting purposes. For most of the forward-looking information variables related to our Canadian businesses, we have forecast scenarios by province. In forming the base case scenario, we consider the forecasts of international organizations and monetary authorities such as the Organisation for Economic Co-operation and Development, the International Monetary Fund, and the Bank of Canada, as well as private sector economists. We then derive reasonably possible "upside case" and "downside case" scenarios using external forecasts that are above and below our base case and the application of management judgment. A probability weighting is assigned to our base case, upside case and downside case scenarios based on management judgment.

The forecasting process is overseen by a governance committee consisting of internal stakeholders from across our bank including Risk Management, Economics, Finance and the impacted SBUs and involves a significant amount of judgment both in determining the forward-looking information forecasts for our various scenarios and in determining the probability weighting assigned to the scenarios. In general, a worsening of our outlook on forecasted forward-looking information for each scenario, an increase in the probability of the downside case scenario occurring, or a decrease in the probability of the upside case scenario occurring will increase the number of loans migrating from stage 1 to stage 2 and increase the estimated ECL allowance. In contrast, an improvement in our outlook on forecasted forward-looking information, an increase in the probability of the upside case scenario occurring, or a decrease in the probability of the downside case scenario occurring will have the opposite impact. It is not possible to meaningfully isolate the impact of changes in the various forward-looking information variables for a particular scenario because of both the interrelationship between the variables and the interrelationship between the level of pessimism inherent in a particular scenario and its probability of occurring.

The forecasting of forward-looking information and the determination of scenario weightings continued to require a heightened application of judgment in a number of areas as our forecast reflects numerous assumptions and uncertainties inherent in the current macroeconomic environment.

The following table provides the base case, upside case and downside case scenario forecasts for select forward-looking information variables used to estimate our ECL.

	Base case		Upside case		Downside case	
As at October 31, 2022	Average value over the next 12 months	Average value over the remaining forecast period[1]	Average value over the next 12 months	Average value over the remaining forecast period[1]	Average value over the next 12 months	Average value over the remaining forecast period[1]
Real GDP year-over-year growth						
Canada[2]	**0.8 %**	**1.5 %**	**3.9 %**	**2.8 %**	**(0.6)%**	**1.0 %**
United States	**0.7 %**	**1.3 %**	**2.9 %**	**3.0 %**	**(2.1)%**	**0.4 %**
Unemployment rate						
Canada[2]	**5.5 %**	**5.9 %**	**4.9 %**	**5.6 %**	**6.0 %**	**6.8 %**
United States	**4.0 %**	**4.2 %**	**3.3 %**	**3.3 %**	**5.6 %**	**5.1 %**
Canadian Housing Price Index growth[2]	**(2.5)%**	**1.9 %**	**10.1 %**	**6.6 %**	**(13.1)%**	**(5.2)%**
S&P 500 Index growth rate	**(1.4)%**	**6.0 %**	**6.3 %**	**12.1 %**	**(13.4)%**	**(1.3)%**
Canadian household debt service ratio	**15.5 %**	**15.1 %**	**14.4 %**	**14.5 %**	**15.9 %**	**15.2 %**
West Texas Intermediate Oil Price (US$)	**$ 92**	**$ 81**	**$ 119**	**$ 107**	**$ 76**	**$ 56**

(1) The remaining forecast period is generally four years.
(2) National-level forward-looking forecasts are presented in the table above, which represent the aggregation of the provincial-level forecasts used to estimate our ECL. Housing Price Index growth rates are also forecasted at the municipal level in some cases. As a result, the forecasts for individual provinces or municipalities reflected in our ECL will differ from the national forecasts presented above.

	Base case		Upside case		Downside case	
As at October 31, 2021	Average value over the next 12 months	Average value over the remaining forecast period[1]	Average value over the next 12 months	Average value over the remaining forecast period[1]	Average value over the next 12 months	Average value over the remaining forecast period[1]
Real GDP year-over-year growth						
Canada[2]	4.2 %	2.4 %	5.6 %	2.8 %	3.1 %	1.6 %
United States	4.7 %	2.2 %	5.8 %	3.3 %	2.8 %	1.3 %
Unemployment rate						
Canada[2]	6.4 %	5.9 %	6.0 %	5.5 %	7.3 %	6.8 %
United States	4.4 %	3.9 %	3.8 %	3.4 %	6.0 %	5.0 %
Canadian Housing Price Index growth[2]	6.1 %	2.8 %	10.7 %	6.3 %	2.2 %	(2.2)%
S&P 500 Index growth rate	6.1 %	4.6 %	10.3 %	8.6 %	(0.6)%	(1.7)%
Canadian household debt service ratio	13.6 %	14.4 %	13.0 %	14.2 %	14.1 %	14.7 %
West Texas Intermediate Oil Price (US$)	$ 69	$ 64	$ 74	$ 81	$56	$ 54

See above for footnote references.

As required, the forward-looking information used to estimate ECLs reflects our expectations as at October 31, 2022 and October 31, 2021, respectively, and does not reflect changes in expectation as a result of economic forecasts that may have subsequently emerged. The base case, upside case and downside case amounts shown represent the average value of the forecasts over the respective projection horizons. Our underlying base case projection as at October 31, 2022 is characterized by weaker GDP growth for the remainder of calendar 2022 and 2023, due to continued uncertainty related to the expectation that central banks will continue to raise interest rates in response to prolonged inflationary pressures, and the impact of supply chain disruptions related to COVID-19 measures imposed in some countries, elevated worker absenteeism levels, and geopolitical events. Significant judgment continued to be inherent in the forecasting of forward-looking information, including with regard to our base case assumptions that the increase in interest rates will result in only modest economic growth, global supply chain and inflationary challenges will ease, vaccination programs and other treatments will be able to effectively respond to the new and emerging variants, governments will respond to future waves of the virus with targeted health measures rather than broader economic closures, and that the war in Ukraine will not expand into a broader conflict. While U.S. GDP had contracted in early 2022, it is expected to experience modest growth over the remainder of the year and until the end of calendar 2024, with a gradual increase in the unemployment rate until the end of calendar 2024.

The downside case forecast assumes a recession until mid-calendar year 2023 for Canada and a more prolonged recession in the U.S. resulting from aggressive interest rate hikes introduced to combat the prolonged high levels of inflation, and a worsening of geopolitical tensions and COVID-19 lockdown measures in some countries that exacerbate supply chain issues. It also reflects a slower recovery thereafter to a lower level of sustained economic activity and an unemployment rate persistently above where it stood pre-pandemic. Meanwhile, the upside scenario continues to reflect a recovery, with absolute levels of GDP reached in calendar 2022 that are consistent with the levels that would have occurred if the pre-pandemic level of GDP had continued to increase through the pandemic at pre-pandemic growth rates and continuing at a higher trend level than the base case thereafter.

As indicated above, forecasting forward-looking information for multiple scenarios and determining the probability weighting of the scenarios involves a high degree of management judgment. Assumptions concerning measures used by governments to combat inflation, the economic risks emanating from the war in Ukraine, and the degree to which vaccinations and other treatments will contain existing and potential new variants such that severe restrictions will no longer need to be imposed by most governments to limit the impact of subsequent waves of infection are material to these forecasts.

If we were to only use our base case scenario for the measurement of ECL for our performing loans, our ECL allowance would be $ 248 million lower than the recognized ECL as at October 31, 2022 (2021: $249 million). If we were to only use our downside case scenario for the measurement of ECL for our performing loans, our ECL allowance would be $ 847 million higher than the recognized ECL as at October 31, 2022 (2021: $414 million). This sensitivity is isolated to the measurement of ECL and therefore did not consider changes in the migration of exposures between stage 1 and stage 2 from the determination of the SICR that would have resulted in a 100% base case scenario or a 100% downside case scenario. As a result, our ECL allowance on performing loans could exceed the amount implied by the 100% downside case scenario from the migration of additional exposures from stage 1 to stage 2. Actual credit losses could differ materially from those reflected in our estimates.

Use of management overlays

Management overlays to ECL allowance estimates are adjustments which we use in circumstances where we judge that our existing inputs, assumptions and model techniques do not capture all relevant risk factors. The emergence of new macroeconomic, microeconomic or political events, along with expected changes to parameters, models or data that are not incorporated in our current parameters, internal risk rating migrations, or forward-looking information are examples of such circumstances. To address the uncertainties inherent in the current environment, we continue to utilize management overlays with respect to the impact of certain forward-looking information and credit metrics that are not expected to be as indicative of the credit condition of the portfolios as the historical experience in our models would have otherwise suggested, including with respect to the benefit of higher levels of household savings that have accumulated during the pandemic. The use of management overlays requires the application of significant judgment that impacts the amount of ECL allowances recognized. Actual credit losses could differ materially from those reflected in our estimates.

The following tables provide the gross carrying amount of loans, and the contractual amounts of undrawn credit facilities and other off-balance sheet exposures based on the application of our 12-month point-in-time PDs under IFRS 9 to our risk management PD bands within each respective stage for retail exposures, and based on our internal risk ratings for business and government exposures. Refer to the "Credit risk" section of the MD&A for details on the CIBC risk categories.

Loans[1]

$ millions, as at October 31	2022				2021			
	Stage 1	Stage 2	Stage 3 [2][3]	Total	Stage 1	Stage 2	Stage 3 [2][3]	Total
Residential mortgages								
– Exceptionally low	$ 174,749	$ 140	$ –	$ 174,889	$ 162,307	$ 94	$ –	$ 162,401
– Very low	53,795	498	–	54,293	49,958	640	–	50,598
– Low	24,200	6,816	–	31,016	22,912	6,547	–	29,459
– Medium	261	4,927	–	5,188	364	4,671	–	5,035
– High	–	906	–	906	–	840	–	840
– Default	–	–	374	374	–	–	443	443
– Not rated	2,604	214	222	3,040	2,160	395	195	2,750
Gross residential mortgages [4][5]	255,609	13,501	596	269,706	237,701	13,187	638	251,526
ECL allowance	57	69	167	293	59	63	158	280
Net residential mortgages	255,552	13,432	429	269,413	237,642	13,124	480	251,246
Personal								
– Exceptionally low	18,943	1	–	18,944	18,608	1	–	18,609
– Very low	6,119	5	–	6,124	5,179	4	–	5,183
– Low	9,117	4,953	–	14,070	8,091	4,389	–	12,480
– Medium	934	3,084	–	4,018	990	2,773	–	3,763
– High	266	1,089	–	1,355	252	803	–	1,055
– Default	–	–	175	175	–	–	109	109
– Not rated	657	34	52	743	585	60	53	698
Gross personal [5]	36,036	9,166	227	45,429	33,705	8,030	162	41,897
ECL allowance	115	641	146	902	125	537	106	768
Net personal	35,921	8,525	81	44,527	33,580	7,493	56	41,129
Credit card								
– Exceptionally low	3,151	–	–	3,151	2,065	–	–	2,065
– Very low	1,042	–	–	1,042	715	–	–	715
– Low	6,936	597	–	7,533	4,653	347	–	5,000
– Medium	992	2,927	–	3,919	593	2,195	–	2,788
– High	–	682	–	682	–	435	–	435
– Default	–	–	–	–	–	–	–	–
– Not rated	145	7	–	152	123	8	–	131
Gross credit card	12,266	4,213	–	16,479	8,149	2,985	–	11,134
ECL allowance	143	641	–	784	127	498	–	625
Net credit card	12,123	3,572	–	15,695	8,022	2,487	–	10,509
Business and government								
– Investment grade	87,184	404	–	87,588	65,963	562	–	66,525
– Non-investment grade	101,889	6,457	–	108,346	85,764	4,599	–	90,363
– Watch list	66	2,971	–	3,037	67	2,985	–	3,052
– Default	–	–	920	920	–	–	1,033	1,033
– Not rated	208	17	–	225	174	24	–	198
Gross business and government [4][6]	189,347	9,849	920	200,116	151,968	8,170	1,033	161,171
ECL allowance	285	458	351	1,094	240	428	508	1,176
Net business and government	189,062	9,391	569	199,022	151,728	7,742	525	159,995
Total net amount of loans	$ 492,658	$ 34,920	$ 1,079	$ 528,657	$ 430,972	$ 30,846	$ 1,061	$ 462,879

(1) The table excludes debt securities measured at FVOCI, for which ECL allowances of $4 million (2021: $19 million) were recognized in AOCI. In addition, the table excludes debt securities classified at amortized cost, for which ECL allowances of $15 million were recognized as at October 31, 2022 (2021: $15 million), $12 million of which was stage 3 ECL allowance on originated credit-impaired amortized cost debt securities (2021: $13 million). Other financial assets classified at amortized cost were also excluded from the table above as their ECL allowances were immaterial as at October 31, 2022 and October 31, 2021. Financial assets other than loans that are classified as amortized cost are presented on our consolidated balance sheet net of ECL allowances.
(2) Excludes foreclosed assets of $24 million (2021: $18 million), which were included in Other assets on our consolidated balance sheet.
(3) As at October 31, 2022, 84% (2021: 89%) of stage 3 impaired loans were either fully or partially collateralized.
(4) Includes $4 million (2021: $16 million) of residential mortgages and $963 million (2021: $25,983 million) of business and government loans that are measured and designated at FVTPL.
(5) The internal risk rating grades presented for residential mortgages and certain personal loans do not take into account loan guarantees or insurance issued by the Canadian government (federal or provincial), Canadian government agencies, or private insurers, as the determination of whether a SICR has occurred for these loans is based on relative changes in the loans' lifetime PD without considering collateral or other credit enhancements.
(6) Includes customers' liability under acceptances of $11,574 million (2021: $10,958 million).

Undrawn credit facilities and other off-balance sheet exposures

$ millions, as at October 31	2022				2021			
	Stage 1	**Stage 2**	**Stage 3**	**Total**	Stage 1	Stage 2	Stage 3	Total
Retail								
– Exceptionally low	**$ 149,286**	**$ 6**	**$ –**	**$ 149,292**	$ 130,212	$ 12	$ –	$ 130,224
– Very low	**14,461**	**51**	**–**	**14,512**	12,868	59	–	12,927
– Low	**10,844**	**2,412**	**–**	**13,256**	7,937	1,811	–	9,748
– Medium	**522**	**1,402**	**–**	**1,924**	740	896	–	1,636
– High	**155**	**682**	**–**	**837**	73	495	–	568
– Default	**–**	**–**	**39**	**39**	–	–	34	34
– Not rated	**484**	**8**	**–**	**492**	375	8	–	383
Gross retail	**175,752**	**4,561**	**39**	**180,352**	152,205	3,281	34	155,520
ECL allowance	**38**	**83**	**–**	**121**	34	29	–	63
Net retail	**175,714**	**4,478**	**39**	**180,231**	152,171	3,252	34	155,457
Business and government								
– Investment grade	**119,069**	**121**	**–**	**119,190**	111,877	524	–	112,401
– Non-investment grade	**64,446**	**2,540**	**–**	**66,986**	58,652	1,714	–	60,366
– Watch list	**15**	**571**	**–**	**586**	19	734	–	753
– Default	**–**	**–**	**69**	**69**	–	–	91	91
– Not rated	**575**	**26**	**–**	**601**	346	9	–	355
Gross business and government	**184,105**	**3,258**	**69**	**187,432**	170,894	2,981	91	173,966
ECL allowance	**50**	**32**	**–**	**82**	37	21	–	58
Net business and government	**184,055**	**3,226**	**69**	**187,350**	170,857	2,960	91	173,908
Total net undrawn credit facilities and other off-balance sheet exposures	**$ 359,769**	**$ 7,704**	**$ 108**	**$ 367,581**	$ 323,028	$ 6,212	$ 125	$ 329,365

Net interest income after provision for credit losses

$ millions, for the year ended October 31	**2022**	2021
Interest income	**$ 22,179**	$ 14,741
Interest expense	**9,538**	3,282
Net interest income	**12,641**	11,459
Provision for (reversal of) credit losses	**1,057**	158
Net interest income after provision for credit losses	**$ 11,584**	$ 11,301

Modified financial assets

As part of CIBC's usual lending business, from time to time we may modify the contractual terms of loans classified as stage 2 and stage 3 for which the borrower has experienced financial difficulties, through the granting of a concession in the form of below-market rates or terms that we would not otherwise have considered.

During the year ended October 31, 2022, loans classified as stage 2 or stage 3 with an amortized cost of $ 434 million before modification were modified through the granting of a financial concession in response to the borrower having experienced financial difficulties. The amortized cost of loans with lifetime allowance that were modified during the year ended October 31, 2021 was $733 million before modification, including the modifications under the COVID-19 client deferral programs. In addition, the gross carrying amount of previously modified or deferred stage 2 or stage 3 loans that have returned to stage 1 during the year ended October 31, 2022 was $461 million (2021: $1,461 million), including loans that were previously subject to the client deferral programs.

Note 6 | Structured entities and derecognition of financial assets

Structured entities

SEs are entities that have been designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, such as when any voting rights relate to administrative tasks only and the relevant activities are directed by means of contractual arrangements. SEs are entities that are created to accomplish a narrow and well-defined objective. CIBC is involved with various types of SEs for which the business activities include securitization of financial assets, asset-backed financings, and asset management.

We consolidate a SE when the substance of the relationship indicates that we control the SE.

Consolidated structured entities

We consolidate the following SEs:

Credit card securitization trust

We sell an ownership interest in a revolving pool of credit card receivables generated under certain credit card accounts to Cards II Trust (Cards II), which purchases a proportionate share of credit card receivables on certain credit card accounts, with the proceeds received from the issuance of notes. We consolidate this trust because we have the power to direct the relevant activities and have exposure to substantially all the variability of returns for the excess spread (the deferred purchase price) that we receive over time.

Our credit card securitizations are revolving securitizations, with credit card receivable balances fluctuating from month to month as credit card clients repay their balances and new receivables are generated.

The notes are presented as Secured borrowings within Deposits on the consolidated balance sheet.

As at October 31, 2022, Cards II held $ 4.5 billion of credit card receivable assets with a fair value of $ 4.5 billion (2021: $ 1.7 billion with a fair value of $ 1.7 billion), which supported $3.0 billion of associated funding liabilities with a fair value of $ 2.9 billion (2021: $ 1.7 billion with a fair value of $ 1.7 billion).

Covered bond guarantor

Under the Legislative Covered Bond Programme, we transfer a pool of conventional uninsured mortgages to the CIBC Covered Bond (Legislative) Guarantor Limited Partnership (the Guarantor LP). The Guarantor LP holds interest and title to these transferred mortgages and serves to guarantee payment of principal and interest to bondholders. The covered bond liabilities are on-balance sheet obligations that are fully collateralized by the mortgage assets over which bondholders enjoy a priority claim in the event of CIBC's insolvency. We consolidate this entity because we have the ability to direct the relevant activities and retain substantially all of the variability of returns on the underlying mortgages.

As at October 31, 2022, our Legislative Covered Bond Programme had outstanding covered bond liabilities of $ 26.3 billion with a fair value of $ 26.1 billion (2021: $ 23.8 billion with a fair value of $24.0 billion).

Multi-seller conduit

We sponsor a consolidated multi-seller conduit in Canada that acquires direct or indirect ownership or security interests in pools of financial assets from clients and finance the acquisitions by issuing ABS and asset-backed commercial paper (ABCP). The sellers to the conduit continue to service the assets and are exposed to credit losses realized on these assets through the provision of credit enhancements. We hold all of the outstanding ABS and ABCP. As at October 31, 2022, $525 million of financial assets held by the conduit were included in Securities (2021: nil), of which $178 million are measured at FVTPL (2021: nil) and $347 million at amortized cost (2021: nil), and $ 1,089 million were included in Loans (2021: nil) on our consolidated balance sheet. These financial assets are related to third-party SEs and are included in the non-consolidated SEs table below.

CIBC-managed investment funds

We establish and manage investment funds such as mutual funds and pooled funds. We act as an investment manager and earn market-based management fees and, for certain pooled funds, performance fees which are generally based on the performance of the funds. Seed capital is provided from time to time to CIBC-managed investment funds for initial launch. We consolidate those investment funds in which we have power to direct the relevant activities of the funds and in which our seed capital, or our units held, is significant relative to the total variability of returns of the funds such that we are deemed to be a principal rather than an agent. As at October 31, 2022, the total assets and non-controlling interests in consolidated CIBC-managed investment funds were $137 million and $70 million, respectively (2021: $ 50 million and $ 14 million, respectively). Non-controlling interests in consolidated CIBC-managed investment funds are included in Other liabilities as the investment fund units are mandatorily redeemable at the option of the investor.

Community-based tax-advantaged investments

We sponsor certain SEs that invest in community development projects in the U.S. through the issuance of below-market loans that generate a return primarily through the realization of tax credits. As at October 31, 2022, the program had outstanding loans of $125 million (2021: $92 million). We consolidate these entities because we have the ability to direct the relevant activities and retain substantially all of the variability of returns on the underlying loans.

Non-consolidated structured entities

The following SEs are not consolidated by CIBC because we do not have control over these SEs:

Single-seller and multi-seller conduits

We manage and administer a single-seller conduit and several CIBC-sponsored multi-seller conduits in Canada. The multi-seller conduits acquire direct or indirect ownership or security interests in pools of financial assets from our clients and finance the acquisitions by issuing ABCP to investors. The single-seller conduit acquires financial assets and finances these acquisitions through a credit facility provided by a syndicate of financial institutions. The sellers to the conduits may continue to service the assets and may be exposed to credit losses realized on these assets, typically through the provision of over-collateralization or another form of credit enhancement. The conduits may also obtain credit enhancement from third-party providers. As at October 31, 2022, the total assets in the single-seller conduit and multi-seller conduits amounted to $0.6 billion and $ 9.3 billion, respectively (2021: $ 0.6 billion and $7.6 billion, respectively).

We provide the multi-seller conduits with commercial paper backstop liquidity facilities, securities distribution, and provide both the single and multi-seller conduits with accounting, cash management, and operations services. The liquidity facilities for the managed and administered multi-seller conduits require us to provide funding, subject to the satisfaction of certain conditions with respect to the conduits, for ABCP not placed with external investors. We also may purchase ABCP issued by the multi-seller conduits for market-making purposes.

We are required to maintain certain short-term and/or long-term debt ratings with respect to the liquidity facilities that we provide to the sponsored multi-seller conduits. If we are downgraded below the level specified under the terms of those facilities, we must provide alternative satisfactory liquidity arrangements, such as procuring an alternative liquidity provider that meets the minimum rating requirements.

We may also act as the counterparty to derivative contracts entered into by a multi-seller conduit in order to convert the yield of the underlying assets to match the needs of the multi-seller conduit's investors or to mitigate the interest rate, basis, and currency risk within the conduit.

All fees earned in respect of activities with the conduits are on a market basis.

Third-party structured vehicles

We have investments in and provide loans, liquidity and credit facilities to third-party SEs. We also have investments in limited partnerships in which we generally are a passive investor of the limited partnerships as a limited partner, and in some cases, we are the co-general partner and have significant influence over the limited partnerships. Similar to other limited partners, we are obligated to provide funding up to our commitment level to these limited partnerships.

Loan warehouse financing

We provide interim and term senior financing to third-party SEs for the purpose of future securitization. The SE is established by a third-party investor, who provides the initial investment into the SE (the equity investors). The senior financing enables the SE to purchase a loan portfolio at the direction of a collateral manager during the warehousing phase of the securitization. The senior lenders are repaid by proceeds from the issuance of debt securities to investors when the deal closes or by the cash flows from the repayment of the underlying assets held by the SE or alternative financing obtained by the investor from third-party lenders.

Community Reinvestment Act investments

We hold debt and equity investments in limited liability entities to further our U.S. *Community Reinvestment Act* initiatives with a carrying value of $489 million (2021: $338 million). These entities invest in qualifying community development projects, including affordable housing projects that generate a return primarily by the realization of tax credits. Similar to other limited investors in these entities, we are obligated to provide funding up to our commitment level to these limited liability entities. As at October 31, 2022, the total assets of these limited liability entities were $7.9 billion (2021: $5.9 billion).

CIBC-managed investment funds

As indicated above, we establish investment funds, including mutual funds and pooled funds, to provide clients with investment opportunities and we may receive management fees and performance fees. We may hold insignificant amounts of fund units in these CIBC-managed funds. We do not consolidate these funds if we do not have significant variability of returns from our interests in these funds such that we are deemed to be an agent through our capacity as the investment manager, rather than a principal. We do not guarantee the performance of CIBC-managed investment funds. As at October 31, 2022, the total AUM in the non-consolidated CIBC-managed investment funds amounted to $133.5 billion (2021: $152.5 billion).

CIBC structured collateralized debt obligation (CDO) vehicles

We hold exposures to structured CDO vehicles through investments in, or written credit derivatives referencing, these structured vehicles. The structured vehicles are funded through the issuance of senior and subordinated tranches. We may hold a portion of those senior and/or subordinated tranches.

We previously curtailed our business activity in structuring CDO vehicles within our structured credit run-off portfolio. Our exposures to CDO vehicles mainly arose through our previous involvement in acting as structuring and placement agent for the CDO vehicles. As at October 31, 2022, the assets in the CIBC structured CDO vehicles have a total principal amount of nil (2021: $181 million).

Our on-balance sheet amounts and maximum exposure to loss related to SEs that are not consolidated are set out in the table below. The maximum exposure comprises the carrying value of unhedged investments, the notional amounts for liquidity and credit facilities, and the notional amounts less accumulated fair value losses for unhedged written credit derivatives on SE reference assets. The impact of CVA is not considered in the table below.

$ millions, as at October 31, 2022	Single-seller and multi-seller conduits	Third-party structured vehicles	Loan warehouse financing	Other [1]
On-balance sheet assets at carrying value [2]				
Securities	**$ 642**	**$ 2,199**	**$ –**	**$ 509**
Loans	**98**	**2,740**	**8,898**	**24**
Investments in equity-accounted associates and joint ventures	**–**	**66**	**–**	**68**
	$ 740	**$ 5,005**	**$ 8,898**	**$ 601**
October 31, 2021	$ 141	$ 3,838	$ 3,245	$ 394
On-balance sheet liabilities at carrying value [2]				
Deposits	**$ –**	**$ –**	**$ –**	**$ –**
Derivatives [3]	**–**	**–**	**–**	**45**
	$ –	**$ –**	**$ –**	**$ 45**
October 31, 2021	$ –	$ –	$ –	$ 354
Maximum exposure to loss, net of hedges				
Investments and loans	**$ 740**	**$ 5,005**	**$ 8,898**	**$ 601**
Notional of written derivatives, less fair value losses	**–**	**–**	**–**	**35**
Liquidity, credit facilities and commitments	**8,682** [4]	**2,638**	**2,700**	**308**
Less: hedges of investments, loans and written derivatives exposure	**–**	**–**	**–**	**(39)**
	$ 9,422	**$ 7,643**	**$ 11,598**	**$ 905**
October 31, 2021	$ 7,680	$ 5,854	$ 4,166	$ 520

(1) Includes *Community Reinvestment Act*-related investment vehicles, CIBC-managed investment funds, CIBC structured CDO vehicles and third-party structured vehicles related to structured credit run-off. It also includes as at October 31, 2021, notes issued by CIBC Capital Trust of $300 million which were redeemed on November 1, 2021; see Note 16 for more details.
(2) Excludes SEs established by CMHC, Fannie Mae, Freddie Mac, Ginnie Mae, FHLB, Federal Farm Credit Bank, and Student Loan Marketing Association.
(3) Comprises written credit default swaps (CDS) and total return swaps (TRS) under which we assume exposures. Excludes foreign exchange derivatives, interest rate derivatives and other derivatives provided as part of normal client facilitation.
(4) Excludes an additional $2.4 billion (2021: $3.0 billion) relating to our backstop liquidity facilities provided to the multi-seller conduits as part of their commitment to fund purchases of additional assets. Also excludes $642 million (2021: $35 million) of our direct investments in the multi-seller conduits which we consider investment exposure.

We also hold investments in a variety of third-party investment funds, which include, but are not limited to, exchange-traded funds, mutual funds, and investment trusts. We buy and sell units of these investment funds as part of trading activities or client facilitation businesses that are managed as part of larger portfolios. We generally are a passive investor and are not the investment manager in any of these investment funds. We are not the sponsor of any third-party investment funds, nor do we have the power over key decision-making activities of the funds. Our maximum exposure to loss from our investments is limited to the carrying amounts of our investments and any unutilized commitment we have provided to these funds. In addition, we issue certain structured notes and enter into equity derivatives that are referenced to the return of certain investment funds. Accordingly, we do not include our interests in these third-party investment funds in the table above.

Derecognition of financial assets

We enter into transactions in the normal course of business in which we transfer recognized financial assets directly to third parties, but retain substantially all of the risks and rewards of those assets. The risks include credit, interest rate, foreign exchange, prepayment and other price risks whereas the rewards include income streams associated with the assets. Due to the retention of risks, the transferred financial assets are not derecognized and such transfers are accounted for as secured borrowing transactions.

The majority of our financial assets transferred to non-consolidated entities that do not qualify for derecognition are: (i) residential mortgage loans under securitization transactions; (ii) securities held by counterparties as collateral under repurchase agreements; and (iii) securities lent under securities lending agreements.

Residential mortgage securitizations

We securitize fully insured fixed- and variable-rate residential mortgage pools through the creation of *National Housing Act* (NHA) MBS under the NHA MBS Program, sponsored by CMHC. Under the Canada Mortgage Bond Program, sponsored by CMHC, we sell MBS to a government-sponsored securitization trust that issues securities to investors. We do not consolidate the securitization trust. We may act as a counterparty in interest rate swap agreements where we pay the trust the interest due to investors and receive the interest on the MBS. We have also sold MBS directly to CMHC under the Government of Canada's Insured Mortgage Purchase Program.

The sale of mortgage pools that comprise the NHA MBS does not qualify for derecognition as we retain prepayment, credit, and interest rate risks associated with the mortgages, which represent substantially all the risks and rewards. As a result, the mortgages remain on our consolidated balance sheet and are carried at amortized cost. We also recognize the cash proceeds from the securitization as Deposits – Secured borrowings.

Securities held by counterparties as collateral under repurchase agreements

We enter into arrangements whereby we sell securities but enter into simultaneous arrangements to repurchase the securities at a fixed price on a future date , thereby retaining substantially all the risks and rewards. As a result, the securities remain on our consolidated balance sheet.

Securities lent for cash collateral or for securities collateral

We enter into arrangements whereby we lend securities but with arrangements to receive the securities at a future date, thereby retaining substantially all the risks and rewards. As a result, the securities remain on our consolidated balance sheet.

The following table provides the carrying amount and fair value of transferred financial assets that did not qualify for derecognition and the associated financial liabilities:

$ millions, as at October 31	2022		2021	
	Carrying amount	**Fair value**	Carrying amount	Fair value
Residential mortgage securitizations [1]	**$ 16,939**	**$ 16,540**	$ 17,121	$ 17,023
Securities held by counterparties as collateral under repurchase agreements [2]	**39,788**	**39,788**	36,469	36,469
Securities lent for cash collateral [2]	**2,165**	**2,165**	1	1
Securities lent for securities collateral [2]	**30,520**	**30,520**	31,548	31,548
	$ 89,412	**$ 89,013**	$ 85,139	$ 85,041
Associated liabilities [3]	**$ 88,954**	**$ 88,912**	$ 85,061	$ 85,122

(1) Consists mainly of Canadian residential mortgage loans transferred to Canada Housing Trust. Certain cash in transit balances related to the securitization process amounting to $805 million (2021: $792 million) have been applied to reduce these balances.

(2) Does not include over-collateralization of assets pledged. Repurchase and securities lending arrangements are conducted with both CIBC-owned and third-party assets on a pooled basis. The carrying amounts represent an estimated allocation related to the transfer of our own financial assets.

(3) Includes the obligation to return off-balance sheet securities collateral on securities lent and fair value hedge basis adjustments.

Note 7 | Property and equipment

$ millions, as at or for the year ended October 31		Right-of-use assets	Land and buildings [1]	Computer equipment	Office furniture, equipment and other [1]	Leasehold improvements [1]	Total
2022	**Cost**						
	Balance at beginning of year [2]	**$ 2,303**	**$ 722**	**$ 1,135**	**$ 859**	**$ 1,406**	**$ 6,425**
	Additions [3]	**293**	**51**	**100**	**57**	**110**	**611**
	Disposals [4]	**(55)**	**(6)**	**(58)**	**(50)**	**(66)**	**(235)**
	Adjustments [5]	**50**	**17**	**16**	**22**	**18**	**123**
	Balance at end of year	**$ 2,591**	**$ 784**	**$ 1,193**	**$ 888**	**$ 1,468**	**$ 6,924**
2021	Balance at end of year [2]	$ 2,303	$ 722	$ 1,135	$ 859	$ 1,406	$ 6,425
2022	**Accumulated depreciation**						
	Balance at beginning of year	**$ 550**	**$ 313**	**$ 923**	**$ 472**	**$ 881**	**$ 3,139**
	Depreciation [4]	**282**	**14**	**101**	**54**	**71**	**522**
	Disposals [4]	**(42)**	**–**	**(53)**	**(38)**	**(48)**	**(181)**
	Adjustments [5]	**24**	**6**	**13**	**13**	**11**	**67**
	Balance at end of year	**$ 814**	**$ 333**	**$ 984**	**$ 501**	**$ 915**	**$ 3,547**
2021	Balance at end of year	$ 550	$ 313	$ 923	$ 472	$ 881	$ 3,139
	Net book value						
	As at October 31, 2022	**$ 1,777**	**$ 451**	**$ 209**	**$ 387**	**$ 553**	**$ 3,377**
	As at October 31, 2021	$ 1,753	$ 409	$ 212	$ 387	$ 525	$ 3,286

(1) Includes $242 million (2021: $234 million) of work-in-progress not subject to depreciation.
(2) Certain prior year balances have been reclassified to conform to the current year presentation.
(3) Includes impact of lease modifications.
(4) Includes write-offs for properties that were vacated in the fourth quarter of 202**2**, and write-offs of fully depreciated assets.
(5) Includes foreign currency translation adjustments.

Cost of net additions and disposals during the year was: Canadian Personal and Business Banking net additions of $106 million (2021: net disposals of $70 million); Canadian Commercial Banking and Wealth Management net disposals of $102 million (2021: net disposals of $5 million); U.S. Commercial Banking and Wealth Management net additions of $23 million (2021: net additions of $31 million); Capital Markets net disposals of $18 million (2021: net additions of $20 million); and Corporate and Other net additions of $367 million (2021: net additions of $644 million).

Note 8 | Goodwill, software and other intangible assets

Goodwill

The carrying amount of goodwill is reviewed for impairment annually as at August 1 and whenever there are events or changes in circumstances which indicate that the carrying amount may not be recoverable. Goodwill is allocated to CGUs for the purposes of impairment testing based on the lowest level for which identifiable cash inflows are largely independent of cash inflows from other assets or groups of assets. The goodwill impairment test is performed by comparing the recoverable amount of the CGU to which goodwill has been allocated with the carrying amount of the CGU including goodwill, with any deficiency recognized as impairment to goodwill. The recoverable amount of a CGU is defined as the higher of its estimated fair value less cost to sell and value in use.

We have two significant CGUs to which goodwill has been allocated. The changes in the carrying amount of goodwill are allocated to each CGU as follows:

		CGUs			
$ millions, as at or for the year ended October 31		Canadian Wealth Management	U.S. Commercial Banking and Wealth Management	Other [1]	Total
2022	**Balance at beginning of year**	**$ 884**	**$ 3,838**	**$ 232**	**$ 4,954**
	Impairment	**–**	**–**	**–**	**–**
	Adjustments [2]	**–**	**386**	**8**	**394**
	Balance at end of year	**$ 884**	**$ 4,224**	**$ 240**	**$ 5,348**
2021	Balance at beginning of year	$ 884	$ 4,131	$ 238	$ 5,253
	Impairment	–	–	–	–
	Adjustments [2]	–	(293)	(6)	(299)
	Balance at end of year	$ 884	$ 3,838	$ 232	$ 4,954

(1) Certain information has been reclassified to conform to the presentation adopted in the current year. Other now includes CIBC FirstCaribbean.
(2) Includes foreign currency translation adjustments.

Impairment testing of goodwill and key assumptions

U.S. Commercial Banking and Wealth Management

The recoverable amount of the U.S. Commercial Banking and Wealth Management CGU (including The PrivateBank and Geneva Advisors) is based on a value in use calculation using a five-year cash flow projection approved by management, and an estimate of the capital required to be maintained to support ongoing operations.

We have determined that for the impairment testing performed as at August 1, 2022, the estimated recoverable amount of the U.S. Commercial Banking and Wealth Management CGU was in excess of its carrying amount. As a result, no impairment charge was recognized during 2022.

A terminal growth rate of 4.4% as at August 1, 2022 (August 1, 2021: 4.3%) was applied to the years after the five-year forecast. All of the forecasted cash flows were discounted at an after-tax rate of 9.8% as at August 1, 2022 (11.7% pre-tax) which we believe to be a risk-adjusted discount rate appropriate to U.S. Commercial Banking and Wealth Management (we used an after-tax rate of 10.9% as at August 1, 2021). The determination of a discount rate and a terminal growth rate require the exercise of judgment. The discount rate was determined based on the following primary factors: (i) the risk-free rate; (ii) an equity risk premium; and (iii) beta adjustment to the equity risk premium based on a review of betas of comparable publicly traded financial institutions in the region. The terminal growth rate was based on management's expectations of real growth and forecast inflation rates.

If alternative reasonably possible changes in key assumptions were applied, the result of the impairment test would not differ.

Estimation of the recoverable amount is an area of significant judgment. The recoverable amount is estimated using an internally developed model which requires the use of significant assumptions including forecasted earnings, a discount rate, a terminal growth rate and forecasted regulatory capital requirements. Reductions in the estimated recoverable amount could arise from various factors, such as reductions in forecasted cash flows, an increase in the assumed level of required capital, and any adverse changes to the discount rate or terminal growth rate either in isolation or in any combination thereof.

Canadian Wealth Management

The recoverable amount of the Canadian Wealth Management CGU is based on a fair value less cost to sell calculation. The fair value is estimated using an earnings-based approach whereby the forecasted earnings are based on the Wealth Management internal plan which was approved by management and covers a three-year period. The calculation incorporates the forecasted earnings multiplied by an earnings multiple derived from observable price-to-earnings multiples of comparable wealth management institutions. The price-to-earnings multiples of those comparable wealth management institutions ranged from 6.4 to 10.7 as at August 1, 2022 (August 1, 2021: 7.0 to 10.9).

We have determined that the estimated recoverable amount of the Wealth Management CGU was well in excess of its carrying amount as at August 1, 2022. As a result, no impairment charge was recognized during 2022.

If alternative reasonably possible changes in key assumptions were applied, the result of the impairment test would not differ.

Other

The goodwill relating to the Other CGUs, which includes the CIBC FirstCaribbean CGU, is comprised of amounts which individually are not considered to be significant. We have determined that for the impairment testing performed as at August 1, 2022, the estimated recoverable amount of each of these CGUs was in excess of their carrying amounts.

Allocation to strategic business units

Goodwill of $5,348 million (2021: $4,954 million) is allocated to the SBUs as follows: Canadian Commercial Banking and Wealth Management of $ 954 million (2021: $954 million), Corporate and Other of $99 million (2021: $95 million), U.S. Commercial Banking and Wealth Management of $4,224 million (2021: $3,837 million), Capital Markets of $64 million (2021: $61 million), and Canadian Personal and Business Banking of $ 7 million (2021: $7 million).

Software and other intangible assets

The carrying amount of indefinite-lived intangible assets is provided in the following table:

$ millions, as at or for the year ended October 31		Contract based [1]	Brand name [2]	Total
2022	**Balance at beginning of year**	**$ 116**	**$ 24**	**$ 140**
	Adjustments [3]	**–**	**3**	**3**
	Balance at end of year	**$ 116**	**$ 27**	**$ 143**
2021	Balance at beginning of year	$ 116	$ 26	$ 142
	Adjustments [3]	–	(2)	(2)
	Balance at end of year	$ 116	$ 24	$ 140

(1) Represents management contracts purchased as part of past acquisitions.
(2) Acquired as part of the CIBC FirstCaribbean acquisition.
(3) Includes foreign currency translation adjustments.

The components of finite-lived software and other intangible assets are as follows:

$ millions, as at or for the year ended October 31		Software [1]	Core deposit intangibles [2]	Contract based [3]	Customer relationships [4]	Total
2022	**Gross carrying amount**					
	Balance at beginning of year	**$ 4,061**	**$ 575**	**$ 20**	**$ 239**	**$ 4,895**
	Additions	**833**	**–**	**10**	**242**	**1,085**
	Disposals [5]	**(42)**	**–**	**–**	**–**	**(42)**
	Adjustments [6]	**29**	**58**	**2**	**17**	**106**
	Balance at end of year	**$ 4,881**	**$ 633**	**$ 32**	**$ 498**	**$ 6,044**
2021	Balance at end of year	$ 4,061	$ 575	$ 20	$ 239	$ 4,895
2022	**Accumulated amortization**					
	Balance at beginning of year	**$ 2,367**	**$ 475**	**$ 13**	**$ 151**	**$ 3,006**
	Amortization and impairment [5]	**427**	**51**	**–**	**47**	**525**
	Disposals [5]	**(31)**	**–**	**–**	**–**	**(31)**
	Adjustments [6]	**27**	**51**	**2**	**15**	**95**
	Balance at end of year	**$ 2,790**	**$ 577**	**$ 15**	**$ 213**	**$ 3,595**
2021	Balance at end of year	$ 2,367	$ 475	$ 13	$ 151	$ 3,006
	Net book value					
	As at October 31, 2022	**$ 2,091**	**$ 56**	**$ 17**	**$ 285**	**$ 2,449**
	As at October 31, 2021	$ 1,694	$ 100	$ 7	$ 88	$ 1,889

(1) Includes $942 million (2021: $659 million) of work-in-progress not subject to amortization.
(2) Acquired as part of the acquisitions of CIBC FirstCaribbean and The PrivateBank.
(3) Represents a combination of management contracts purchased as part of past acquisitions including The PrivateBank and Geneva Advisors in 2017, as well as Lowenhaupt Global Advisors, LLC (LGA) and Cleary Gull in 2019.
(4) Represents customer relationships associated with past acquisitions including The PrivateBank and Geneva Advisors in 2017, LGA in 2019 and the Canadian Costco credit card portfolio in 2022.
(5) Includes write-offs of fully amortized assets.
(6) Includes foreign currency translation and purchase price adjustments.

Net additions and disposals of gross carrying amount during the year were: Canadian Personal and Business Banking net additions of $242 million (2021: net disposals of $2 million); Canadian Commercial Banking and Wealth Management net disposals of nil (2021: net disposals of nil); U.S. Commercial Banking and Wealth Management net additions of $26 million (2021: net additions of $5 million); Capital Markets net additions of nil (2021: net disposals of nil); and Corporate and Other net additions of $775 million (2021: net additions of $570 million).

Note 9 | Other assets

$ millions, as at October 31	**2022**	2021
Accrued interest receivable	**$ 2,230**	$ 1,271
Defined benefit asset (Note 18)	**1,420**	1,372
Precious metals [1]	**2,304**	3,005
Brokers' client accounts	**9,467**	12,273
Current tax receivable	**2,837**	1,676
Other prepayments	**652**	582
Derivative collateral receivable	**13,637**	6,599
Accounts receivable	**1,053**	859
Other [2]	**1,597**	1,588
	$ 35,197	$ 29,225

(1) Includes gold and silver bullion that are measured at fair value using unadjusted market prices quoted in active markets.
(2) Includes investments in subleases of $703 million as at October 31, 2022 (2021: $664 million). For the year ended October 31, 2022, finance income related to our investment in sublease was $46 million (2021: $47 million). Future lease payments receivable are $522 million over the next five years, and $657 million thereafter until expiry of the subleases.

Note 10 | Deposits [1][2]

$ millions, as at October 31	Payable on demand [3]	Payable after notice [4]	Payable on a fixed date [5][6]	2022 Total	2021 Total
Personal	$ 16,104	$ 139,042	$ 76,949	$ 232,095	$ 213,932
Business and government [7][8]	113,259	89,253	194,676	397,188	344,388
Bank	11,706	93	10,724	22,523	20,246
Secured borrowings [9]	–	–	45,766	45,766	42,592
	$ 141,069	$ 228,388	$ 328,115	$ 697,572	$ 621,158
Comprises:					
Held at amortized cost				$ 670,770	$ 602,628
Designated at fair value				26,802	18,530
				$ 697,572	$ 621,158
Total deposits include: [10]					
Non-interest-bearing deposits					
Canada				$ 93,801	$ 93,850
U.S.				17,053	16,522
Other international				6,452	5,601
Interest-bearing deposits					
Canada				447,409	406,642
U.S.				92,333	70,312
Other international				40,524	28,231
				$ 697,572	$ 621,158

(1) Includes deposits of $243.3 billion (2021: $215.4 billion) denominated in U.S. dollars and deposits of $33.1 billion (2021: $37.1 billion) denominated in other foreign currencies.
(2) Net of purchased notes of $3.0 billion (2021: $2.2 billion).
(3) Includes all deposits for which we do not have the right to require notice of withdrawal. These deposits are generally chequing accounts.
(4) Includes all deposits for which we can legally require notice of withdrawal. These deposits are generally savings accounts.
(5) Includes all deposits that mature on a specified date. These deposits are generally term deposits, guaranteed investment certificates, and similar instruments.
(6) Includes $55.1 billion (2021: $32.6 billion) of deposits which are subject to the bank recapitalization (bail-in) conversion regulations issued by the Department of Finance Canada. These regulations provide certain statutory powers to the Canada Deposit Insurance Corporation, including the ability to convert specified eligible shares and liabilities of CIBC into common shares in the event that CIBC is determined to be non-viable.
(7) Includes nil (2021: $300 million) of Notes issued to CIBC Capital Trust. These Notes were redeemed on November 1, 2021. For additional information, see Note 6.
(8) Includes $10.6 billion (2021: $6.8 billion) of structured note liabilities that were sold upon issuance to third-party financial intermediaries, who may resell the notes to retail investors in foreign jurisdictions.
(9) Comprises liabilities issued by or as a result of activities associated with the securitization of residential mortgages, Covered Bond Programme, and consolidated securitization vehicles.
(10) Classification is based on geographical location of the CIBC office.

Note 11 | Other liabilities

$ millions, as at October 31	2022	2021
Accrued interest payable	$ 2,009	$ 781
Defined benefit liability (Note 18)	477	602
Gold and silver certificates	102	113
Brokers' client accounts	6,617	5,809
Derivative collateral payable	5,919	6,662
Negotiable instruments	1,267	1,149
Accrued employee compensation and benefits	2,737	2,961
Accounts payable and accrued expenses	2,608	2,259
Other [1]	6,336	4,587
	$ 28,072	$ 24,923

(1) Includes the carrying value of our lease liabilities, which was $2,175 million as at October 31, 2022 (2021: $2,134 million). The undiscounted cash flows related to the contractual maturity of our lease liabilities is $44 million for the period less than 1 year, $1,109 million between years 1-5, and $1,199 million thereafter until expiry of the leases. During the year ended October 31, 2022, interest expense on lease liabilities was $51 million (2021: $51 million).

Note 12 | Derivative instruments

As described in Note 1, in the normal course of business, we use various derivative instruments for both trading and ALM purposes. These derivatives limit, modify or give rise to varying degrees and types of risk.

$ millions, as at October 31	2022 Assets	2022 Liabilities	2021 Assets	2021 Liabilities
Trading (Note 2)	$40,101	$ 46,278	$ 34,647	$ 30,040
ALM (Note 2) [1]	2,934	6,062	1,265	2,061
	$43,035	$ 52,340	$ 35,912	$ 32,101

(1) Comprised of derivatives that qualify for hedge accounting under IAS 39 and derivatives used for economic hedges.

Derivatives used by CIBC

The majority of our derivative contracts are OTC transactions, which consist of: (i) contracts that are bilaterally negotiated and settled between CIBC and the counterparty to the contract; and (ii) contracts that are bilaterally negotiated and then cleared through a central counterparty (CCP). Bilaterally negotiated and settled contracts are usually traded under a standardized International Swaps and Derivatives Association (ISDA) agreement with collateral posting arrangements between CIBC and its counterparties. Terms are negotiated directly with counterparties and the contracts have industry-standard settlement mechanisms prescribed by ISDA. Centrally cleared contracts are generally bilaterally negotiated and then novated to, and cleared through, a CCP. The industry promotes the use of CCPs to clear OTC trades. The central clearing of derivative contracts generally facilitates the reduction of credit exposures due to the ability to net settle offsetting positions. Consequently, derivative contracts cleared through CCPs generally attract less capital relative to those settled with non-CCPs.

The remainder of our derivative contracts are exchange-traded derivatives, which are standardized in terms of their amounts and settlement dates, and are bought and sold on organized and regulated exchanges. These exchange-traded derivative contracts consist primarily of options and futures.

Interest rate derivatives

Forward rate agreements are OTC contracts that effectively fix a future interest rate for a period of time. A typical forward rate agreement provides that at a pre-determined future date, a cash settlement will be made between the counterparties based upon the difference between a contracted rate and a market rate to be determined in the future, calculated on a specified notional principal amount. No exchange of principal amount takes place. Certain forward rate agreements are bilaterally transacted and then novated and settled through a clearing house which acts as a CCP.

Interest rate swaps are OTC contracts in which two counterparties agree to exchange cash flows over a period of time based on rates applied to a specified notional principal amount. A typical interest rate swap would require one counterparty to pay a fixed market interest rate in exchange for a variable market interest rate determined from time to time, with both calculated on a specified notional principal amount. No exchange of principal amount takes place. Certain interest rate swaps are bilaterally transacted and then novated and settled through a clearing house which acts as a CCP.

Interest rate options are contracts in which one party (the purchaser of an option) acquires from another party (the writer of an option), in exchange for a premium, the right, but not the obligation, to either buy or sell, on a specified future date or within a specified time, a specified financial instrument at a contracted price. The underlying financial instrument has a market price which varies in response to changes in interest rates. Options are transacted in both OTC and exchange-traded markets.

Interest rate futures are standardized contracts transacted on an exchange. They are based upon an agreement to buy or sell a specified quantity of a financial instrument on a specified future date, at a contracted price. These contracts differ from forward rate agreements in that they are in standard amounts with standard settlement dates and are transacted through an exchange.

Foreign exchange derivatives

Foreign exchange forwards are OTC contracts in which one counterparty contracts with another to exchange a specified amount of one currency for a specified amount of a second currency, at a future date or range of dates.

Foreign exchange futures contracts are similar in mechanics to foreign exchange forward contracts except that they are in standard currency amounts with standard settlement dates and are transacted through an exchange.

Foreign exchange swap contracts comprise foreign exchange swaps and cross-currency interest rate swaps. Foreign exchange swaps are transactions in which a currency is simultaneously purchased in the spot market and sold for a different currency in the forward market, or vice versa. Cross-currency interest rate swaps are transactions in which counterparties exchange principal and interest flows in different currencies over a period of time. These contracts are used to manage both currency and interest rate exposures.

Credit derivatives

Credit derivatives are OTC contracts designed to transfer the credit risk in an underlying financial instrument (usually termed as a reference asset) from one counterparty to another. The most common credit derivatives are CDS and certain TRS.

CDS contracts provide protection against the decline in value of a reference asset as a result of specified credit events such as default or bankruptcy. These derivatives are similar in structure to an option whereby the purchaser pays a premium to the seller of the CDS contract in return for payment contingent on the occurrence of a credit event. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value of the reference asset at the time of settlement. Neither the purchaser nor the seller under the CDS contract has recourse to the entity that issued the reference asset. Certain CDS contracts are cleared through a CCP.

In credit derivative TRS contracts, one counterparty agrees to pay or receive cash amounts based on the returns of a reference asset, including interest earned on these assets in exchange for amounts that are based on prevailing market funding rates. These cash settlements are made regardless of whether there is a credit event. Upon the occurrence of a credit event, the parties may either exchange cash payments according to the value of the defaulted assets or exchange cash based on the notional amount for physical delivery of the defaulted assets.

Equity derivatives

Equity swaps are OTC contracts in which one counterparty agrees to pay, or receive from the other, cash amounts based on changes in the value of a stock index, a basket of stocks or a single stock in exchange for amounts that are based either on prevailing market funding rates or changes in the value of a different stock index, basket of stocks or a single stock. These contracts generally include payments in respect of dividends.

Equity options give the purchaser of the option, for a premium, the right, but not the obligation, to buy from or sell to the writer of an option, an underlying stock index, basket of stocks, or a single stock at a contracted price. Options are transacted in both OTC and exchange markets.

Equity index futures are standardized contracts transacted on an exchange. They are based on an agreement to pay or receive a cash amount based on the difference between the contracted price level of an underlying stock index and its corresponding market price level at a specified future date. There is generally no actual delivery of stocks that comprise the underlying index. These contracts are in standard amounts with standard settlement dates.

Precious metal and other commodity derivatives

We also transact in other derivative products, including commodity forwards, futures, swaps and options, such as precious metal and energy-related products in both OTC and exchange markets.

Notional amounts

The notional amounts are not recorded as assets or liabilities, as they represent the face amount of the contract to which a rate or price is applied to determine the amount of cash flows to be exchanged. In most cases, notional amounts do not represent the potential gain or loss associated with market or credit risk of such instruments.

The following table presents the notional amounts of derivative instruments:

$ millions, as at October 31	Residual term to contractual maturity				2022		2021	
	Less than 1 year	1 to 5 years	Over 5 years	Total notional amounts	Trading	ALM	Trading	ALM
Interest rate derivatives								
Over-the-counter								
Forward rate agreements	$ 9,098	$ 2,228	$ –	$ 11,326	$ –	$ 11,326	$ 7,149	$ 5,611
Centrally cleared forward rate agreements	95,241	16,375	–	111,616	111,616	–	100,198	–
Swap contracts	55,981	123,774	88,270	268,025	246,336	21,689	243,655	23,205
Centrally cleared swap contracts	1,964,761	1,772,589	789,361	4,526,711	3,930,263	596,448	2,998,139	460,922
Purchased options	12,219	7,142	1,089	20,450	20,160	290	13,319	344
Written options	10,428	5,757	844	17,029	16,926	103	13,912	261
	2,147,728	1,927,865	879,564	4,955,157	4,325,301	629,856	3,376,372	490,343
Exchange-traded								
Futures contracts	86,893	22,622	–	109,515	109,493	22	164,644	–
Purchased options	6	–	–	6	6	–	5,251	–
Written options	1,006	–	–	1,006	1,006	–	10,251	–
	87,905	22,622	–	110,527	110,505	22	180,146	–
Total interest rate derivatives	2,235,633	1,950,487	879,564	5,065,684	4,435,806	629,878	3,556,518	490,343
Foreign exchange derivatives								
Over-the-counter								
Forward contracts	699,241	26,247	1,589	727,077	719,885	7,192	709,628	6,937
Swap contracts	160,500	254,614	154,073	569,187	497,830	71,357	491,884	52,247
Purchased options	23,800	1,922	13	25,735	25,734	1	19,843	88
Written options	27,484	2,320	–	29,804	29,158	646	21,887	739
	911,025	285,103	155,675	1,351,803	1,272,607	79,196	1,243,242	60,011
Exchange-traded								
Futures contracts	42	–	–	42	42	–	6	–
Total foreign exchange derivatives	911,067	285,103	155,675	1,351,845	1,272,649	79,196	1,243,248	60,011
Credit derivatives								
Over-the-counter								
Credit default swap contracts – protection purchased	1,305	533	376	2,214	2,195	19	2,210	27
Centrally cleared credit default swap contracts – protection purchased	203	633	1,019	1,855	1,801	54	1,524	123
Credit default swap contracts – protection sold	448	458	123	1,029	1,029	–	1,304	–
Centrally cleared credit default swap contracts – protection sold	–	320	378	698	698	–	377	–
Total credit derivatives	1,956	1,944	1,896	5,796	5,723	73	5,415	150
Equity derivatives								
Over-the-counter	65,407	54,616	876	120,899	119,327	1,572	83,612	1,831
Exchange-traded	79,954	28,808	724	109,486	109,486	–	93,564	–
Total equity derivatives	145,361	83,424	1,600	230,385	228,813	1,572	177,176	1,831
Precious metal and other commodity derivatives (1)								
Over-the-counter	27,969	25,404	564	53,937	53,926	11	48,028	–
Centrally cleared commodity derivatives	50	6	–	56	56	–	119	–
Exchange-traded	24,255	11,813	359	36,427	36,427	–	34,783	–
Total precious metal and other commodity derivatives	52,274	37,223	923	90,420	90,409	11	82,930	–
Total notional amount of which:	$ 3,346,291	$ 2,358,181	$ 1,039,658	$ 6,744,130	$ 6,033,400	$ 710,730	$ 5,065,287	$ 552,335
Over-the-counter (2)	3,154,135	2,294,938	1,038,575	6,487,648	5,776,940	710,708	4,756,788	552,335
Exchange-traded	192,156	63,243	1,083	256,482	256,460	22	308,499	–

(1) Certain prior year information has been revised to conform to current year presentation.
(2) For OTC derivatives that are not centrally cleared, $9,695.3 billion (2021: $1,622.2 billion) are with counterparties that have two-way collateral posting arrangements, $33.0 billion (2021: $37.1 billion) are with counterparties that have one-way collateral posting arrangements, and $98.4 billion (2021: $88.4 billion) are with counterparties that have no collateral posting arrangements. Counterparties with whom we have more than insignificant OTC derivative portfolios and one-way collateral posting arrangements are either sovereign entities or supra national financial institutions.

Risk

In the following sections, we discuss the risks related to the use of derivatives and how we manage these risks.

Market risk

Derivatives are financial instruments where valuation is linked to changes in interest rates, foreign exchange rates, equity, commodity, credit prices or indices. Changes in value as a result of the aforementioned risk factors are referred to as market risk.

Market risk arising from derivative trading activities is managed in order to mitigate risk in line with CIBC's risk appetite. To manage market risk, we set market risk limits and may enter into hedging transactions.

Credit risk

Credit risk arises from the potential for a counterparty to default on its contractual obligations and the possibility that prevailing market conditions are such that a loss would occur in replacing the defaulted transaction.

We limit the credit risk of OTC derivatives through the use of ISDA master netting agreements, collateral, CCPs and other credit mitigation techniques. We clear eligible derivatives through CCPs in accordance with various global initiatives. Where feasible, we novate existing bilaterally

negotiated and settled derivatives to a CCP in an effort to reduce CIBC's credit risk exposure. We establish counterparty credit limits and limits for CCP exposures based on a counterparty's creditworthiness and the type of trading relationship with each counterparty (underlying agreements, business volumes, product types, tenors, etc.).

We negotiate netting agreements to contain the build-up of credit exposure resulting from multiple transactions with more active counterparties. Such agreements provide for the simultaneous close-out and netting of all transactions with a counterparty, in the case of a counterparty default. A number of these agreements incorporate a Credit Support Annex, which is a bilateral security agreement that, among other things, provides for the exchange of collateral between parties in the event that one party's exposure to the other exceeds agreed upon thresholds.

Credit risk on exchange-traded futures and options is limited, as these transactions are standardized contracts executed on established exchanges, whose CCPs assume the obligations of both counterparties. Similarly, swaps that are centrally cleared represent limited credit risk because these transactions are novated to the CCP, which assumes the obligations of the original bilateral counterparty. All exchange-traded and centrally cleared contracts are subject to initial margin and daily settlement of variation margins, designed to protect participants from losses incurred from a counterparty default.

A CVA is determined using the fair value based exposure we have on derivative contracts. We believe that we have made appropriate fair value adjustments to date. The establishment of fair value adjustments involves estimates that are based on accounting processes and judgments by management. We evaluate the adequacy of the fair value adjustments on an ongoing basis. Market and economic conditions relating to derivative counterparties may change in the future, which could result in significant future losses.

The following table summarizes our credit exposure arising from derivatives, which includes the current replacement cost, credit equivalent amount and risk-weighted amount.

For the majority of OTC derivative transactions, we use the Internal Model Method (IMM) for the determination of the EAD, using models that simulate the underlying risk factors and reflect netting and collateral agreements. For the minority of derivative transactions where we do not have regulatory approval to use IMM, we used the Standardized Approach for Counterparty Credit Risk (SA-CCR).

$ millions, as at October 31	2022					2021				
	Current replacement cost [1]			Credit equivalent amount [2]	Risk-weighted amount	Current replacement cost [1]			Credit equivalent amount [2]	Risk-weighted amount
	Trading	ALM	Total			Trading	ALM	Total		
Interest rate derivatives										
Over-the-counter										
Forward rate agreements	$ –	$ –	$ –	$ 7	$ 2	$ –	$ 4	$ 4	$ 35	$ 31
Swap contracts	939	40	979	2,223	422	2,116	141	2,257	4,182	1,360
Purchased options	21	–	21	35	16	14	2	16	26	14
Written options	–	–	–	7	3	4	–	4	8	4
	960	40	1,000	2,272	443	2,134	147	2,281	4,251	1,409
Exchange-traded	–	–	–	198	7	3	–	3	332	10
	960	40	1,000	2,470	450	2,137	147	2,284	4,583	1,419
Foreign exchange derivatives										
Over-the-counter										
Forward contracts	1,966	574	2,540	6,293	1,922	943	196	1,139	4,027	1,335
Swap contracts	366	394	760	2,928	721	452	389	841	2,684	751
Purchased options	325	–	325	767	267	144	14	158	156	54
Written options	29	–	29	139	46	40	–	40	50	19
	2,686	968	3,654	10,127	2,956	1,579	599	2,178	6,917	2,159
Credit derivatives										
Over-the-counter										
Credit default swap contracts										
– protection purchased	2	–	2	164	19	3	1	4	105	16
– protection sold	–	–	–	44	11	1	–	1	18	7
	2	–	2	208	30	4	1	5	123	23
Equity derivatives										
Over-the-counter	124	51	175	3,788	926	254	79	333	3,910	935
Exchange-traded	10	–	10	2,546	87	1,310	–	1,310	6,298	195
	134	51	185	6,334	1,013	1,564	79	1,643	10,208	1,130
Precious metal and other commodity derivatives [3]										
Over-the-counter	3,801	–	3,801	6,051	1,655	4,147	4	4,151	6,374	1,876
Exchange-traded	12	–	12	3,060	122	17	–	17	2,559	102
	3,813	–	3,813	9,111	1,777	4,164	4	4,168	8,933	1,978
RWA related to non-trade exposures to central counterparties					366					306
RWA related to CVA charge					6,696					7,174
Total derivatives	$ 7,595	$ 1,059	$ 8,654	$ 28,250	$ 13,288	$ 9,448	$ 830	$ 10,278	$ 30,764	$ 14,189

(1) Current replacement cost reflects the current mark-to-market (MTM) value of derivatives offset by eligible financial collateral, where present.
(2) Under IMM, expected effective positive exposure (EEPE) is used, which computes, through simulation, the expected exposures with consideration to the expected movements in underlying risk factor and netting/collateral agreements. The EAD is calculated as EEPE multiplied by the prescribed alpha factor of 1.4. The EAD under SA-CCR is calculated as the sum of replacement cost and potential future exposure, multiplied by the prescribed alpha factor of 1.4.
(3) Certain prior year information has been revised to conform to current year presentation.

The following table presents the current replacement cost of derivatives by geographic region based on the location of the derivative counterparty:

$ millions, as at October 31	2022				2021			
	Canada	U.S.	Other countries	Total	Canada	U.S.	Other countries	Total
Derivative instruments								
By counterparty type								
Financial institutions	$ 1,245	$ 223	$ 1,151	$ 2,619	$ 558	$ 1,693	$ 1,130	$ 3,381
Governments	1,016	–	35	1,051	641	1	17	659
Corporate	1,167	3,247	570	4,984	1,824	3,445	969	6,238
Total derivative instruments	$ 3,428	$ 3,470	$ 1,756	$ 8,654	$ 3,023	$ 5,139	$ 2,116	$ 10,278

Note 13 | Designated accounting hedges

Hedge accounting

We apply hedge accounting as part of managing the market risk of certain non-trading portfolios arising from changes due to interest rates, foreign exchange rates, and equity market prices. See the shaded sections in "Non-trading activities" in the MD&A for further information on our risk management strategy for these risks. See Note 12 for further information on the derivatives used by CIBC.

Interest rate risk

The majority of our derivative contracts used to hedge certain exposures to benchmark interest rate risk are interest rate swaps. For fair value hedges, we convert our fixed interest rate exposures from the hedged financial instruments to floating interest rate exposures. For cash flow hedges, we convert certain exposures to cash flow variability from our variable rate instruments to fixed interest rate exposures.

Foreign currency risk

For our fair value hedges, we mainly use various combinations of cross-currency interest rate swaps and interest rate swaps to hedge our exposures to foreign currency risk together with interest rate risk, converting our fixed foreign currency rate exposures to floating functional currency rate exposures.

For our cash flow hedges, the majority of our derivative contracts are used to hedge our exposures to cash flow variability arising from fluctuations in foreign exchange rates, and mainly consist of cross-currency interest rate swaps.

For NIFO hedges, we use a combination of foreign denominated deposit liabilities and foreign exchange forwards to manage our foreign currency exposure of our NIFOs with a functional currency other than the Canadian dollar.

Equity price risk

We use cash-settled TRS in designated cash flow hedge relationships to hedge changes in CIBC's share price in respect of certain cash-settled share-based compensation awards. Note 17 provides details on our cash-settled share-based compensation plans.

For the hedge relationships described above, hedge effectiveness is assessed at the inception of the hedge relationship and on an ongoing basis, primarily using the dollar offset method. The sources of hedge ineffectiveness are mainly attributed to the following:

- Utilization of hedging instruments that have a non-zero fair value at the inception of the hedge relationship;
- Differences in fixed rates, when contractual coupons of the fixed rate hedged items are designated;
- Differences in the discounting factors between the hedged item and the hedging instruments arising from different rate reset frequencies and timing of cash flows; and
- Differences in the discount curves to determine the basis adjustments of the hedged items and the fair value of the hedging derivatives, including from the application of OIS and CVA to the valuation of derivatives when they are applicable.

Designated hedging instruments

The following table provides a summary of financial instruments designated as hedging instruments:

$ millions, as at October 31		Notional amount of the hedging instrument (1)	Maturity range: Less than 1 year	Maturity range: 1-5 years	Maturity range: Over 5 years	Fair value of the hedging derivatives: Assets	Fair value of the hedging derivatives: Liabilities	Gains (losses) on changes in fair value used for calculating hedge ineffectiveness
2022	**Cash flow hedges**							
	Foreign exchange risk							
	Cross-currency interest rate swaps	**$ 16,527**	**$ 5,331**	**$ 11,196**	**$ –**	**$ 467**	**$ 1,008**	**$ (618)**
	Interest rate risk							
	Interest rate swaps	**29,660**	**6,235**	**23,289**	**136**	**–**	**20**	**(964)**
	Equity share price risk							
	Equity swaps	**1,413**	**143**	**1,270**	**–**	**7**	**38**	**(255)**
		$ 47,600	**$ 11,709**	**$ 35,755**	**$ 136**	**$ 474**	**$ 1,066**	**$ (1,837)**
	NIFO hedges							
	Foreign exchange risk							
	Foreign exchange forwards	**$ 232**	**$ 232**	**$ –**	**$ –**	**$ 5**	**$ 3**	**$ (22)**
	Deposits (2)	**24,793**	**24,793**	**–**	**–**	**n/a**	**n/a**	**(2,399)**
		$ 25,025	**$ 25,025**	**$ –**	**$ –**	**$ 5**	**$ 3**	**$ (2,421)**
	Fair value hedges							
	Interest rate risk							
	Interest rate swaps	**$ 226,764**	**$ 68,457**	**$ 131,337**	**$ 26,970**	**$ 89**	**$ 817**	**$ 400**
	Foreign exchange / interest rate risk							
	Cross-currency interest rate swaps	**50,555**	**21,330**	**23,515**	**5,710**	**1,335**	**3,084**	**(130)**
	Interest rate swaps	**21,352**	**9,023**	**10,125**	**2,204**	**–**	**32**	**(1,316)**
		$ 298,671	**$ 98,810**	**$ 164,977**	**$ 34,884**	**$ 1,424**	**$ 3,933**	**$ (1,046)**
		$ 371,296	**$ 135,544**	**$ 200,732**	**$ 35,020**	**$ 1,903**	**$ 5,002**	**$ (5,304)**
2021	**Cash flow hedges**							
	Foreign exchange risk							
	Cross-currency interest rate swaps	$ 13,002	$ 6,605	$ 6,397	$ –	$ 165	$ 191	$ (55)
	Interest rate risk							
	Interest rate swaps	12,073	4,846	7,227	–	–	–	(223)
	Equity share price risk							
	Equity swaps	1,679	964	715	–	44	1	529
		$ 26,754	$ 12,415	$ 14,339	$ –	$ 209	$ 192	$ 251
	NIFO hedges							
	Foreign exchange risk							
	Foreign exchange forwards	$ 226	$ 226	$ –	$ –	$ 1	$ 1	$ 14
	Deposits (2)	24,116	24,116	–	–	n/a	n/a	1,534
		$ 24,342	$ 24,342	$ –	$ –	$ 1	$ 1	$ 1,548
	Fair value hedges							
	Interest rate risk							
	Interest rate swaps	$ 190,769	$ 72,010	$ 99,532	$ 19,227	$ 152	$ 162	$ 1,018
	Foreign exchange / interest rate risk							
	Cross-currency interest rate swaps	38,213	7,804	23,483	6,926	478	1,391	48
	Interest rate swaps	20,907	4,113	13,692	3,102	–	–	(260)
		$ 249,889	$ 83,927	$ 136,707	$ 29,255	$ 630	$ 1,553	$ 806
		$ 300,985	$ 120,684	$ 151,046	$ 29,255	$ 840	$ 1,746	$ 2,605

(1) For some hedge relationships, we apply a combination of derivatives to hedge the underlying exposures; therefore, the notional amounts of the derivatives generally exceed the carrying amount of the hedged items.
(2) Notional amount represents the principal amount of deposits as at October 31, 2022 and October 31, 2021.
n/a Not applicable.

The following table provides the average rate or price of the hedging derivatives:

As at October 31			Average exchange rate (1)		Average fixed interest rate (1)	Average share price (2)
2022	**Cash flow hedges**					
	Foreign exchange risk					
	Cross-currency interest rate swaps	AUD – CAD	**0.92**		**n/a**	**n/a**
		EUR – CAD	**1.42**		**n/a**	**n/a**
		GBP – CAD	**1.68**		**n/a**	**n/a**
	Interest rate risk					
	Interest rate swaps		**n/a**	CAD	**2.72 %**	**n/a**
			n/a	USD	**3.89 %**	**n/a**
	Equity share price risk					
	Equity swaps		**n/a**		**n/a**	**$ 68.23**
	NIFO hedges					
	Foreign exchange risk					
	Foreign exchange forwards	AUD – CAD	**0.88**		**n/a**	**n/a**
		HKD – CAD	**0.17**		**n/a**	**n/a**
	Fair value hedges					
	Interest rate risk					
	Interest rate swaps		**n/a**	CAD	**2.32 %**	**n/a**
	Foreign exchange / interest rate risk					
	Cross-currency interest rate swaps	EUR – CAD	**1.48**		**1.76 %**	**n/a**
		CHF – CAD	**1.39**		**n/a**	**n/a**
		USD – CAD	**1.28**		**3.46 %**	**n/a**
	Interest rate swaps		**n/a**	CHF	**(0.14)%**	**n/a**
			n/a	EUR	**0.01 %**	**n/a**
			n/a	GBP	**1.02 %**	**n/a**
2021	**Cash flow hedges**					
	Foreign exchange risk					
	Cross-currency interest rate swaps	AUD – CAD	0.94		n/a	n/a
		GBP – CAD	1.72		n/a	n/a
	Interest rate risk					
	Interest rate swaps		n/a	CAD	1.57 %	n/a
			n/a	USD	0.77 %	n/a
	Equity share price risk					
	Equity swaps		n/a		n/a	$ 59.09
	NIFO hedges					
	Foreign exchange risk					
	Foreign exchange forwards	AUD – CAD	0.92		n/a	n/a
		HKD – CAD	0.16		n/a	n/a
	Fair value hedges					
	Interest rate risk					
	Interest rate swaps		n/a	CAD	1.37 %	n/a
	Foreign exchange / interest rate risk					
	Cross-currency interest rate swaps	EUR – CAD	1.50		0.08 %	n/a
		GBP – CAD	1.66		1.31 %	n/a
		USD – CAD	1.27		1.29 %	n/a
	Interest rate swaps		n/a	CHF	(0.02)%	n/a
			n/a	EUR	(0.39)%	n/a
			n/a	GBP	0.71 %	n/a

(1) Includes average foreign exchange rates and interest rates relating to significant hedging relationships.
(2) On April 7, 2022, CIBC shareholders approved a two-for-one share split (Share Split) of CIBC's issued and outstanding common shares. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and per common share amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.
n/a Not applicable.

Designated hedged items

The following table provides information on designated hedged items:

$ millions, as at or for the year ended October 31		Carrying amount of the hedged item – Assets	Carrying amount of the hedged item – Liabilities	Accumulated amount of fair value hedge adjustments on the hedged item – Assets	Accumulated amount of fair value hedge adjustments on the hedged item – Liabilities	Gains (losses) on change in fair value used for calculating hedge ineffectiveness
2022	**Cash flow hedges** [1]					
	Foreign exchange risk					
	Deposits	**$ –**	**$ 9,466**	**n/a**	**n/a**	**$ 615**
	Interest rate risk					
	Loans	**29,660**	**–**	**n/a**	**n/a**	**970**
	Equity share price risk					
	Share-based payment	**–**	**1,314**	**n/a**	**n/a**	**255**
		$ 29,660	**$ 10,780**	**n/a**	**n/a**	**$ 1,840**
	NIFO hedges	**$ 25,025**	**$ –**	**n/a**	**n/a**	**$ 2,421**
	Fair value hedges [2]					
	Interest rate risk					
	Securities	**$ 47,659**	**$ –**	**$ (3,251)**	**$ –**	**$ (3,583)**
	Loans	**36,282**	**–**	**(1,794)**	**–**	**(1,537)**
	Deposits	**–**	**112,295**	**–**	**(4,655)**	**4,437**
	Subordinated indebtedness	**–**	**5,893**	**–**	**(265)**	**293**
	Foreign exchange / interest rate risk					
	Deposits	**–**	**27,017**	**–**	**(1,581)**	**1,448**
		$ 83,941	**$ 145,205**	**$ (5,045)**	**$ (6,501)**	**$ 1,058**
2021	**Cash flow hedges** [1]					
	Foreign exchange risk					
	Deposits	$ –	$ 5,514	n/a	n/a	$ 54
	Interest rate risk					
	Loans	12,070	–	n/a	n/a	223
	Equity share price risk					
	Share-based payment	–	1,549	n/a	n/a	(529)
		$ 12,070	$ 7,063	n/a	n/a	$ (252)
	NIFO hedges	$ 24,342	$ –	n/a	n/a	$ (1,548)
	Fair value hedges [2]					
	Interest rate risk					
	Securities	$ 31,661	$ –	$ (243)	$ –	$ (1,403)
	Loans	45,180	–	(583)	–	(1,340)
	Deposits	–	91,414	–	(261)	1,568
	Subordinated indebtedness	–	5,419	–	10	192
	Foreign exchange / interest rate risk					
	Deposits	–	19,662	–	(154)	217
		$ 76,841	$ 116,495	$ (826)	$ (405)	$ (766)

(1) As at October 31, 2022, the amount remaining in AOCI related to discontinued cash flow hedges was a net loss of $62 million (2021: net gain of $73 million).
(2) As at October 31, 2022, the accumulated fair value hedge net liability adjustment remaining on the consolidated balance sheet related to discontinued fair value hedges was $537 million (2021: net asset of $44 million).
n/a Not applicable.

Hedge accounting gains (losses) in the consolidated statement of comprehensive income

$ millions, for the year ended October 31		Beginning balance of AOCI – hedge reserve (after-tax)	Change in the value of the hedging instrument recognized in OCI (before-tax)	Amount reclassified from accumulated OCI to income (before-tax) [1]	Tax benefit (expense)	Ending balance of AOCI hedge reserve (after-tax)	Hedge ineffectiveness gains (losses) recognized in income
2022	**Cash flow hedges**						
	Foreign exchange risk	**$ (7)**	**$ (615)**	**$ 607**	**$ 2**	**$ (13)**	**$ (3)**
	Interest rate risk	**68**	**(963)**	**(18)**	**258**	**(655)**	**(1)**
	Equity share price risk	**76**	**(255)**	**160**	**25**	**6**	**–**
		$ 137	**$ (1,833)**	**$ 749**	**$ 285**	**$ (662)**	**$ (4)**
	NIFO hedges – foreign exchange risk						
	Hedges of net investment in foreign operations	**$ 154**	**$ (2,421)**	**$ –**	**$ 131**	**$ (2,136)**	**$ –**
2021	**Cash flow hedges**						
	Foreign exchange risk	$ (2)	$ (64)	$ 57	$ 2	$ (7)	$ –
	Interest rate risk	279	(223)	(63)	75	68	–
	Equity share price risk	(3)	529	(421)	(29)	76	–
		$ 274	$ 242	$ (427)	$ 48	$ 137	$ –
	NIFO hedges – foreign exchange risk						
	Hedges of net investment in foreign operations	$ (1,341)	$ 1,548	$ –	$ (53)	$ 154	$ –

(1) During the year ended October 31, 2022, the amount reclassified from AOCI to net income for cash flow hedges of forecasted transactions that were no longer expected to occur was nil (2021: nil).

Hedge accounting gains (losses) in the consolidated statement of income

$ millions, for the year ended October 31		Gains (losses) on the hedging instruments	Gains (losses) on the hedged items attributable to hedged risk	Hedge ineffectiveness gains (losses) recognized in income
2022	**Fair value hedges**			
	Interest rate risk	**$ 400**	**$ (390)**	**$ 10**
	Foreign exchange / interest rate risk	**(1,446)**	**1,448**	**2**
		$ (1,046)	**$ 1,058**	**$ 12**
2021	**Fair value hedges**			
	Interest rate risk	$ 1,018	$ (983)	$ 35
	Foreign exchange / interest rate risk	(212)	217	5
		$ 806	$ (766)	$ 40

Note 14 | Subordinated indebtedness

The debt issues included in the table below are outstanding unsecured obligations of CIBC and its subsidiaries and are subordinated to the claims of depositors and other creditors as set out in their terms. Foreign currency denominated indebtedness funds foreign currency denominated assets. All redemptions are subject to regulatory approval.

Terms of subordinated indebtedness

$ millions, as at October 31					**2022**		2021	
		Earliest date redeemable						
Interest rate %	Contractual maturity date	At greater of Canada Yield Price (1) and par	At par	Denominated in foreign currency	**Par value**	**Carrying value** (2)	Par value	Carrying value (2)
5.75 (3)	July 11, 2024 (4)			TT$175 million	**$ 36**	**$ 36**	$ 32	$ 32
3.45 (5)(6)	April 4, 2028		April 4, 2023		**1,500**	**1,487**	1,500	1,525
8.70	May 25, 2029 (4)				**25**	**32**	25	37
2.95 (5)(7)	June 19, 2029		June 19, 2024		**1,500**	**1,426**	1,500	1,484
2.01 (5)(8)	July 21, 2030		July 21, 2025		**1,000**	**929**	1,000	976
11.60	January 7, 2031	January 7, 1996			**200**	**174**	200	196
1.96 (5)(9)	April 21, 2031		April 21, 2026		**1,000**	**916**	1,000	976
10.80	May 15, 2031	May 15, 2021			**150**	**129**	150	146
4.20 (5)(10)	April 7, 2032		April 7, 2027		**1,000**	**963**	–	–
8.70	May 25, 2032 (4)				**25**	**34**	25	39
8.70	May 25, 2033 (4)				**25**	**34**	25	40
8.70	May 25, 2035 (4)				**25**	**36**	25	42
Floating (11)	July 31, 2084		July 27, 1990	US$38 million (12)	**52**	**52**	47	47
Floating (13)	August 31, 2085		August 20, 1991	US$10 million (14)	**13**	**13**	14	14
					6,551	**6,261**	5,543	5,554
Subordinated indebtedness sold short (held) for trading purposes					**31**	**31**	(15)	(15)
					$ 6,582	**$ 6,292**	$ 5,528	$ 5,539

(1) Canada Yield Price: a price calculated at the time of redemption to provide a yield to maturity equal to the yield of a Government of Canada bond of appropriate maturity plus a pre-determined spread.
(2) Carrying values of fixed-rate subordinated indebtedness notes reflect the impact of interest rate hedges in an effective hedge relationship.
(3) Guaranteed Subordinated Term Notes in Trinidad and Tobago dollars issued on July 11, 2018 by FirstCaribbean International Bank (Trinidad & Tobago) Limited, a subsidiary of CIBC FirstCaribbean, and guaranteed on a subordinated basis by CIBC FirstCaribbean.
(4) Not redeemable prior to maturity date.
(5) Debentures are also subject to a non-viability contingent capital (NVCC) provision, necessary for the Debentures to qualify as Tier 2 regulatory capital under Basel III. As such, the Debentures are automatically converted into common shares upon the occurrence of a Trigger Event as described in the capital adequacy guidelines. In such an event, the Debentures are convertible into a number of common shares, determined by dividing 150% of the par value plus accrued and unpaid interest by the average common share price (as defined in the relevant prospectus supplements) subject to a minimum price of $2.50 per share (subject to adjustment in certain events as defined in the relevant prospectus supplements).
(6) Interest rate is fixed at the indicated rate until the earliest date redeemable at par by CIBC and, thereafter, at a rate of1.00% above the three-month Canadian dollar bankers' acceptance rate.
(7) Interest rate is fixed at the indicated rate until the earliest date redeemable at par by CIBC and, thereafter, at a rate of1.18% above the three-month Canadian dollar bankers' acceptance rate.
(8) Interest rate is fixed at the indicated rate until the earliest date redeemable at par by CIBC and, thereafter, at a rate of1.28% above the three-month Canadian dollar bankers' acceptance rate.
(9) Interest rate is fixed at the indicated rate until the earliest date redeemable at par by CIBC and, thereafter, at a rate of0.56% above the three-month Canadian dollar bankers' acceptance rate.
(10) Interest rate is fixed at the indicated rate until the earliest date redeemable at par by CIBC and, thereafter, at Daily Compounded Canadian Overnight Repo Rate Average (CORRA) plus1.69%.
(11) Interest rate is based on the six-month US$ LIBOR plus 0.25%.
(12) Nil (2021: US$6 million) of this issue was repurchased and cancelled during 2022.
(13) Interest rate is based on the six-month US$ LIBOR plus 0.125%.
(14) US$1 million (2021: US$2 million) of this issue was repurchased and cancelled during 2022.

Note 15 | Common and preferred shares and other equity instruments

The following table presents the number of common and preferred shares outstanding and dividends paid, and other equity instruments and distributions paid thereon:

Common and preferred shares outstanding and other equity instruments

$ millions, except number of shares and per share amounts, as at or for the year ended October 31	2022				2021			
	Shares outstanding		Dividends and distributions paid		Shares outstanding		Dividends and distributions paid	
	Number of shares	Amount	Amount	$ per share	Number of shares	Amount	Amount	$ per share
Common shares [1]	**905,993,892**	**$ 14,723**	**$ 2,954**	**$ 3.270**	901,658,556	$ 14,351	$ 2,622	$ 2.920
Class A Preferred Shares								
Series 39	**16,000,000**	**400**	**15**	**0.93**	16,000,000	400	15	0.93
Series 41	**12,000,000**	**300**	**12**	**0.98**	12,000,000	300	12	0.98
Series 43	**12,000,000**	**300**	**9**	**0.79**	12,000,000	300	9	0.79
Series 45 [2]	**–**	**–**	**26**	**0.83**	32,000,000	800	35	1.10
Series 47	**18,000,000**	**450**	**20**	**1.13**	18,000,000	450	20	1.13
Series 49	**13,000,000**	**325**	**17**	**1.30**	13,000,000	325	17	1.30
Series 51	**10,000,000**	**250**	**13**	**1.29**	10,000,000	250	13	1.29
Series 56	**600,000**	**600**	**–**	**–**	–	–	–	–
		$ 2,625	**$ 112**			$ 2,825	$ 121	
Treasury shares – common shares	**46,205**	**$ 3**			(2,604)	$ –		
Treasury shares – preferred shares	**(1,995)**	**(2)**			(20)	–		
Other Equity Instruments								
Limited recourse capital notes Series 1 [3]		**$ 750**	**$ 33**	**4.375%** [4]		$ 750	$ 37	4.375% [4]
Limited recourse capital notes Series 2 [5]		**$ 750**	**$ 26**	**4.000%** [4]		$ 750	$ –	4.000% [4]
Limited recourse capital notes Series 3 [6]		$ 800	$ –	**7.150%** [4]		$ –	$ –	

(1) On April 7, 2022, CIBC shareholders approved a two-for-one share split (Share Split) of CIBC's issued and outstanding common shares. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and per common share amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.
(2) Series 45 preferred shares were redeemed on July 29, 2022.
(3) See 4.375% Limited Recourse Capital Notes Series 1 (NVCC) (subordinated indebtedness) section below for details.
(4) Represents the annual interest rate percentage applicable to the LRCNs issued as at October 31 for each respective year.
(5) See 4.000% Limited Recourse Capital Notes Series 2 (NVCC) (subordinated indebtedness) section below for details.
(6) See 7.150% Limited Recourse Capital Notes Series 3 (NVCC) (subordinated indebtedness) section below for details.

Common shares

CIBC's authorized capital consists of an unlimited number of common shares, without nominal or par value.

Common shares issued

$ millions, except number of shares, as at or for the year ended October 31	2022		2021	
	Number of shares	Amount	Number of shares	Amount
Balance at beginning of year [1]	**901,655,952**	**$ 14,351**	894,170,658	$ 13,908
Issuance pursuant to:				
Equity-settled share-based compensation plans [2]	**1,559,629**	**85**	3,410,140	176
Shareholder investment plan	**2,272,831**	**153**	2,022,558	132
Employee share purchase plan	**2,302,876**	**163**	2,360,358	150
	907,791,288	**$ 14,752**	901,963,714	$ 14,366
Purchase of common shares for cancellation	**(1,800,000)**	**(29)**	–	–
Treasury shares	**48,809**	**3**	(307,762)	(15)
Balance at end of year [1]	**906,040,097**	**$ 14,726**	901,655,952	$ 14,351

(1) On April 7, 2022, CIBC shareholders approved a two-for-one share split (Share Split) of CIBC's issued and outstanding common shares. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and per common share amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.
(2) Includes the settlement of contingent consideration related to prior acquisitions.

Share split

In February 2022, CIBC's Board of Directors approved a two-for-one share split (Share Split) of CIBC's issued and outstanding common shares to be effected through an amendment to CIBC's by-laws. On April 7, 2022, CIBC shareholders approved the Share Split. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and per common share amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.

Common shares reserved for issue

As at October 31, 2022, 25,579,546 common shares (2021: 26,941,886) were reserved for future issue pursuant to stock option plans, 21,402,179 common shares (2021: 23,675,010) were reserved for future issue pursuant to the Shareholder Investment Plan, 11,147,755 common shares (2021: 13,647,920) were reserved for future issue pursuant to the ESPP and other activities, and 5,663,395,500 common shares (2021: 4,794,037,500) were reserved for future issue pursuant to instruments which include an NVCC provision requiring conversion into common shares upon the occurrence of a Trigger Event as described in the capital adequacy guidelines.

Normal course issuer bid

On December 9, 2021, we announced that the Toronto Stock Exchange had accepted the notice of our intention to commence a normal course issuer bid. Purchases under this bid will be completed upon the earlier of: (i) CIBC purchasing 20 million common shares (on a post share split basis); (ii) CIBC providing a notice of termination; or (iii) December 12, 2022. For the year ended October 31, 2022, we purchased and cancelled 1,800,000 common shares (on a post share split basis) at an average price of $ 74.43 for a total amount of $ 134 million, all of which occurred during the first quarter.

Preferred shares and other equity instruments

CIBC is authorized to issue an unlimited number of Class A Preferred Shares and Class B Preferred Shares without nominal or par value , issuable in series, provided that, for each class of preferred shares, the maximum aggregate consideration for all outstanding shares at any time does not exceed $10 billion. There are no Class B Preferred Shares currently outstanding.

Preferred share and other equity instruments rights and privileges

Class A Preferred Shares

Non-cumulative Rate Reset Class A Preferred Shares Series 39, 41, 43, 47, 49, 51, and 56 (NVCC) are redeemable, subject to regulatory approval, for cash by CIBC on or after the specified redemption dates at the cash redemption prices indicated in the terms of the preferred shares. Class A Preferred Shares Series 39, 41, 43, 47, 49, and 51 bear quarterly non-cumulative dividends and Series 56 bears semi-annual non-cumulative dividends.

Non-cumulative Rate Reset Class A Preferred Shares Series 39 (NVCC) (Series 39 shares)

On June 11, 2014, we issued 16 million Non-cumulative Rate Reset Class A Preferred Shares Series 39 (NVCC) (Series 39 shares) with a par value of $ 25.00 per share, for gross proceeds of $400 million. For the initial five-year period to the earliest redemption date of July 31, 2019, the Series 39 shares paid quarterly cash dividends, as declared, at a rate of 3.90%. The dividend was reset to 3.713%, payable quarterly as and when declared by the Board, effective for the five-year period commencing July 31, 2019. On July 31, 2024, and on July 31 every five years thereafter, the dividend rate will reset to be equal to the then current five-year Government of Canada bond yield plus 2.32%.

Holders of the Series 39 shares had the right to convert their shares on a one-for-one basis into Non-cumulative Floating Rate Class A Preferred Shares Series 40 (NVCC) (Series 40 shares), subject to certain conditions, on July 31, 2019. As the conditions for conversion were not met, no Series 40 shares were issued, and all of the Series 39 shares remain outstanding. Holders of the Series 39 shares will have the right to convert their shares on a one-for-one basis into Series 40 shares, subject to certain conditions, on July 31, 2024 and on July 31 every five years thereafter. Holders of the Series 40 shares will be entitled to receive a quarterly floating rate dividend, if declared, equal to the three-month Government of Canada Treasury Bill yield plus 2.32%. Holders of the then outstanding Series 40 shares may convert their shares on a one-for-one basis into Series 39 shares, subject to certain conditions, on July 31, 2029 and on July 31 every five years thereafter.

Subject to regulatory approval and certain provisions of the shares, we may redeem all or any part of the then outstanding Series 39 shares at par on July 31, 2024, and on July 31 every five years thereafter; we may redeem all or any part of the then outstanding Series 40 shares at par on July 31, 2029, and on July 31 every five years thereafter.

Non-cumulative Rate Reset Class A Preferred Shares Series 41 (NVCC) (Series 41 shares)

On December 16, 2014, we issued 12 million Non-cumulative Rate Reset Class A Preferred Shares Series 41 (NVCC) (Series 41 shares) with a par value of $ 25.00 per share, for gross proceeds of $300 million. For the initial five-year period to the earliest redemption date of January 31, 2020, the Series 41 shares paid quarterly cash dividends, as declared, at a rate of 3.75%. The dividend was reset to 3.909%, payable quarterly as and when declared by the Board, effective for the five-year period commencing January 31, 2020. On January 31, 2025, and on January 31 every five years thereafter, the dividend rate will reset to be equal to the then current five-year Government of Canada bond yield plus 2.24%.

Holders of the Series 41 shares had the right to convert their shares on a one-for-one basis into Non-cumulative Floating Rate Class A Preferred Shares Series 42 (NVCC) (Series 42 shares), subject to certain conditions, on January 31, 2020. As the conditions for conversion were not met, no Series 42 shares were issued, and all of the Series 41 shares remain outstanding. Holders of the Series 41 shares will have the right to convert their shares on a one-for-one basis into Series 42 shares, subject to certain conditions, on January 31, 2025 and on January 31 every five years thereafter. Holders of the Series 42 shares will be entitled to receive a quarterly floating rate dividend, if declared, equal to the three-month Government of Canada Treasury Bill yield plus 2.24%. Holders of the then outstanding Series 42 shares may convert their shares on a one-for-one basis into Series 41 shares, subject to certain conditions, on January 31, 2030 and on January 31 every five years thereafter.

Subject to regulatory approval and certain provisions of the shares, we may redeem all or any part of the then outstanding Series 41 shares at par on January 31, 2025 and on January 31 every five years thereafter; we may redeem all or any part of the then outstanding Series 42 shares at par on January 31, 2030 and on January 31 every five years thereafter.

Non-cumulative Rate Reset Class A Preferred Shares Series 43 (NVCC) (Series 43 shares)

On March 11, 2015, we issued 12 million Non-cumulative Rate Reset Class A Preferred Shares Series 43 (NVCC) (Series 43 shares) with a par value of $ 25.00 per share, for gross proceeds of $300 million. For the initial five-year period to the earliest redemption date of July 31, 2020, the Series 43 shares paid quarterly cash dividends, as declared, at a rate of 3.60%. The dividend was reset to 3.143%, payable quarterly as and when declared by the Board, effective for the five-year period commencing July 31, 2020. On July 31, 2025, and on July 31 every five years thereafter, the dividend rate will reset to be equal to the then current five-year Government of Canada bond yield plus 2.79%.

Holders of the Series 43 shares had the right to convert their shares on a one-for-one basis into Non-cumulative Floating Rate Class A Preferred Shares Series 44 (NVCC) (Series 44 shares), subject to certain conditions, on July 31, 2020. As the conditions for conversion were not met, no Series 44 shares were issued, and all of the Series 43 shares remain outstanding. Holders of the Series 43 shares will have the right to convert their shares on a one-for-one basis into Series 44 shares, subject to certain conditions, on July 31, 2025 and on July 31 every five years thereafter. Holders of the Series 44 shares will be entitled to receive a quarterly floating rate dividend, if declared, equal to the three-month Government of Canada Treasury Bill yield plus 2.79%. Holders of the then outstanding Series 44 shares may convert their shares on a one-for-one basis into Series 43 shares, subject to certain conditions, on July 31, 2030 and on July 31 every five years thereafter.

Subject to regulatory approval and certain provisions of the shares, we may redeem all or any part of the then outstanding Series 43 shares at par on July 31, 2025 and on July 31 every five years thereafter; we may redeem all or any part of the then outstanding Series 44 shares at par on July 31, 2030 and on July 31 every five years thereafter.

Non-cumulative Rate Reset Class A Preferred Shares Series 45 (NVCC) (Series 45 shares)
On July 29, 2022, we redeemed all 32 million Non-cumulative Rate Reset Class A Preferred Shares Series 45 (NVCC) (Series 45 shares), at a redemption price of $25.00 per Series 45 Preferred Share, for a total redemption cost of $800 million.

Non-cumulative Rate Reset Class A Preferred Shares Series 47 (NVCC) (Series 47 shares)
On January 18, 2018, we issued 18 million Non-cumulative Rate Reset Class A Preferred Shares Series 47 (NVCC) (Series 47 shares) with a par value of $25.00 per share, for gross proceeds of $450 million. For the initial five-year period to the earliest redemption date of January 31, 2023, the Series 47 shares pay quarterly cash dividends, as declared, at a rate of 4.50%. On January 31, 2023, and on January 31 every five years thereafter, the dividend rate will reset to be equal to the then current five-year Government of Canada bond yield plus 2.45%.

Holders of the Series 47 shares will have the right to convert their shares on a one-for-one basis into Non-cumulative Floating Rate Class A Preferred Shares Series 48 (NVCC) (Series 48 shares), subject to certain conditions, on January 31, 2023 and on January 31 every five years thereafter. Holders of the Series 48 shares will be entitled to receive a quarterly floating rate dividend, if declared, equal to the three-month Government of Canada Treasury Bill yield plus 2.45%. Holders of the then outstanding Series 48 shares may convert their shares on a one-for-one basis into Series 47 shares, subject to certain conditions, on January 31, 2028 and on January 31 every five years thereafter.

Subject to regulatory approval and certain provisions of the shares, we may redeem all or any part of the then outstanding Series 47 shares at par on January 31, 2023 and on January 31 every five years thereafter; we may redeem all or any part of the then outstanding Series 48 shares at par on January 31, 2028 and on January 31 every five years thereafter.

Non-cumulative Rate Reset Class A Preferred Shares Series 49 (NVCC) (Series 49 shares)
On January 22, 2019, we issued 13 million Non-cumulative Rate Reset Class A Preferred Shares Series 49 (NVCC) (Series 49 shares) with a par value of $25.00 per share, for gross proceeds of $325 million. For the initial five-year period to the earliest redemption date of April 30, 2024, the Series 49 shares pay quarterly cash dividends, as declared, at a rate of 5.20%. On April 30, 2024, and on April 30 every five years thereafter, the dividend rate will reset to be equal to the then current five-year Government of Canada bond yield plus 3.31%.

Holders of the Series 49 shares will have the right to convert their shares on a one-for-one basis into Non-cumulative Floating Rate Class A Preferred Shares Series 50 (NVCC) (Series 50 shares), subject to certain conditions, on April 30, 2024 and on April 30 every five years thereafter. Holders of the Series 50 shares will be entitled to receive a quarterly floating rate dividend, if declared, equal to the three-month Government of Canada Treasury Bill yield plus 3.31%. Holders of the then outstanding Series 50 shares may convert their shares on a one-for-one basis into Series 49 shares, subject to certain conditions, on April 30, 2029 and on April 30 every five years thereafter.

Subject to regulatory approval and certain provisions of the shares, we may redeem all or any part of the then outstanding Series 49 shares at par on April 30, 2024 and on April 30 every five years thereafter; we may redeem all or any part of the then outstanding Series 50 shares at par on April 30, 2029 and on April 30 every five years thereafter.

Non-cumulative Rate Reset Class A Preferred Shares Series 51 (NVCC) (Series 51 shares)
On June 4, 2019, we issued 10 million Non-cumulative Rate Reset Class A Preferred Shares Series 51 (NVCC) (Series 51 shares) with a par value of $25.00 per share, for gross proceeds of $250 million. For the initial five-year period to the earliest redemption date of July 31, 2024, the Series 51 shares pay quarterly cash dividends, as declared, at a rate of 5.15%. On July 31, 2024, and on July 31 every five years thereafter, the dividend rate will reset to be equal to the then current five-year Government of Canada bond yield plus 3.62%.

Holders of the Series 51 shares will have the right to convert their shares on a one-for-one basis into Non-cumulative Floating Rate Class A Preferred Shares Series 52 (NVCC) (Series 52 shares), subject to certain conditions, on July 31, 2024 and on July 31 every five years thereafter. Holders of the Series 52 shares will be entitled to receive a quarterly floating rate dividend, if declared, equal to the three-month Government of Canada Treasury Bill yield plus 3.62%. Holders of the then outstanding Series 52 shares may convert their shares on a one-for-one basis into Series 51 shares, subject to certain conditions, on July 31, 2029 and on July 31 every five years thereafter.

Subject to regulatory approval and certain provisions of the shares, we may redeem all or any part of the then outstanding Series 51 shares at par on July 31, 2024 and on July 31 every five years thereafter; we may redeem all or any part of the then outstanding Series 52 shares at par on July 31, 2029 and on July 31 every five years thereafter.

Non-cumulative Rate Reset Class A Preferred Shares Series 56 (NVCC) (Series 56 shares)
On September 16, 2022, we issued 600,000 Non-cumulative Rate Reset Class A Preferred Shares Series 56 (NVCC) (Series 56 shares) with a par value of $1,000.00 per share, for gross proceeds of $600 million. For the initial five-year period to October 28, 2027, the Series 56 shares pay semi-annual cash dividends on the 28th day of April and October in each year, as declared, at a rate of 7.361%. The first dividend, if declared, will be payable on April 28, 2023. On October 28, 2027, and on October 28 every five years thereafter, the dividend rate will reset to be equal to the then current five-year Government of Canada bond yield plus 4.20%.

Subject to regulatory approval and certain provisions of the shares, we may redeem all or any part of the then outstanding Series 56 shares at par during the period from September 28, 2027 to and including October 28, 2027 and during the period from September 28 to and including October 28 every five years thereafter.

4.375% Limited Recourse Capital Notes Series 1 (NVCC) (subordinated indebtedness) (LRCN Series 1 Notes)
On September 16, 2020, we issued $750 million principal amount of 4.375% Limited Recourse Capital Notes Series 1 (NVCC) (subordinated indebtedness). The LRCN Series 1 Notes mature on October 28, 2080, and bear interest at a fixed rate of 4.375% per annum (paid semi-annually) until October 28, 2025. Starting on October 28, 2025, and every five years thereafter until October 28, 2075, the interest rate will be reset to the then current five-year Government of Canada bond yield plus 4.000% per annum.

Concurrently with the issuance of the LRCN Series 1 Notes, we issued Non-Cumulative 5-Year Fixed Rate Reset Class A Preferred Shares Series 53 (NVCC) (Series 53 shares) which are held in the CIBC LRCN Limited Recourse Trust (Limited Recourse Trust) that is consolidated by CIBC and as a result the Series 53 Preferred Shares are eliminated in CIBC's consolidated financial statements. In the event of non-payment by CIBC of the principal amount of, interest on, or redemption price for, the LRCN Series 1 Notes when due, the sole remedy of each LRCN Series 1 Note holder is limited to that holder's proportionate share of the Series 53 Preferred Shares held in the Limited Recourse Trust.

Subject to regulatory approval, we may redeem the LRCN Series 1 Notes, in whole or in part, every five years during the period from September 28 to and including October 28, commencing in 2025, at par.

The LRCN Series 1 Notes and the Series 53 Preferred Shares carry standard NVCC provisions necessary for them to qualify as Tier 1 regulatory capital under Basel III (see "NVCC conversion mechanics" below). Upon the occurrence of a Trigger Event, each Series 53 Preferred

Share held in the Limited Recourse Trust will automatically and immediately be converted, without the consent of LRCN Series 1 Note holders, into a variable number of common shares which will be delivered to LRCN Series 1 Note holders in satisfaction of the principal amount of, and accrued and unpaid interest on, all of the LRCN Series 1 Notes. All claims of LRCN Series 1 Note holders against CIBC under the LRCN Series 1 Notes will be extinguished upon receipt of such common shares.

4.000% Limited Recourse Capital Notes Series 2 (NVCC) (subordinated indebtedness) (LRCN Series 2 Notes)

On September 14, 2021, we issued $ 750 million principal amount of 4.000% Limited Recourse Capital Notes Series 2 (NVCC) (subordinated indebtedness). The LRCN Series 2 Notes mature on January 28, 2082 , and bear interest at a fixed rate of 4.000% per annum (paid semi-annually) until January 28, 2027. Starting on January 28, 2027 , and every five years thereafter until January 28, 2077, the interest rate will be reset to the then current five-year Government of Canada bond yield plus 3.102% per annum.

Concurrently with the issuance of the LRCN Series 2 Notes, we issued Non-Cumulative 5-Year Fixed Rate Reset Class A Preferred Shares Series 54 (NVCC) (Series 54 shares) which are held in the Limited Recourse Trust that is consolidated by CIBC and as a result the Series 54 Preferred Shares are eliminated in CIBC's consolidated financial statements. In the event of non-payment by CIBC of the principal amount of, interest on, or redemption price for, the LRCN Series 2 Notes when due, the sole remedy of each LRCN Series 2 Note holder is limited to that holder's proportionate share of the Series 54 Preferred Shares held in the Limited Recourse Trust.

Subject to regulatory approval, we may redeem the LRCN Series 2 Notes, in whole or in part, every five years during the period from December 28 to and including January 28, commencing on December 28, 2026, at par.

The LRCN Series 2 Notes and the Series 54 Preferred Shares carry standard NVCC provisions necessary for them to qualify as Tier 1 regulatory capital under Basel III (see "NVCC conversion mechanics" below). Upon the occurrence of a Trigger Event, each Series 54 Preferred Share held in the Limited Recourse Trust will automatically and immediately be converted, without the consent of LRCN Series 2 Note holders, into a variable number of common shares which will be delivered to LRCN Series 2 Note holders in satisfaction of the principal amount of, and accrued and unpaid interest on, all of the LRCN Series 2 Notes. All claims of LRCN Series 2 Note holders against CIBC under the LRCN Series 2 Notes will be extinguished upon receipt of such common shares.

7.150% Limited Recourse Capital Notes Series 3 (NVCC) (subordinated indebtedness) (LRCN Series 3 Notes)

On June 15, 2022, we issued $ 800 million principal amount of 7.150% Limited Recourse Capital Notes Series 3 (NVCC) (subordinated indebtedness). The LRCN Series 3 Notes mature on July 28, 2082 , and bear interest at a fixed rate of 7.150% per annum (paid semi-annually) until July 28, 2027. Starting on July 28, 2027, and every five years thereafter until July 28, 2077, the interest rate will be reset to the then current five-year Government of Canada bond yield plus 4.000% per annum.

Concurrently with the issuance of the LRCN Series 3 Notes, we issued Non-Cumulative 5-Year Fixed Rate Reset Class A Preferred Shares Series 55 (NVCC) (Series 55 shares), which are held in the Limited Recourse Trust that is consolidated by CIBC and, as a result, the Series 55 Preferred Shares are eliminated in CIBC's consolidated financial statements. In the event of non-payment by CIBC of the principal amount of, interest on, or redemption price for, the LRCN Series 3 Notes when due, the sole remedy of each LRCN Series 3 Note holder is limited to that holder's proportionate share of the Series 55 Preferred Shares held in the Limited Recourse Trust. Subject to regulatory approval, we may redeem the LRCN Series 3 Notes, in whole or in part, every five years during the period from June 28 to and including July 28, commencing on June 28, 2027, at par.

Subject to regulatory approval, we may redeem the LRCN Series 3 Notes, in whole or in part, every five years during the period from June 28 to and including July 28, commencing on June 28, 2027, at par.

The LRCN Series 3 Notes and the Series 55 Preferred Shares carry standard NVCC provisions necessary for them to qualify as Tier 1 regulatory capital under Basel III (see "NVCC conversion mechanics" below). Upon the occurrence of a Trigger Event, each Series 55 Preferred Share held in the Limited Recourse Trust will automatically and immediately be converted, without the consent of LRCN Series 3 Note holders, into a variable number of common shares that will be delivered to LRCN Series 3 Note holders in satisfaction of the principal amount of, and accrued and unpaid interest on, all of the LRCN Series 3 Notes. All claims of LRCN Series 3 Note holders against CIBC under the LRCN Series 3 Notes will be extinguished upon receipt of such common shares.

Limited Recourse Capital Notes (the Notes)

The Notes are compound instruments with both equity and liability features as payments of interest and principal in cash are made at our discretion, as the sole recourse of each Note holder in the event of non-payment will be limited to that holder's proportionate share of the non-cumulative Rate Reset Class A Preferred Shares Series 53, 54 and 55 held in the Limited Recourse Trust. The liability component of the Notes has a nominal value and, as a result, the full proceeds received upon the issuance of the Notes have been presented as equity on the consolidated balance sheet and any interest payments paid thereon are accounted for as equity distributions.

NVCC conversion mechanics

Each series of Class A Preferred Shares discussed above are subject to an NVCC provision, necessary for the shares to qualify as regulatory capital under Basel III. As such, the shares are automatically converted into common shares upon the occurrence of a "Trigger Event". As described in the Capital Adequacy Guidelines, a Trigger Event occurs when OSFI determines the bank is or is about to become non-viable and, if after conversion of all contingent instruments and consideration of any other relevant factors or circumstances, it is reasonably likely that its viability will be restored or maintained; or if the bank has accepted or agreed to accept a capital injection or equivalent support from a federal or provincial government, without which OSFI would have determined the bank to be non-viable. Each such share is convertible into a number of common shares, determined by dividing the par value of $25.00 (except, $1,000 in the case of the Series 53, 54, 55, and 56 Preferred Shares) plus declared and unpaid dividends (except for the Series 53, 54 and 55 Preferred Shares while held in the Limited Recourse Trust) by the average common share price (as defined in the relevant prospectus supplement) subject to a minimum price of $2.50 per share (subject to adjustment in certain events as defined in the relevant prospectus supplement). We have recorded the Series 39, Series 41, Series 43, Series 47, Series 49, Series 51 and Series 56 shares as equity.

Terms of Class A Preferred Shares

Outstanding as at October 31, 2022	Semi-annually dividends per share [1]	Quarterly dividends per share [1]	Earliest specified redemption date	Cash redemption price per share
Series 39		$ 0.232063	July 31, 2024	$ 25.00
Series 41		0.244313	January 31, 2025	25.00
Series 43		0.196438	July 31, 2025	25.00
Series 47		0.281250	January 31, 2023	25.00
Series 49		0.325000	April 30, 2024	25.00
Series 51		0.321875	July 31, 2024	25.00
Series 56	$ 36.825000		September 28, 2027	1,000.00

(1) Dividends may be adjusted depending on the timing of issuance or redemption.

Restrictions on the payment of dividends

Under Section 79 of the *Bank Act* (Canada), a bank, including CIBC, is prohibited from declaring or paying any dividends on its preferred or common shares if there are reasonable grounds for believing that the bank is, or the payment would cause it to be, in contravention of any capital adequacy or liquidity regulation or any direction to the bank made by OSFI.

In addition, our ability to pay common share dividends is also restricted by the terms of the outstanding preferred shares. These terms provide that we may not pay dividends on our common shares at any time without the approval of holders of the outstanding preferred shares, unless all dividends to preferred shareholders that are then payable have been declared and paid or set apart for payment. Our Series 53, 54, and 55 Preferred Shares further limit the payment of dividends on the outstanding Class A Preferred Shares Series 39, 41, 43, 47, 49, 51, and 56 in certain limited circumstances.

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

Capital

Objectives, policy and procedures

Our overall capital management objective is to employ a strong and efficient capital base. We manage capital in accordance with a capital policy approved by the Board, which includes specific guidelines that relate to capital strength, capital mix, dividends and return of capital, and the unconsolidated capital adequacy of regulated entities. Capital is monitored continuously for compliance.

Each year, a Capital Plan and three-year outlook are established as a part of the financial plan, and they encompass all material elements of capital: forecasts of sources and uses of capital including earnings, dividends, business growth, and corporate initiatives, as well as maturities, redemptions, and issuances of capital instruments. The Capital Plan is stress-tested to ensure that it is sufficiently robust under severe but plausible stress scenarios. The level of capital and capital ratios are monitored throughout the year including a comparison to the Capital Plan. There were no significant changes made to the objectives, policy, guidelines and procedures during the year.

Regulatory capital, leverage and total loss absorbing capacity (TLAC) requirements

Our regulatory capital requirements are determined in accordance with guidelines issued by OSFI, which are based on the capital standards developed by the Basel Committee on Banking Supervision (BCBS).

CIBC has been designated by OSFI as a domestic systemically important bank (D-SIB) in Canada, and is subject to a Common Equity Tier 1 (CET1) surcharge equal to 1.0% of RWA. OSFI also expects D-SIBs to hold a Domestic Stability Buffer (DSB) of 2.5% effective October 31, 2021, reflecting the highest DSB requirement under OSFI capital requirements. The resulting targets established by OSFI for D-SIBs, including all buffer requirements, for CET1, Tier 1 and Total capital ratios of 10.5%, 12.0%, and 14.0%, respectively. These targets may be higher for certain institutions at OSFI's discretion.

Regulatory capital consists of CET1, Tier 1 and Tier 2 capital. CET1 capital includes common shares, retained earnings, AOCI (excluding AOCI relating to cash flow hedges and changes to FVO liabilities attributable to changes in own credit risk), and qualifying instruments issued by a consolidated banking subsidiary to third parties, less regulatory adjustments for items such as goodwill and other intangible assets (net of related deferred tax liabilities), certain deferred tax assets, net assets related to defined benefit pension plans as reported on our consolidated balance sheet (net of related deferred tax liabilities), and certain investments. Additional Tier 1 (AT1) capital primarily includes NVCC preferred shares, Limited Recourse Capital Notes, qualifying instruments issued by a consolidated subsidiary to third parties. Tier 2 capital includes NVCC subordinated indebtedness, eligible collective allowance under the standardized approach, and qualifying instruments issued by a consolidated subsidiary to third parties.

OSFI also requires D-SIBs to maintain a supervisory target TLAC ratio (which builds on the risk-based capital ratios) and a minimum TLAC leverage ratio (which builds on the leverage ratio). OSFI expects D-SIBs to have a minimum risk-based TLAC ratio of 21.5% plus the then applicable DSB requirement (2.5% as noted above), and a minimum TLAC leverage ratio of 6.75%, beginning in the first quarter of fiscal 2022. TLAC consists of regulatory capital and bail-in eligible liabilities that have residual maturity greater than one year.

To supplement risk-based capital requirements, OSFI expects federally regulated deposit-taking institutions to have a leverage ratio, which is a non-risk-based capital metric, that meets or exceeds 3.0%. This minimum may be higher for certain institutions at OSFI's discretion. On April 9, 2020, OSFI announced temporary exclusion of central bank reserves and qualifying sovereign-issued securities from the leverage ratio exposure measure in response to the onset of the COVID-19 pandemic. Starting January 1, 2022, the temporary exclusion of qualifying sovereign-issued securities from the leverage ratio exposure measure was no longer applicable. On September 13, 2022, OSFI announced that the temporary exclusion of central bank reserves from the leverage exposure measure will be no longer applicable effective April 1, 2023. Effective February 1, 2023, D-SIBs will be expected to have leverage ratios that meet or exceed 3.5%, including a leverage ratio buffer introduced under the modified Leverage Ratio framework as part of Basel III reforms.

Our capital ratios and leverage ratio are presented in the table below:

$ millions, as at October 31		2022	2021
CET1 capital [1]		**$ 37,005**	$ 33,751
Tier 1 capital [1]	A	**41,946**	38,344
Total capital [1]		**48,263**	44,202
Total RWA	B	**315,634**	272,814
CET1 ratio		**11.7 %**	12.4 %
Tier 1 capital ratio		**13.3 %**	14.1 %
Total capital ratio		**15.3 %**	16.2 %
Leverage ratio exposure [2]	C	**$ 961,791**	$ 823,343
Leverage ratio [2]	A/C	**4.4 %**	4.7 %
TLAC available	D	**$ 95,136**	$ 76,701
TLAC ratio	D/B	**30.1 %**	28.1 %
TLAC leverage ratio	D/C	**9.9 %**	9.3 %

(1) Includes the impact of the ECL transitional arrangement announced by OSFI on March 27, 2020. The transitional arrangement results in a portion of ECL allowances that would otherwise be included in Tier 2 capital qualifying for inclusion in CET1 capital. The amount is subject to certain adjustments and limitations until 2022.

(2) The temporary exclusion of qualifying sovereign-issued securities from the leverage ratio exposure measure in response to the onset of the COVID-19 pandemic was no longer applicable beginning in the first quarter of 2022. Central bank reserves continue to be excluded from the measure. On September 13, 2022, OSFI announced that the temporary exclusion of central bank reserves from the leverage exposure measure will be no longer applicable effective April 1, 2023.

During the years ended October 31, 2022 and 2021, we have complied with OSFI's regulatory capital, leverage ratio, and TLAC requirements.

Note 16 | Capital Trust securities

CIBC Capital Trust was a trust wholly owned by CIBC and established under the laws of the Province of Ontario. CIBC Tier 1 Notes were issued on March 13, 2009. CIBC Capital Trust was not consolidated by CIBC and the senior deposit notes issued by CIBC to CIBC Capital Trust were reported as Deposits – Business and government on the consolidated balance sheet.

The Notes were structured to achieve Tier 1 regulatory capital treatment and, as such, had features of equity capital. Under the OSFI Capital Adequacy Requirements (CAR) Guideline, any Tier 1 Notes outstanding as of November 1, 2021 would not be recognized as regulatory capital. With OSFI's prior approval, on November 1, 2021, CIBC Capital Trust redeemed its remaining $300 million of Tier 1 Notes at 100% of their principal amount together with accrued and unpaid interest up to but excluding the redemption date. As a result of the redemption of the Tier 1 Notes by CIBC Capital Trust, CIBC also redeemed the corresponding senior deposit notes issued by CIBC to CIBC Capital Trust on November 1, 2021.

Note 17 | Share-based payments

We provide the following share-based compensation to certain employees and directors in the form of cash-settled or equity-settled awards.

Restricted share award plan[1]

Under the RSA plan, share unit equivalents (RSA units) are granted to certain key employees on an annual basis or during the year as special grants. RSA grants are made in the form of cash-settled awards which generally vest and settle in cash either at the end of three years or one-third annually beginning one year after the date of the grant. Dividend equivalents on RSA units are paid in cash or in the form of additional RSA units to the employees at the end of the vesting period or settlement date.

Grant date fair value of each cash-settled RSA unit granted is calculated based on the average closing price per common share on the Toronto Stock Exchange (TSX) for the 10 trading days prior to a date specified in the grant terms. Upon vesting, each RSA unit is settled in cash based on the average closing price per common share on the TSX for the 10 trading days prior to the vesting date.

During the year, 5,656,353 RSAs were granted at a weighted-average price of $ 73.43 (2021: 5,798,730 granted at a weighted-average price of $ 55.67) and the number of RSAs outstanding as at October 31, 2022 was 17,022,399 (2021: 17,043,678). Compensation expense in respect of RSAs, before the impact of hedging for changes in share price, totalled $247 million in 2022 (2021: $692 million). As at October 31, 2022, liabilities in respect of RSAs, which are included in Other liabilities, were $ 973 million (2021: $1,136 million).

Performance share unit plan[1]

Under the PSU plan, awards are granted to certain key employees on an annual basis in December. PSU grants are made in the form of cash-settled awards which vest and settle in cash at the end of three years. Dividend equivalents on PSUs are provided in the form of additional PSUs.

The grant date fair value of each cash-settled PSU is calculated based on the average closing price per common share on the TSX for the 10 trading days prior to a date specified in the grant terms. The final number of PSUs that vest will range from 75% to 125% of the initial number awarded based on CIBC's performance relative to the other major Canadian banks. Upon vesting, each PSU is settled in cash based on the average closing price per common share on the TSX for the 10 trading days prior to the vesting date.

During the year, 1,652,812 PSUs were granted at a weighted-average price of $ 73.77 (2021: 1,752,590 granted at a weighted-average price of $ 55.08). As at October 31, 2022, the number of PSUs outstanding, before the impact of CIBC's relative performance, was 5,501,190 (2021: 5,823,600). Compensation expense in respect of PSUs, before the impact of hedging for changes in share price, totalled $90 million in 2022 (2021: $241 million). As at October 31, 2022, liabilities in respect of PSUs, which are included in Other liabilities, were $341 million (2021: $413 million).

(1) On April 7, 2022, CIBC shareholders approved atwo-for-one share split (Share Split) of CIBC's issued and outstanding common shares. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and per common share amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.

Exchangeable shares

As part of our acquisition of Wellington Financial in the first quarter of 2018, equity-settled awards in the form of exchangeable shares, which vest over a period of up to five years and have specific service and non-market performance vesting conditions, were issued to selected employees. Employees receive dividend equivalents in the form of additional common shares upon vesting. Compensation expense in respect of the exchangeable shares is based on the grant date fair value, adjusted for the impact of best estimates on the satisfaction of the service requirements and non-market performance conditions. At the acquisition, each exchangeable share was granted at $123.99, and the number of exchangeable shares outstanding that have not vested as at October 31, 2022 was 100,907 (2021: 153,015). The number of exchangeable shares outstanding was not impacted by the two-for-one share split of CIBC common shares that was effective at the close of business on May 13, 2022; however, employees will receive additional common shares upon exchange to reflect the share split. Compensation expense in respect of exchangeable shares totalled $3 million in 2022 (2021: $12 million).

Deferred share unit plan/deferred compensation plan[1]

Under the DSU plan and DCP plan, certain employees can elect to receive DSUs in exchange for cash compensation that they would otherwise be entitled to. In addition, certain key employees are granted DSUs during the year as special grants. DSUs are generally fully vested upon grant or vest in accordance with the vesting schedule defined in the grant agreement and settle in cash on a date within the period specified in the plan terms. Employees receive dividend equivalents in the form of additional DSUs.

Grant date fair value of each cash settled DSU that is not granted under the DCP is calculated based on the average closing price per common share on the TSX for the 10 trading days prior to a date specified in the grant terms. These DSUs are settled in cash based on the average closing price per common share on the TSX for the 10 trading days prior to the payout date and after the employee's termination of employment. The grant date fair value for DCP grants is based on the closing stock price on the New York Stock Exchange (NYSE) on the last day of the calendar quarter. Upon distribution, each DSU is settled in cash based on the average closing price per common share on the NYSE for the 10 trading days prior to the date of the distribution.

During the year, 315,545 DSUs were granted at a weighted-average price of $ 73.54 (2021: 364,348 granted at a weighted-average price of $ 55.31) and the number of DSUs outstanding as at October 31, 2022 was 2,079,118 (2021: 1,786,036). Compensation expense in respect of DSUs, before the impact of hedging for changes in share price, totalled $ 2 million in 2022 (2021: $70 million). As at October 31, 2022, liabilities in respect of DSUs, which are included in Other liabilities, were $ 147 million (2021: $146 million).

(1) On April 7, 2022, CIBC shareholders approved a two-for-one share split (Share Split) of CIBC's issued and outstanding common shares. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and per common share amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.

Directors' plans

Each director who is not an officer or employee of CIBC may elect to receive: 1) the annual equity retainer as either DSUs or common shares, under the Director DSU/Common Share Election Plan and 2) all or a portion of their remuneration in the form of cash, common shares or DSUs under the Non-Officer Director Share Plan.

The value of DSUs credited to a director is payable when he or she is no longer a director or employee of CIBC or of an affiliate of CIBC, and for directors subject to section 409A of the U.S. Internal Revenue Code of 1986, as amended, the director is not providing any services to CIBC or any member of its controlled group as an independent contractor. In addition, under the Director DSU/Common Share Election Plan, the value of DSUs is payable only if the director is not related to, or affiliated with, CIBC as defined in the *Income Tax Act* (Canada).

Other non-interest expense in respect of the DSU components, before the impact of hedging for changes in share price of these plans, totalled ($ 4) million in 2022 (2021: $14 million). As at October 31, 2022, liabilities in respect of DSUs, which are included in Other liabilities, were $26 million (2021: $37 million).

Stock option plans

Under the ESOP, stock options are periodically granted to certain key employees. Options provide the employee with the right to purchase common shares from CIBC at a fixed price not less than the closing price of the shares on the trading day immediately preceding the grant date. In general, the options vest by the end of the fourth year and expire 10 years from the grant date.

The following tables summarize the activities of the stock options and provide additional details related to stock options outstanding and vested.

As at or for the year ended October 31	2022		2021	
	Number of stock options[1]	**Weighted-average exercise price[1][2]**	Number of stock options[1]	Weighted-average exercise price[1]
Outstanding at beginning of year	**10,295,854**	**$ 53.34**	11,360,222	$ 50.20
Granted	**2,565,310**	**70.05**	2,114,416	55.40
Exercised[3]	**(1,362,340)**	**48.42**	(3,050,788)	43.92
Forfeited	**(60,800)**	**56.08**	(127,996)	55.93
Cancelled/expired	**–**	**–**	–	–
Outstanding at end of year	**11,438,024**	**$ 57.73**	10,295,854	$ 53.34
Exercisable at end of year	**4,381,128**	**$ 53.03**	4,135,122	$ 49.48
Available for grant	**14,141,522**		16,646,032	
Reserved for future issue	**25,579,546**		26,941,886	

(1) On April 7, 2022, CIBC shareholders approved a two-for-one share split (Share Split) of CIBC's issued and outstanding common shares. The number of stock options and the weighted-average exercise price have been adjusted to reflect the Share Split such that the value of the outstanding and vested stock options to the employees was not impacted by the Share Split.

(2) For foreign currency-denominated options granted and exercised during the year, the weighted-average exercise prices are translated using exchange rates as at the grant date and settlement date, respectivelyThe weighted-average exercise price of outstanding balances as at October 31, 2022 reflects the conversion of foreign currency-denominated options at the year-end exchange rate.

(3) The weighted-average share price at the date of exercise was $76.35 (2021: $64.25).

As at October 31, 2022	Stock options outstanding [1]			Stock options vested [1]	
Range of exercise prices	Number outstanding	Weighted-average contractual life remaining	Weighted-average exercise price	Number outstanding	Weighted-average exercise price
$1.00 – $20.00	73,574	0.31	$ 16.15	73,574	$ 16.15
$20.01 – $30.00	25,142	1.32	25.15	25,142	25.15
$30.01 – $40.00	171,486	2.86	31.14	171,486	31.14
$40.01 – $50.00	791,454	2.15	46.85	791,454	46.85
$50.01 – $60.00	6,636,482	6.47	55.15	2,140,046	54.82
$60.01 – $70.00	1,179,426	5.12	60.01	1,179,426	60.01
$70.01 – $80.00	2,560,460	9.10	70.05	–	–
	11,438,024	6.52	$ 57.73	4,381,128	$ 53.03

The fair value of options granted during the year was measured at the grant date using the Black-Scholes option pricing model. Model assumptions are based on observable market data for the risk-free interest rate and dividend yield, contractual terms for the exercise price, and historical experience for expected life. Volatility assumptions are best estimates of market implied volatility matching the exercise price and expected life of the options.

The following weighted-average assumptions were used as inputs into the Black-Scholes option pricing model to determine the fair value of options on the date of grant:

For the year ended October 31	2022	2021
Weighted-average assumptions		
Risk-free interest rate	1.84 %	0.96 %
Expected dividend yield	5.80 %	6.50 %
Expected share price volatility	18.03 %	20.25 %
Expected life	6 years	6 years
Share price/exercise price [1]	$ 70.05	$ 55.395

For 2022, the weighted-average[1] grant date fair value of options was $ 4.68 (2021: $3.37). The fair value of options for 2021 has been restated to reflect the two-for-one Share Split with a corresponding increase in the number of options granted such that the compensation expense recognized over the vesting period is not affected by the stock split.

Compensation expense in respect of stock options totalled $ 21 million in 2022 (2021: $ 7 million).

(1) On April 7, 2022, CIBC shareholders approved atwo-for-one share split (Share Split) of CIBC's issued and outstanding common shares. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and per common share amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.

Employee share purchase plan

Under our Canadian ESPP, qualifying employees can choose each year to have any portion of their eligible earnings withheld to purchase common shares. We match 50% of the employee contribution amount, up to a maximum contribution of 3% of eligible earnings, subject to a ceiling of $ 2,250 annually. CIBC contributions vest after employees have two years of continuous participation in the plan, and all subsequent contributions vest immediately. Similar programs exist in other regions globally, where each year qualifying employees can choose to have a portion of their eligible earnings withheld to purchase common shares and receive a matching employer contribution subject to each plan's provisions. Employee contributions to our ESPP are used to purchase common shares from Treasury. CIBC FirstCaribbean operates an ESPP locally, in which contributions are used by the plan trustee to purchase CIBC FirstCaribbean common shares in the open market.

Our contributions are expensed as incurred and totalled $ 57 million in 2022 (2021: $ 53 million).

Note 18 | Post-employment benefits

We sponsor pension and other post-employment benefit plans for eligible employees in a number of jurisdictions including Canada, the U.S., the U.K., and the Caribbean. Our pension plans include registered funded defined benefit pension plans, supplemental arrangements that provide pension benefits in excess of statutory limits, and defined contribution plans. We also provide certain health-care, life insurance, and other benefits to eligible employees and retired members. Plan assets and defined benefit obligations related to our defined benefit plans are measured for accounting purposes as at October 31 each year.

Plan characteristics, funding and risks

Pension plans

Pension plans include CIBC's Canadian, U.S., U.K., and Caribbean pension plans. CIBC's Canadian pension plans represent approximately 91% of our consolidated defined benefit obligation. All of our Canadian pension plans are defined benefit plans, the most significant of which is our principal Canadian pension plan (the CIBC Pension Plan), which encompasses approximately 67,000 active, deferred, and retired members.

The CIBC Pension Plan provides members with monthly pension income at retirement based on a prescribed plan formula which is based on a combination of maximum yearly pensionable earnings, average earnings at retirement and length of service recognized in the plan. There is a two-year waiting period for members to join the CIBC Pension Plan.

The CIBC Pension Plan is funded through a separate trust. Actuarial funding valuations are prepared by the Plan's external actuary at least once every three years or more frequently as required by Canadian pension legislation to determine CIBC's minimum funding requirements as well as maximum permitted contributions. Any deficits determined in the funding valuations must generally be funded over a period not exceeding fifteen years. CIBC's pension funding policy is to make at least the minimum annual required contributions required by regulations. Any contributions in excess of the minimum requirements are discretionary.

The CIBC Pension Plan is registered with OSFI and the Canada Revenue Agency (CRA) and is subject to the acts and regulations that govern federally regulated pension plans.

Other post-employment plans

Other post-employment plans include CIBC's Canadian, U.S. and Caribbean post-retirement health-care benefit plans (referred to for disclosure purposes as other post-employment plans). CIBC's Canadian other post-employment plan (the Canadian post-employment plan) represents more than 93% of our consolidated other post-employment defined benefit obligation.

The Canadian post-employment plan provides medical, dental and life insurance benefits to retirees that meet specified eligibility requirements, including specified age and service period eligibility requirements. CIBC reimburses 100% of the cost of benefits for eligible employees that retired prior to January 1, 2009, whereas the contribution level for medical and dental benefits for eligible employees that retire subsequent to this date has been fixed at a specified level. The plan is funded on a pay-as-you-go basis.

Benefit changes

There were no material changes to the terms of our Canadian defined benefit pension plans in 2022 or 2021. Certain plan amendments were made to our other pension and other post-employment plans in 2022, which resulted in a negative past service cost.

Risks

CIBC's defined benefit plans expose the group to actuarial risks (such as longevity risk), currency risk, interest rate risk, market (investment) risk and health-care cost inflation risks.

The CIBC pension plan operates a currency overlay strategy, which may use forwards or similar instruments, to manage and mitigate its currency risk.

Interest rate risk is managed as part of the CIBC pension plan's liability-driven investment strategy through a combination of physical bonds, overlays funded in the repo market, and/or derivatives.

Market (investment) risk is mitigated through a multi-asset portfolio construction process that diversifies across a variety of market risk drivers.

The use of derivatives within the CIBC pension plan is governed by its derivatives policy that was approved by the Pension Benefits Management Committee (PBMC) and permits the use of derivatives to manage risk at the discretion of the Pension Investment Committee (PIC). In addition to the management of interest rate risk, risk reduction and mitigation strategies may include hedging of currency, credit spread and/or equity risks. The derivatives policy also permits the use of derivatives to enhance plan returns.

Plan governance

All of CIBC's pension arrangements are governed by local pension committees, senior management or a board of trustees. However, all significant plan changes require approval from the Management Resources and Compensation Committee (MRCC). For the Canadian pension plans, the MRCC is responsible for setting the strategy for the pension plans, reviewing material risks, performance including funded status, and approving material design or governance changes.

While specific investment policies are determined at a plan level to reflect the unique characteristics of each plan, common investment policies for all plans include the optimization of the risk-return relationship using a portfolio of multiple asset classes diversified by market segment, economic sector, and issuer. The objectives are to secure the benefits promised by our funded plans, to maximize long-term investment returns while not compromising the benefit security of the respective plans, manage the level of funding contributions in conjunction with the stability of the funded status, and implement all policies in a cost effective manner. Investments in quoted debt and equity (held either directly or indirectly through investment funds) represent the most significant asset allocations.

The use of derivatives is limited to the purposes and instruments described in the derivatives policy of the CIBC Pension Plan. These include the use of synthetic debt or equity instruments, currency hedging, risk reduction and enhancement of returns.

Investments in specific asset classes are further diversified across funds, managers, strategies, sectors and geographies, depending on the specific characteristics of each asset class.

The exposure to any one of these asset classes will be determined by our assessment of the needs of the plan assets and economic and financial market conditions. Factors evaluated before adopting the asset mix include demographics, cash-flow payout requirements, liquidity requirements, actuarial assumptions, expected benefit increases, and plan funding requirements.

Management of the assets of the various Canadian plans has been delegated primarily to the PIC, which is a committee that is composed of CIBC management. The PIC is responsible for the appointment and termination of individual investment managers (which includes CIBC Asset Management Inc., a wholly owned subsidiary of CIBC), who each have investment discretion within established target asset mix ranges as set by the PBMC. Should a fund's actual asset mix fall outside specified ranges, the assets are re-balanced as required to be within the target asset mix ranges. On a periodic basis, an Asset-Liability Matching study is performed in which the consequences of the strategic investment policies are analyzed.

Management of the actuarial valuations of the various Canadian plans is primarily the responsibility of the PBMC. The PBMC is responsible for approving the actuarial assumptions for the valuations of the plans, and for recommending the level of annual funding for the Canadian plans to CIBC senior management.

Local committees with similar mandates manage our non-Canadian plans and annually report back to the MRCC on all material governance activities.

Amounts recognized on the consolidated balance sheet

The following tables present the financial position of our defined benefit pension and other post-employment plans for Canada, the U.S., the U.K., and our Caribbean subsidiaries. Other minor plans operated by some of our subsidiaries are not material and are not included in these disclosures.

	Pension plans		Other post-employment plans	
$ millions, as at or for the year ended October 31	**2022**	2021	**2022**	2021
Defined benefit obligation				
Balance at beginning of year	**$ 8,564**	$ 9,139	**$ 549**	$ 609
Current service cost	**265**	280	**7**	7
Past service cost	**–**	(1)	**(8)**	9
Interest cost on defined benefit obligation	**303**	267	**19**	17
Gain on settlements	**1**	–	**–**	–
Employee contributions	**4**	5	**–**	–
Benefits paid	**(379)**	(386)	**(27)**	(26)
Special termination benefits	**(1)**	–	**–**	–
Foreign exchange rate changes and other [1]	**58**	(49)	**6**	(3)
Net actuarial (gains) losses on defined benefit obligation	**(1,775)**	(691)	**(110)**	(64)
Balance at end of year	**$ 7,040**	$ 8,564	**$ 436**	$ 549
Plan assets				
Fair value at beginning of year	**$ 9,904**	$ 9,341	**$ –**	$ –
Interest income on plan assets [2]	**360**	282	**–**	–
Net actuarial gains (losses) on plan assets [2]	**(1,592)**	479	**–**	–
Employer contributions	**79**	249	**27**	26
Employee contributions	**4**	5	**–**	–
Benefits paid	**(379)**	(386)	**(27)**	(26)
Settlements and special termination benefits	**(1)**	–	**–**	–
Plan administration costs	**(8)**	(8)	**–**	–
Foreign exchange rate changes and other [1]	**68**	(58)	**–**	–
Fair value at end of year	**$ 8,435**	$ 9,904	**$ –**	$ –
Net defined benefit asset (liability)	**1,395**	1,340	**(436)**	(549)
Valuation allowance [3]	**(16)**	(17)	**–**	–
Net defined benefit asset (liability), net of valuation allowance	**$ 1,379**	$ 1,323	**$ (436)**	$ (549)

(1) Includes the addition of the defined benefit obligations and plan assets related to the pension plans and other post-employment plans of immaterial subsidiaries with a net defined benefit liability of $ million as at October 31, 2022.
(2) The actual return on plan assets for the year was a loss of $3,232 million (2021: gain of $761 million).
(3) The valuation allowance reflects the effect of asset ceiling on plans with a net defined benefit asset.

The net defined benefit asset (liability), net of valuation allowance, included in other assets and other liabilities is as follows:

	Pension plans		Other post-employment plans	
$ millions, as at October 31	**2022**	2021	**2022**	2021
Other assets	**$ 1,420**	$ 1,372	**$ –**	$ –
Other liabilities [1]	**(41)**	(49)	**(436)**	(549)
	$ 1,379	$ 1,323	**$ (436)**	$ (549)

(1) Excludes nil (2021: $4 million) of other liabilities for other post-employment plans of immaterial subsidiaries.

The defined benefit obligation and plan assets by region are as follows:

	Pension plans		Other post-employment plans	
$ millions, as at October 31	**2022**	2021	**2022**	2021
Defined benefit obligation				
Canada	**$ 6,382**	$ 7,846	**$ 405**	$ 512
U.S., U.K., and the Caribbean	**658**	718	**31**	37
Defined benefit obligation at the end of year	**$ 7,040**	$ 8,564	**$ 436**	$ 549
Plan assets				
Canada	**$ 7,666**	$ 8,996	**$ –**	$ –
U.S., U.K., and the Caribbean	**769**	908	**–**	–
Plan assets at the end of year	**$ 8,435**	$ 9,904	**$ –**	$ –

Amounts recognized in the consolidated statement of income

The net defined benefit expense for our defined benefit plans in Canada, the U.S., the U.K., and the Caribbean is as follows:

	Pension plans		Other post-employment plans	
$ millions, for the year ended October 31	**2022**	2021	**2022**	2021
Current service cost [1]	**$ 265**	$ 280	**$ 7**	$ 7
Past service cost	**–**	(1)	**(8)**	9
Gain on settlements	**1**	–	**–**	–
Interest cost on defined benefit obligation	**303**	267	**19**	17
Interest income on plan assets	**(360)**	(282)	**–**	–
Interest expense on effect of asset ceiling	**1**	–	**–**	–
Plan administration costs	**8**	8	**–**	–
Net defined benefit plan expense recognized in net income	**$ 218**	$ 272	**$ 18**	$ 33

(1) The 2022 and 2021 current service costs were calculated using separate discount rates of 3.61% and 2.99%, respectively, to reflect the longer duration of future benefits payments associated with the additional year of service to be earned by the plan's active participants.

Amounts recognized in the consolidated statement of comprehensive income

The net remeasurement gains (losses) recognized in OCI for our defined benefit plans in Canada, the U.S., the U.K., and the Caribbean is as follows:

	Pension plans		Other post-employment plans	
$ millions, for the year ended October 31	**2022**	2021	**2022**	2021
Actuarial gains (losses) on defined benefit obligation arising from changes in:				
Demographic assumptions	**$ 5**	$ (1)	**$ –**	$ 16
Financial assumptions	**2,033**	798	**105**	42
Experience	**(263)**	(106)	**4**	6
Net actuarial gains (losses) on plan assets	**(1,592)**	479	**–**	–
Changes in asset ceiling excluding interest income	**2**	–	**–**	–
Net remeasurement gains (losses) recognized in OCI [1]	**$ 185**	$ 1,170	**$ 110**	$ 64

(1) Excludes net remeasurement gains/losses recognized in OCI in respect ofimmaterial subsidiaries not included in the disclosures totallingnil (2021: $6 million of net losses).

Canadian defined benefit plans

As the Canadian defined benefit pension and other post-employment benefit plans represent approximately 91% of our consolidated defined benefit obligation, they are the subject and focus of the disclosures in the balance of this note.

Disaggregation and maturity profile of defined benefit obligation

The breakdown of the defined benefit obligation for our Canadian plans between active, deferred and retired members is as follows:

	Pension plans		Other post-employment plans	
$ millions, as at October 31	**2022**	2021	**2022**	2021
Active members	**$ 3,164**	$ 4,014	**$ 75**	$ 99
Deferred members	**410**	569	**–**	–
Retired members	**2,808**	3,263	**330**	413
Total	**$ 6,382**	$ 7,846	**$ 405**	$ 512

The weighted-average duration of the defined benefit obligation for our Canadian plans is as follows:

	Pension plans		Other post-employment plans	
As at October 31	**2022**	2021	**2022**	2021
Weighted-average duration, in years	**12.7**	14.2	**10.4**	11.7

Plan assets
The major categories of our defined benefit pension plan assets for our Canadian plans are as follows:

$ millions, as at October 31	2022		2021	
Asset category [1]				
Canadian equity securities [2]	**$ 421**	**5 %**	$ 753	8 %
Debt securities [3]				
Government bonds	**3,724**	**48**	4,917	55
Corporate bonds	**1,193**	**16**	755	8
	4,917	**64**	5,672	63
Investment funds [4]				
Canadian equity funds	**22**	**–**	40	1
U.S. equity funds	**435**	**6**	560	6
International equity funds [5]	**26**	**1**	39	1
Global equity funds [5]	**1,083**	**14**	1,171	13
Emerging markets equity funds	**–**	**–**	296	3
Fixed income funds	**86**	**1**	110	1
	1,652	**22**	2,216	25
Other [2]				
Alternative investments [6]	**2,396**	**31**	1,740	20
Cash and cash equivalents and other	**421**	**6**	257	2
Securities purchased under resale agreements	**485**	**6**	–	–
Obligations related to securities sold under repurchase agreements and securities sold short	**(2,626)**	**(34)**	(1,642)	(18)
	676	**9**	355	4
	$ 7,666	**100 %**	$ 8,996	100 %

(1) Asset categories are based upon risk classification including synthetic exposure through derivatives. The fair value of derivatives as at October 31, 2022 was a net derivative asset of $4 million (2021: net derivative asset of $30 million).
(2) Pension benefit plan assets include CIBC issued securities and deposits of nil (2022: nil), representing nil of Canadian plan assets (2021: nil). All of the equity securities held as at October 31, 2022 and 2021 have daily quoted prices in active markets except hedge funds, infrastructure, and private equity.
(3) All debt securities held as at October 31, 2022 and 2021 are investment grade, of which $341 million (2021: $134 million) have daily quoted prices in active markets.
(4) $23 million (2021: $40 million) of the investment funds are directly held as at October 31, 2022 and have daily quoted prices in active markets.
(5) Global equity funds include North American and international investments, whereas International equity funds do not include North American investments.
(6) Comprised of private equity, infrastructure, private debt and real estate funds.

Principal actuarial assumptions

The weighted-average principal assumptions used to determine the defined benefit obligation for our Canadian plans are as follows:

	Pension plans		Other post-employment plans	
As at October 31	**2022**	2021	**2022**	2021
Discount rate	**5.4 %**	3.5 %	**5.5 %**	3.4 %
Rate of compensation increase [1]	**2.5 %**	2.1 %	**2.5 %**	2.1 %

(1) Rates of compensation increase for 2022 and 2021 reflect the use of a salary growth rate assumption table that is based on the age and tenure of the employees. The table yields a weighted-average salary growth rate of approximately 2.5% per annum (2021: 2.1%).

Assumptions regarding future mortality have been based on published statistics and mortality tables. The current longevities underlying the values of the defined benefit obligation of our Canadian plans are as follows (in years):

As at October 31	**2022**	2021
Longevity at age 65 for current retired members		
Males	**23.5**	23.4
Females	**24.6**	24.5
Longevity at age 65 for current members aged 45		
Males	**24.4**	24.4
Females	**25.5**	25.4

The assumed health-care cost trend rates of the Canadian other post-employment plan providing medical, dental, and life insurance benefits are as follows:

For the year ended October 31	**2022**	2021
Health-care cost trend rates assumed for next year	**4.8 %**	4.9 %
Rate to which the cost trend rate is assumed to decline	**4.0 %**	4.0 %
Year that the rate reaches the ultimate trend rate	**2040**	2040

Sensitivity analysis

Reasonably possible changes to one of the principal actuarial assumptions, holding other assumptions constant, would have affected the defined benefit obligation of our Canadian plans as follows:

Estimated increase (decrease) in defined benefit obligation	**Pension plans**	**Other post-employment plans**
$ millions, as at October 31	**2022**	**2022**
Discount rate (100 basis point change)		
Decrease in assumption	**$ 887**	**$ 47**
Increase in assumption	**(753)**	**(39)**
Rate of compensation increase (100 basis point change)		
Decrease in assumption	**(174)**	**–**
Increase in assumption	**195**	**–**
Health-care cost trend rates (100 basis point change)		
Decrease in assumption	**n/a**	**(17)**
Increase in assumption	**n/a**	**20**
Future mortality		
1 year shorter life expectancy	**(139)**	**(8)**
1 year longer life expectancy	**135**	**12**

n/a Not applicable.

The sensitivity analyses presented above are indicative only, and should be considered with caution as they have been calculated in isolation without changing other assumptions. In practice, changes in one assumption may result in changes in another, which may magnify or counteract the disclosed sensitivities.

Future cash flows

Cash contributions

The most recently completed actuarial valuation of the CIBC Pension Plan for funding purposes was as at October 31, 2021. The next actuarial valuation of this plan for funding purposes will be effective as of October 31, 2022.

The minimum contributions for 2023 are anticipated to be $ 228 million for the Canadian defined benefit pension plans and $ 28 million for the Canadian other post-employment benefit plans. These estimates are subject to change since contributions are affected by various factors, such as market performance, regulatory requirements, and management's ability to change funding policy.

Expected future benefit payments

The expected future benefit payments for our Canadian plans for the next 10 years are as follows:

$ millions, for the year ended October 31	2023	2024	2025	2026	2027	2028–2032	Total
Defined benefit pension plans	$ 350	$ 362	$ 374	$ 387	$ 400	$ 2,198	$ 4,071
Other post-employment plans	28	29	29	30	30	158	304
	$ 378	$ 391	$ 403	$ 417	$ 430	$ 2,356	$ 4,375

Defined contributions and other plans

We also maintain defined contribution plans for certain employees and make contributions to government pension plans. The expense recognized in the consolidated statement of income for these benefit plans is as follows:

$ millions, for the year ended October 31	2022	2021
Defined contribution pension plans	**$ 49**	$ 40
Government pension plans [1]	**171**	143
	$ 220	$ 183

(1) Includes Canada Pension Plan, Quebec Pension Plan, and U.S. Federal Insurance Contributions Act.

Note 19 | Income taxes

Total income taxes

$ millions, for the year ended October 31	2022	2021
Consolidated statement of income		
Provision for (reversal of) current income taxes		
Adjustments for prior years	**$ 35**	$ (22)
Current income tax expense	**1,741**	1,939
	1,776	1,917
Provision for (reversal of) deferred income taxes		
Adjustments for prior years	**(27)**	19
Effect of changes in tax rates and laws	**(4)**	1
Origination and reversal of temporary differences	**(15)**	(61)
	(46)	(41)
	1,730	1,876
OCI	**(268)**	297
Total comprehensive income	**$ 1,462**	$ 2,173

Components of income tax

$ millions, for the year ended October 31	2022	2021
Current income taxes		
Federal	**$ 627**	$ 918
Provincial	**429**	629
Foreign	**459**	398
	1,515	1,945
Deferred income taxes		
Federal	**51**	137
Provincial	**37**	90
Foreign	**(141)**	1
	(53)	228
	$ 1,462	$ 2,173

The combined Canadian federal and provincial income tax rate varies each year according to changes in the statutory rates imposed by each of these jurisdictions, and according to changes in the proportion of our business carried out in each province. We are also subject to Canadian taxation on income of foreign branches.

Earnings of foreign subsidiaries would generally only be subject to Canadian tax when distributed to Canada. Additional Canadian taxes that would be payable if all foreign subsidiaries' retained earnings were distributed to the Canadian parent as dividends are estimated to be nil.

The effective rates of income tax in the consolidated statement of income are different from the combined Canadian federal and provincial income tax rates as set out in the following table:

Reconciliation of income taxes

$ millions, for the year ended October 31	2022		2021	
Combined Canadian federal and provincial income tax rate applied to income before income taxes	**$ 2,097**	**26.3 %**	$ 2,188	26.3 %
Income taxes adjusted for the effect of:				
Earnings of foreign subsidiaries	**(199)**	**(2.5)**	(136)	(1.6)
Tax-exempt income	**(156)**	**(2.0)**	(150)	(1.8)
Changes in income tax rate on deferred tax balances	**(4)**	**–**	1	–
Impact of equity-accounted income	**(13)**	**(0.2)**	(13)	(0.2)
Other	**5**	**0.1**	(14)	(0.2)
Income taxes in the consolidated statement of income	**$ 1,730**	**21.7 %**	$ 1,876	22.5 %

Deferred income taxes

Sources of and movement in deferred tax assets and liabilities

Deferred tax assets

$ millions, for the year ended October 31		Allowance for credit losses	Property and equipment	Pension and employee benefits	Provisions	Financial instrument revaluation	Tax loss carry-forwards [1]	Other	Total assets
2022	**Balance at beginning of year**	**$ 222**	**$ 40**	**$ 307**	**$ 103**	**$ 24**	**$ 5**	**$ 215**	**$ 916**
	Recognized in net income	**24**	**3**	**(25)**	**(12)**	**(3)**	**2**	**49**	**38**
	Recognized in OCI	**–**	**–**	**(16)**	**–**	**104**	**–**	**–**	**88**
	Other [2]	**10**	**(37)**	**9**	**1**	**–**	**(1)**	**–**	**(18)**
	Balance at end of year	**$ 256**	**$ 6**	**$ 275**	**$ 92**	**$ 125**	**$ 6**	**$ 264**	**$ 1,024**
2021	Balance at beginning of year	$ 314	$ 39	$ 554	$ 53	$ 1	$ 19	$ 236	$ 1,216
	Recognized in net income	(80)	3	59	51	(7)	(3)	(16)	7
	Recognized in OCI	–	–	(296)	–	43	–	–	(253)
	Other [2]	(12)	(2)	(10)	(1)	(13)	(11)	(5)	(54)
	Balance at end of year	$ 222	$ 40	$ 307	$ 103	$ 24	$ 5	$ 215	$ 916

Deferred tax liabilities

$ millions, for the year ended October 31		Intangible assets	Property and equipment	Pension and employee benefits	Goodwill	Financial instrument revaluation	Other	Total liabilities
2022	**Balance at beginning of year**	**$ (327)**	**$ (82)**	**$ (24)**	**$ (88)**	**$ (19)**	**$ (12)**	**$ (552)**
	Recognized in net income	**(10)**	**(23)**	**33**	**(2)**	**4**	**6**	**8**
	Recognized in OCI	**–**	**–**	**(81)**	**–**	**–**	**–**	**(81)**
	Other [2]	**(4)**	**36**	**1**	**1**	**2**	**–**	**36**
	Balance at end of year	**$ (341)**	**$ (69)**	**$ (71)**	**$ (89)**	**$ (13)**	**$ (6)**	**$ (589)**
2021	Balance at beginning of year	$ (305)	$ (112)	$ (15)	$ (86)	$ (63)	$ (18)	$ (599)
	Recognized in net income	(26)	27	1	(2)	28	6	34
	Recognized in OCI	–	–	(15)	–	(1)	–	(16)
	Other [2]	4	3	5	–	17	–	29
	Balance at end of year	$ (327)	$ (82)	$ (24)	$ (88)	$ (19)	$ (12)	$ (552)
Net deferred tax assets as at October 31, 2022								**$ 435**
Net deferred tax assets as at October 31, 2021								$ 364

(1) The deferred tax effect of tax loss carryforwards includes $6 million (2021: $5 million) that relate to operating losses (of which $3 million relate to Canada, and $3 million relate to the Caribbean) that expire in various years commencing in 2022, and nil (2021: nil) that relate to U.S. capital losses.
(2) Includes foreign currency translation adjustments.

Deferred tax assets and liabilities are assessed by entity for presentation in our consolidated balance sheet. As a result, the net deferred tax assets of $ 435 million (2021: $364 million) are presented in the consolidated balance sheet as deferred tax assets of $480 million (2021: $402 million) and deferred tax liabilities of $ 45 million (2021: $38 million).

Unrecognized tax losses

The amount of unused operating tax losses for which deferred tax assets have not been recognized was $ 1,620 million as at October 31, 2022 (2021: $ 1,611 million), of which $ 742 million (2021: $674 million) relates to the U.S. region and $ 878 million (2021: $937 million) relates to the Caribbean region. These unused operating tax losses expire within 10 years.

The amount of unused capital tax losses for which deferred tax assets have not been recognized was $ 610 million as at October 31, 2022 (2021: $ 519 million). These unused capital tax losses relate to Canada and are subject to the outcome of the foreign exchange capital loss reassessment discussed below.

Enron

In prior years, the CRA issued reassessments disallowing the deduction of Enron settlement payments and related legal expenses (the Enron expenses). In January 2019, CIBC entered into a settlement agreement with the CRA with respect to the portion of the Enron expenses deductible in Canada. The portion of the Enron expenses deductible in the U.S. has not yet been agreed to by the Internal Revenue Service. It is possible that adjustments may be required to the amount of tax benefits recognized in the U.S.

Dividend received deduction

The CRA has reassessed CIBC approximately $ 1,602 million of additional income tax related to the denial of the tax deductibility of certain 2011 to 2017 Canadian corporate dividends, on the basis that certain dividends received were part of a "dividend rental arrangement", and similar matters. This includes approximately $182 million of additional income tax for the 2017 taxation year that was reassessed by the CRA in May 2022. The dividends that were subject to the reassessments are similar to those prospectively addressed by the rules in the 2015 and 2018 Canadian federal budgets. It is possible that subsequent years may be reassessed for similar matters. In August 2021, CIBC filed a Notice of Appeal with the Tax Court of Canada and the matter is now in litigation. CIBC is confident that its tax filing positions were appropriate and intends to defend itself vigorously. Accordingly, no amounts have been accrued in the consolidated financial statements.

Foreign exchange capital loss reassessment

In November 2021, the Tax Court of Canada ruled against CIBC on its 2007 foreign exchange capital loss reassessment (Decision). CIBC disagrees with the Decision and filed its Appeal in November 2021. The Appeal is scheduled to be heard in December 2022. CIBC remains confident that its tax filing position was appropriate. Accordingly, no amounts have been accrued in the consolidated financial statements. The exposure of additional tax and interest related to this and similar matters is approximately $300 million in addition to the potential inability to utilize approximately $600 million in unrecognized capital tax loss carryforwards.

Canadian federal budget

Following the announcement of budget proposals in April 2022, the Canadian Federal government released draft legislation in August 2022, and subsequently introduced other draft legislation which went through first and second readings in Parliament in November 2022. These proposals included the introduction of a one-time 15% Canada Recovery Dividend tax (CRD) on banks and life insurer groups, based on the average of 2020 and 2021 taxable income in excess of $1.0 billion. Once substantively enacted the CRD would become payable in the 2023 taxation year over a five-year period in equal increments. The draft legislation also includes a prospective 1.5% increase in the tax rate applied to taxable income in excess of $100 million earned by banks and life insurers. We will account for these measures in future periods once they become substantively enacted, which is generally interpreted to occur at the point of a third reading in a Canadian Parliament held by a minority government.

Note 20 | Earnings per share

$ millions, except per share amounts, for the year ended October 31	2022	2021
Basic EPS [1]		
Net income attributable to equity shareholders	**$ 6,220**	$ 6,429
Less: preferred share dividends and distributions on other equity instruments	**171**	158
Net income attributable to common shareholders	**6,049**	6,271
Weighted-average common shares outstanding (thousands)	**903,312**	897,906
Basic EPS	**$ 6.70**	$ 6.98
Diluted EPS [1]		
Net income attributable to common shareholders	**$ 6,049**	$ 6,271
Weighted-average common shares outstanding (thousands)	**903,312**	897,906
Add: stock options potentially exercisable [2] (thousands)	**2,078**	2,122
Add: restricted shares and equity-settled consideration (thousands)	**294**	337
Weighted-average diluted common shares outstanding (thousands)	**905,684**	900,365
Diluted EPS	**$ 6.68**	$ 6.96

(1) On April 7, 2022, CIBC shareholders approved a two-for-one share split (Share Split) of CIBC's issued and outstanding common shares. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and per common share amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.

(2) For the years ended October 31, 2022 and October 31, 2021, we have not excluded any outstanding stock options from the calculation of diluted EPS as the options' exercise prices exceeded the average market price of CIBC's common shares.

Note 21 | Commitments, guarantees and pledged assets

Commitments

Credit-related arrangements

Credit-related arrangements are generally off-balance sheet instruments and are typically entered into to meet the financing needs of clients. In addition, there are certain exposures for which we could be obligated to extend credit that are not recorded on the consolidated balance sheet. Our policy of requiring collateral or other security to support credit-related arrangements and the types of security held is generally the same as for loans. The contract amounts presented below for credit-related arrangements represent the maximum amount of additional credit that we could be obligated to extend. The contract amounts also represent the additional credit risk amounts should the contracts be fully drawn, the counterparties default and any collateral held proves to be of no value. As many of these arrangements will expire or terminate without being drawn upon, the contract amounts are not necessarily indicative of future cash requirements or actual risk of loss.

$ millions, as at October 31	2022	2021
		Contract amounts
Securities lending [1]	**$ 53,008**	$ 50,578
Unutilized credit commitments [2]	**336,261**	301,343
Backstop liquidity facilities	**12,855**	12,174
Standby and performance letters of credit	**18,459**	15,775
Documentary and commercial letters of credit	**209**	194
Other commitments to extend credit	**718**	978
	$ 421,510	$ 381,042

(1) Excludes securities lending of $4.9 billion (2021: $2.5 billion) for cash because it is reported on the consolidated balance sheet.

(2) Includes $167.3 billion (2021: $141.5 billion) of personal, home equity and credit card lines, which are unconditionally cancellable at our discretion.

In addition, the client securities lending of the joint ventures which CIBC has with The Bank of New York Mellon totalled $ 90.5 billion (2021: $ 81.7 billion), of which $ 9.5 billion (2021: $ 8.6 billion) are transactions between CIBC and the joint ventures.

CIBC has provided indemnities to customers of the joint ventures in respect of securities lending transactions with third parties amounting to $ 77.0 billion (2021: $ 68.0 billion). For further information on the joint ventures, see Note 25.

Securities lending

Securities lending represents our credit exposure when we lend our own or our clients' securities to a borrower and the borrower defaults on the redelivery obligation. The borrower must fully collateralize the security lent at all times.

Unutilized credit commitments

Unutilized credit commitments are the undrawn portion of lending facilities that we have approved to meet the requirements of clients. These lines may include various conditions that must be satisfied prior to drawdown and include facilities extended in connection with contingent acquisition

financing. The credit risk associated with these lines arises from the possibility that a commitment will be drawn down as a loan at some point in the future, prior to the expiry of the commitment. The amount of collateral obtained, if deemed necessary, is based on our credit evaluation of the borrower and may include a charge over the present and future assets of the borrower.

Backstop liquidity facilities
We provide irrevocable backstop liquidity facilities primarily to ABCP conduits. We are the financial services agent for some of these conduits, while other conduits are administered by third parties. The liquidity facilities for our sponsored ABCP programs, Safe Trust, Sure Trust, Sound Trust and Stable Trust, require us to provide funding to fund non-defaulted assets, subject to the satisfaction of certain limited conditions with respect to the conduits.

Standby and performance letters of credit
These represent an irrevocable obligation to make payments to third parties in the event that clients are unable to meet their contractual financial or performance obligations. The credit risk associated with these instruments is essentially the same as that involved in extending irrevocable loan commitments to clients. The amount of collateral obtained, if deemed necessary, is based on our credit evaluation of the borrower and may include a charge over present and future assets of the borrower.

Documentary and commercial letters of credit
Documentary and commercial letters of credit are short-term instruments issued on behalf of a client, authorizing a third-party, such as an exporter, to draw drafts on CIBC up to a specified amount, subject to specific terms and conditions. We are at risk for any drafts drawn that are not ultimately settled by the client; however, the amounts drawn are collateralized by the related goods.

Other commitments to extend credit
These represent other commitments to extend credit, and primarily include forward-dated securities financing trades in the form of securities purchased under resale agreements with various counterparties that are executed on or before the end of our reporting period and that settle shortly after period end, usually within five business days.

Other commitments
As an investor in merchant banking activities, we enter into commitments to fund external private equity funds. In connection with these activities, we had commitments to invest up to $462 million (2021: $337 million).

In addition, we act as underwriter for certain new issuances under which we alone or together with a syndicate of financial institutions purchase these new issuances for resale to investors. As at October 31, 2022, the related underwriting commitments were $936 million (2021: $268 million).

Guarantees and other indemnification agreements
Guarantees
A guarantee is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor failed to make payment when due in accordance with the original or modified terms of a debt instrument. Guarantees include standby and performance letters of credit as discussed above, and credit derivatives protection sold, as discussed in Note 12.

Other indemnification agreements
In the ordinary course of business, we enter into contractual arrangements under which we may agree to indemnify the counterparty to such arrangement from any losses relating to a breach of representations and warranties, a failure to perform certain covenants, or for claims or losses arising from certain external events as outlined within the particular contract. This may include, for example, losses arising from changes in tax legislation, litigation, or claims relating to past performance. In addition, we indemnify each of our directors and officers to the extent permitted by law, against any and all claims or losses (including any amounts paid in settlement of any such claims) incurred as a result of their service to CIBC. In most indemnities, maximum loss clauses are generally not provided for, and as a result, no defined limit of the maximum potential liability exists. Amounts are accrued when we have a present legal or constructive obligation as a result of a past event, when it is both probable that an outflow of economic benefits will be required to resolve the matter, and when a reliable estimate can be made of the amount of the obligation. We believe that the likelihood of the conditions arising to trigger obligations under these contract arrangements is remote. Historically, any payments made in respect of these contracts have not been significant. Amounts related to these indemnifications, representations, and warranties reflected within the consolidated financial statements as at October 31, 2022 and 2021 are not significant.

Pledged assets
In the normal course of business, on- and off-balance sheet assets are pledged as collateral for various activities. The following table summarizes asset pledging amounts and the activities to which they relate:

$ millions, as at October 31	2022	2021
Assets pledged in relation to:		
Securities lending	**$ 53,989**	$ 50,895
Obligations related to securities sold under repurchase agreements	**79,759**	73,687
Obligations related to securities sold short	**15,284**	22,790
Securitizations	**19,750**	18,824
Covered bonds	**28,100**	25,416
Derivatives	**25,463**	16,266
Foreign governments and central banks (1)	**286**	252
Clearing systems, payment systems, and depositories (2)	**620**	649
Other	**12**	374
	$ 223,263	$ 209,153

(1) Includes assets pledged to maintain access to central bank facilities in foreign jurisdictions.
(2) Includes assets pledged in order to participate in clearing and payment systems and depositories.

Note 22 | Contingent liabilities and provisions

In the ordinary course of its business, CIBC is a party to a number of legal proceedings, including regulatory investigations, in which claims for substantial monetary damages are asserted against CIBC and its subsidiaries. Legal provisions are established if, in the opinion of management, it is both probable that an outflow of economic benefits will be required to resolve the matter, and a reliable estimate can be made of the amount of the obligation. If the reliable estimate of probable loss involves a range of potential outcomes within which a specific amount appears to be a better estimate, that amount is accrued. If no specific amount within the range of potential outcomes appears to be a better estimate than any other amount, the mid-point in the range is accrued. In some instances, however, it is not possible either to determine whether an obligation is probable or to reliably estimate the amount of loss, in which case no accrual can be made.

While there is inherent difficulty in predicting the outcome of legal proceedings, based on current knowledge and in consultation with legal counsel, we do not expect the outcome of these matters, individually or in aggregate, to have a material adverse effect on our consolidated financial statements. However, the outcome of these matters, individually or in aggregate, may be material to our operating results for a particular reporting period. We regularly assess the adequacy of CIBC's litigation accruals and make the necessary adjustments to incorporate new information as it becomes available.

CIBC considers losses to be reasonably possible when they are neither probable nor remote. It is reasonably possible that CIBC may incur losses in addition to the amounts recorded when the loss accrued is the mid-point of a range of reasonably possible losses, or the potential loss pertains to a matter in which an unfavourable outcome is reasonably possible but not probable.

CIBC believes the estimate of the aggregate range of reasonably possible losses, in excess of the amounts accrued, for its significant legal proceedings, where it is possible to make such an estimate, is from nil to approximately $1.5 billion as at October 31, 2022. This estimated aggregate range of reasonably possible losses is based upon currently available information for those significant proceedings in which CIBC is involved, taking into account CIBC's best estimate of such losses for those cases for which an estimate can be made. CIBC's estimate involves significant judgment, given the varying stages of the proceedings and the existence of multiple defendants in many of such proceedings whose share of the liability has yet to be determined. The range does not include potential punitive damages. The matters underlying the estimated range as at October 31, 2022 consist of the significant legal matters disclosed below. The matters underlying the estimated range will change from time to time, and actual losses may vary significantly from the current estimate. For certain matters, CIBC does not believe that an estimate can currently be made as many of them are in preliminary stages and certain matters have no specific amount claimed. Consequently, these matters are not included in the range.

The following is a description of CIBC's significant legal proceedings, which we intend to vigorously defend.

Green v. Canadian Imperial Bank of Commerce, et al.

In July 2008, a shareholder plaintiff commenced this proposed class action in the Ontario Superior Court of Justice against CIBC and several former and current CIBC officers and directors. It alleged that CIBC and the individual officers and directors violated the Ontario *Securities Act* through material misrepresentations and non-disclosures relating to CIBC's exposure to the U.S. sub-prime mortgage market. The plaintiffs instituted this action on behalf of all CIBC shareholders in Canada who purchased shares between May 31, 2007 and February 28, 2008. The action sought damages of $5 billion. In July 2012, the plaintiffs' motions for leave to file the statement of claim and for class certification were dismissed by the Ontario Superior Court of Justice. In February 2014, the Ontario Court of Appeal released its decision overturning the lower court and allowing the matter to proceed as a certified class action. In August 2014, CIBC and the individual defendants were granted leave to appeal to the Supreme Court of Canada. The defendants' appeal to the Supreme Court of Canada was heard in February 2015. In December 2015, the Supreme Court of Canada upheld the Ontario Court of Appeal's decision allowing the matter to proceed as a certified class action. The trial, which was scheduled to start in October 2021, was adjourned and a settlement agreement was reached, subject to court approval. In January 2022, the court approved the settlement. Pursuant to the settlement, CIBC has paid the plaintiffs $125 million. This matter is now closed.

Fresco v. Canadian Imperial Bank of Commerce
Gaudet v. Canadian Imperial Bank of Commerce

In June 2007, two proposed class actions were filed against CIBC in the Ontario Superior Court of Justice (*Fresco*) and in the Quebec Superior Court (*Gaudet*). Each makes identical claims for unpaid overtime for full-time, part-time, and retail frontline non-management employees. The Ontario action seeks $500 million in damages plus $100 million in punitive damages for all employees in Canada, while the Quebec action is limited to employees in Quebec and has been stayed pending the outcome of the Ontario action. In June 2009, in the Ontario action, the motion judge denied certification of the matter as a class action. In September 2010, the Ontario Divisional Court upheld the motion judge's denial of the plaintiff's certification motion and the award of costs to CIBC by a two-to-one majority. In January 2011, the Ontario Court of Appeal granted the plaintiff leave to appeal the decision denying certification. In June 2012, the Ontario Court of Appeal overturned the lower court and granted certification of the matter as a class action. The Supreme Court of Canada released its decision in March 2013 denying CIBC leave to appeal certification of the matter as a class action, and denying the plaintiff's cross appeal on aggregate damages. The motions for summary judgment on liability were heard in December 2019. In March 2020, the court found CIBC liable for unpaid overtime. CIBC appealed the liability decision. A decision on remedies was released in August 2020 and the court certified aggregate damages as a common issue and directed that the availability and quantum, if any, of aggregate damages be determined at a later date. The plaintiffs' claim for punitive damages was dismissed. In October 2020, the court released its decision on limitation periods finding that limitation periods cannot be determined on a class wide basis. CIBC appealed the decisions on remedies and limitation periods. The appeal was heard in September 2021. In February 2022, CIBC's appeal was dismissed. In October 2022, a settlement agreement was reached, subject to court approval. Pursuant to the proposed settlement, CIBC will pay the plaintiffs $ 153 million.

Credit card class actions – Interchange fees litigation:

Bancroft-Snell v. Visa Canada Corporation, et al.
9085-4886 Quebec Inc. v. Visa Canada Corporation, et al.
Watson v. Bank of America Corporation, et al.
Fuze Salon v. BofA Canada Bank, et al.
1023926 Alberta Ltd. v. Bank of America Corporation, et al.
The Crown & Hand Pub Ltd. v. Bank of America Corporation, et al.
Hello Baby Equipment Inc. v. BofA Canada Bank, et al.

Since 2011, seven proposed class actions were commenced against VISA Canada Corporation (Visa), MasterCard International Incorporated (MasterCard), CIBC and numerous other financial institutions. The actions, brought on behalf of all merchants who accepted payment by Visa or MasterCard from March 23, 2001 to the present, alleged two "separate, but interrelated" conspiracies: one in respect of Visa and one in respect of MasterCard. The claims alleged that Visa and MasterCard conspired with their issuing banks to set default interchange rate and merchant discount fees and that certain rules (Honour All Cards and No Surcharge) had the effect of increasing the merchant discount fees. The claims alleged civil conspiracy, violation of the *Competition Act*, interference with economic interests and unjust enrichment. The claims sought unspecified general and punitive damages. The motion for class certification in *Watson* was granted in March 2014. The appeal of the decision granting class certification was heard in December 2014. In August 2015, the British Columbia Court of Appeal allowed the appeals in part, resulting in certain causes of action being struck and others being reinstated. The matter remained certified as a class action. The trial in *Watson* which was scheduled to commence in October 2020 was adjourned. The motion for class certification in *9085-4886 Quebec Inc.* (formerly *Bakopanos*) was heard in November 2017. In February 2018, the Court certified *9085-4886 Quebec Inc.* as a class action. In May 2019, the plaintiffs' appeal of the certification decision in *9085-4886 Quebec Inc.* was heard and in July 2019, the Quebec Court of Appeal allowed the plaintiffs' appeal. Five of the seven actions were settled subject to court approval. The settlement was approved by the courts in all five jurisdictions in December 2021. The remaining two actions were stayed. CIBC has contributed towards the settlement. These matters are now closed.

Mortgage prepayment class actions:

Jordan v. CIBC Mortgages Inc.
Lamarre v. CIBC Mortgages Inc.
Sherry v. CIBC Mortgages Inc.
Haroch v. Toronto Dominion Bank, et al.

In 2011, three proposed class actions were filed in the Superior Courts of Ontario (*Jordan*), Quebec (*Lamarre*) and British Columbia (*Sherry*) against CIBC Mortgages Inc. The representative plaintiffs alleged that since 2005, CIBC Mortgages Inc. wrongfully charged or overcharged mortgage prepayment penalties and that the calculation clauses in the mortgage contract that provide for discretion in applying the prepayment penalties are void and unenforceable at law. The motion for class certification in *Sherry* was granted in June 2014 conditional on the plaintiffs framing a workable class definition. In July 2014, CIBC filed a Notice of Appeal. CIBC's appeal of the certification decision in *Sherry* was heard in April 2016. In June 2016, the British Columbia Court of Appeal allowed the appeal in *Sherry* in part, resulting in certain causes of action being struck. *Sherry* remained certified as a class action, and continuation of the certification motion on the amended pleading was heard November 2017. In August 2018, the court certified certain of the plaintiffs' causes of action in *Sherry*. The appeal in *Sherry* was heard in April 2019. In May 2020, the court dismissed CIBC's appeal. The certification motion in *Jordan* was heard in August 2018. In February 2019, the court certified *Jordan* as a class action. CIBC's motion for leave to appeal the certification decision in *Jordan* was denied in June 2019. The *Jordan* and *Sherry* actions were settled subject to court approval, for which hearings were conducted in February 2022. In April 2022, the settlement in *Sherry* and *Jordan* received court approval in British Columbia and Ontario. These matters are now closed.

In May 2018, a new proposed class action, *Haroch*, was filed in the Superior Court of Quebec against CIBC, CIBC Mortgages Inc. and several other financial institutions. The action is brought on behalf of Quebec residents who during the class period allegedly paid a mortgage prepayment charge in excess of three months' interest. The plaintiffs allege that the defendants created complex prepayment formulas that are contrary to the *Quebec Civil Code*, the *Quebec Consumer Protection Act* and the *Interest Act* and seek damages back to 2015. *Haroch* and *Lamarre* have been consolidated. The motion for class certification in *Haroch* was heard in June 2019 , and in July 2019, the court certified the matter as a class action against CIBC and CIBC Mortgages Inc. CIBC and CIBC Mortgages Inc. sought leave to appeal the certification decision.

The appeal of the certification decision in *Haroch* did not proceed as the matter has been settled against CIBC, subject to court approval.

Cerberus Capital Management L.P. v. CIBC

In November 2015, Securitized Asset Funding 2011-2, LTD., a special purpose investment vehicle affiliated with Cerberus Capital Management L.P. (collectively, Cerberus), commenced a New York State Court action against CIBC seeking unspecified damages of "at least hundreds of millions of dollars". The action relates to two transactions in 2008 and 2011 in which CIBC issued a limited recourse note and certificate to Cerberus which significantly reduced CIBC's exposure to the U.S. residential real estate market. The complaint alleges that CIBC breached its contracts with Cerberus by failing to appropriately calculate and pay with respect to two of the payment streams due under the 2008 note and 2011 certificate. In January 2016, CIBC served its answer denying Cerberus' allegations and asserting counterclaims. Pre-trial discovery was completed and the parties filed a Note of Issue and Certificate of Readiness for Trial in August 2021. In September 2021, CIBC filed a motion for summary judgment, which was heard in December 2021, and denied. The non-jury trial proceeded in March 2022. The court reserved its decision.

Pilon v. Amex Bank of Canada, et al.

In January 2018, a proposed class action was commenced in Quebec against CIBC and several other financial institutions. The action alleges that the defendants breached the Quebec *Consumer Protection Act* and the *Bank Act* when they unilaterally increased the credit limit on the plaintiffs' credit cards. The claim seeks the return of all over limit fees charged to Quebec customers beginning in January 2015 as well as punitive damages of $500 per class member. The motion for class certification was heard in April 2019. In August 2019, the court dismissed the certification motion. The plaintiff's appeal of the decision denying certification was heard in February 2021. In March 2021, the court dismissed the plaintiff's appeal. In May 2021, the plaintiff filed a motion seeking leave to appeal to the Supreme Court of Canada. In March 2022, the plaintiff's motion for leave to appeal to the Supreme Court of Canada was dismissed. This matter is now closed.

Order Execution Only class actions:

Pozgaj v. CIBC and CIBC Trust
Frayce v. BMO Investorline Inc., et al.
Michaud v. BBS Securities Inc., et al.
Ciardullo v. 1832 Asset Management L.P., et al.
Ciardullo and Aggarwal v. 1832 Asset Management L.P., et al.
Woodard v. CIBC and CIBC Trust

In September 2018, a proposed class action (*Pozgaj*) was filed in the Ontario Superior Court against CIBC and CIBC Trust. It alleges that the defendants should not have paid mutual fund trailing commissions to order execution only dealers. The action is brought on behalf of all persons who held units of CIBC mutual funds through order execution only dealers and seeks $200 million in damages.

In 2020, two proposed class actions were filed in the Ontario Superior Court (*Frayce*) and the Supreme Court of British Columbia (*Michaud*) against CIBC Investor Services Inc. and several other dealers. The proposed actions allege that the defendants should not have received and accepted trailing commissions for service and advice on mutual funds purchased through their respective order execution only dealers. The proposed actions are brought on behalf of all persons who purchased units of mutual funds through an order execution only dealer owned by one or more of the defendants and seeks unspecified compensatory and punitive damages. The motion for certification in *Frayce* was heard in September 2022 and taken under reserve. The *Michaud* action has been stayed.

In July and August 2022, two proposed class actions (*Ciardullo* and *Ciardullo and Aggarwal*) were filed in the Ontario Superior Court against CIBC, CIBC Trust and several other financial institutions. Like the Pozgaj action, these actions allege that the defendants should not have paid mutual fund trailing commissions to order execution only dealers. However, the actions are brought on behalf of all persons who held units of CIBC mutual funds through dealers other than order execution only dealers. They seek unspecified damages. In November 2022, a further proposed class action (*Woodard*) was filed in the Ontario Superior Court with a new proposed representative plaintiff. *Woodard* raises identical allegations to *Ciardullo* and *Ciardullo and Aggarwal*, on behalf of an identical class, but only names CIBC and CIBC Trust as defendants.

York County on Behalf of the County of York Retirement Fund v. Rambo, et al.

In February 2019, a class action complaint was filed in the Northern District of California against the directors, certain officers and the underwriters of several senior note offerings of the Pacific Gas and Electric Company (PG&E) that took place between March 2016 and April 2018, the total issuance amount for the series of offerings being approximately US$4 billion. CIBC World Markets Corp. was part of the underwriting syndicate for an offering, whereby CIBC World Markets Corp. underwrote 6% of a US$650 million December 2016 issuance of senior notes. The offering involved the issuance of two tranches of notes: US$400 million of 30-year senior notes maturing in December 2046 and US$250 million of one-year floating rate notes that matured and were repaid in November 2017. The complaint alleges that the disclosure documentation associated with the note offerings contained misrepresentations and/or omissions of material facts, including with respect to PG&E's failure to comply with various safety regulations, vegetation management programs and requirements, as well as understating the extent to which its equipment has allegedly caused multiple fires in California, including before the wildfires that occurred in California in 2017 and 2018. In October 2019, the defendants filed a motion to dismiss.

Pope v. CIBC and CIBC Trust

In August 2020, a proposed class action was filed in the Supreme Court of British Columbia against CIBC and CIBC Trust. The action alleges that the defendants misrepresented their investment strategy and charged unitholders excess fees in relation to certain CIBC mutual funds and certain CIBC portfolio funds. The action is brought on behalf of all persons who hold or held units of these funds from January 2005 to present and seeks unspecified compensatory and punitive damages. In December 2020, CIBC Asset Management Inc. was added as a defendant. The motion for class certification was heard in August 2021. In October 2022, the court ruled that the plaintiff was required to provide additional information before a final determination on certification could be made.

Salko v. CIBC Investor Services Inc., et al.

In March 2021, a proposed class action was commenced in Quebec against CIBC Investor Services Inc. and several other financial institutions. The plaintiff subsequently added CIBC World Markets Inc. and additional financial institutions as defendants. The action seeks the reimbursement of currency conversion fees alleged to have been unlawfully charged to class members and concealed by the defendants, as well as exemplary and punitive damages. The plaintiffs seek reimbursement of fees charged to clients since March 15, 2018, as well as punitive damages in the amount of 5% of the total sum of fees charged to class members, plus interest. The certification motion was heard in April 2022. In September 2022, the action was certified against CIBC Investor Services Inc. and several other order execution only dealers, and not certified against the full service brokerages, including CIBC World Markets Inc. The plaintiffs are appealing the certification decision.

The Registered Retirement Savings Plan (RRSP) of J.T.G v. His Majesty The King

CIBC Trust Corporation is the trustee of a self-directed RRSP that has been the subject of proceedings in the Tax Court of Canada. The proceedings arise from appeals of tax assessments made by the Minister of National Revenue against the RRSP for the 2004 to 2009 taxation years under Parts I and XI.1 of the *Income Tax Act* (Canada). At the time they were made in March 2013, the Part I assessment amounted to approximately $139 million and the Part XI.1 reassessment totalled approximately $ 144 million, in each case including all taxes, penalties and interest. In April 2021, the Tax Court of Canada released a decision allowing the appeal in part of the assessment under Part I and dismissing the appeal of the reassessment under Part XI.1. The RRSP by its trustee CIBC Trust has appealed this decision to the Federal Court of Appeal. To the extent there is a shortfall in the RRSP's ability to satisfy any of the Part XI.1 reassessment that may be upheld by the courts, CIBC Trust may be liable to pay a portion of that reassessment.

Non-sufficient funds fees class actions:

Vaillancourt-Thivierge v. Bank of Montreal, et al.
Chalmers and Campbell v. CIBC

In September 2016, a proposed class action (*Vaillancourt-Thivierge*) was commenced in Quebec against CIBC and several other financial institutions with respect to charging non-sufficient funds fees (NSF Fees) for client payment orders refused due to insufficient funds. The action alleges that NSF Fees violate the Quebec *Consumer Protection Act* and the Quebec Civil Code. The action is brought on behalf of residents of Quebec who paid NSF fees from September 12, 2013 to present. The action seeks the return of NSF fees charged as well as punitive damages of $300 per class member. The court certified the matter as a class action in 2019.

In September 2022, a proposed class action (*Chalmers*) was commenced in Ontario against CIBC on behalf of personal deposit accountholders who have been charged duplicative non-sufficient fund fees (representment NSF Fees) on their account for a single rejected payment order or cheque. The action alleges that this practice violates our account agreement with clients, the Ontario *Consumer Protection Act* and other consumer protection statutes. The action is brought on behalf of residents of Canada who paid representment NSF Fees from January 1, 2012 to present. The action seeks the return of the representment NSF Fees charged, as well as punitive damages.

Legal provisions

The following table presents changes in our legal provisions:

$ millions, for the year ended October 31	2022	2021
Balance at beginning of year	**$ 301**	$ 151
Additional new provisions recognized	**151**	169
Less:		
Amounts incurred and charged against existing provisions	**(172)**	(13)
Unused amounts reversed and other adjustments	**(5)**	(6)
Balance at end of year	**$ 275**	$ 301

Restructuring

The following table presents changes in the restructuring provision:

$ millions, for the year ended October 31	2022	2021
Balance at beginning of year	**$ 99**	$ 222
Additional new provisions recognized	**6**	14
Less:		
Amounts incurred and charged against existing provisions	**(59)**	(112)
Unused amounts reversed	**(11)**	(25)
Balance at end of year	**$ 35**	$ 99

The amount of $35 million as at October 31, 2022 primarily represents obligations related to ongoing payments as a result of the restructuring s.

Note 23 | Concentration of credit risk

Concentration of credit exposure may arise with a group of counterparties that have similar economic characteristics or are located in the same geographic region. The ability of such counterparties to meet contractual obligations would be similarly affected by changing economic, political or other conditions.

The amounts of credit exposure associated with our on- and off-balance sheet financial instruments are summarized in the following table:

Credit exposure by country of ultimate risk

$ millions, as at October 31	2022				2021			
	Canada	**U.S.**	**Other countries**	**Total**	Canada	U.S.	Other countries	Total
On-balance sheet								
Major assets [1][2][3]	**$ 603,210**	**$ 209,824**	**$ 82,937**	**$ 895,971**	$ 537,932	$ 181,813	$ 77,384	$ 797,129
Off-balance sheet								
Credit-related arrangements								
Financial institutions	**$ 59,480**	**$ 22,201**	**$ 12,797**	**$ 94,478**	$ 59,636	$ 18,315	$ 16,458	$ 94,409
Governments	**11,354**	**24**	**6,280**	**17,658**	11,229	10	8	11,247
Retail	**178,863**	**997**	**492**	**180,352**	154,341	700	383	155,424
Corporate	**78,372**	**40,036**	**10,614**	**129,022**	77,939	33,233	8,790	119,962
	$ 328,069	**$ 63,258**	**$ 30,183**	**$ 421,510**	$ 303,145	$ 52,258	$ 25,639	$ 381,042

(1) Major assets consist of cash and deposits with banks, loans and acceptances net of allowance for credit losses, securities, securities borrowed or purchased under resale agreements, and derivative instruments.
(2) Includes Canadian currency of $572.3 billion (2021: $522.8 billion) and foreign currencies of $823.7 billion (2021: $274.3 billion).
(3) No industry or foreign jurisdiction accounted for 10% or more of loans and acceptances net of allowance for credit losses, with the exception of the U.S., which accounted for 45% as at October 31, 2022 (2021: 43%) and the real estate and construction industry, which across all jurisdictions accounted for 10% as at October 31, 2022 (2021: less than 10%). Canadian residential mortgages accounted for 50% as at October 31, 2022 (2021: 53%) of loans and acceptances net of allowance for credit losses.

See Note 12 for derivative instruments by country and counterparty type of ultimate risk. In addition, see Note 21 for details on the client securities lending of the joint ventures which CIBC has with The Bank of New York Mellon.

Also see shaded sections in "MD&A – Management of risk" for a detailed discussion on our credit risk.

Note 24 | Related-party transactions

In the ordinary course of business, we provide banking services and enter into transactions with related parties on terms similar to those offered to unrelated parties. Related parties include key management personnel(1), their close family members, and entities that they or their close family members control or jointly control. Related parties also include associates and joint ventures accounted for under the equity method, and post-employment benefit plans for CIBC employees. Loans to these related parties are made in the ordinary course of business and on substantially the same terms as for comparable transactions with unrelated parties. As CIBC's subsidiaries are consolidated, transactions with these entities have been eliminated and are not reported as related-party transactions. We offer a subsidy on annual fees and preferential interest rates on credit card balances to senior officers, which is the same offer extended to all employees of CIBC.

Key management personnel and their affiliates

As at October 31, 2022, loans to key management personnel (1) and their close family members and to entities that they or their close family members control or jointly control totalled $ 32 million (2021: $17 million), letters of credit and guarantees were nil (2021: nil), and undrawn credit commitments totalled $21 million (2021: $11 million). Of these outstanding balances, $31 million (2021: $15 million) were secured and $ 1 million (2021: $2 million) were unsecured. We have no provision for credit losses on impaired loans relating to these amounts for the years ended October 31, 2022 and 2021. Loans to these related parties are made in the ordinary course of business and on substantially the same terms as for comparable transactions with unrelated parties. We offer a subsidy on annual fees and preferential interest rates on credit card balances to senior officers which is the same offer extended to all employees of CIBC.

(1) Key management personnel are defined as those persons having authority and responsibility for planning, directing and controlling the activities of CIBC directly or indirectly and comprise the members of the Board (referred to as directors), Executive Committee and certain named officers per the *Bank Act* (Canada) (collectively referred to as senior officers). Board members who are also Executive Committee members are included as senior officers.

Compensation of key management personnel

$ millions, for the year ended October 31	2022		2021	
	Directors	**Senior officers**	Directors	Senior officers
Short-term benefits (1)	**$ 3**	**$ 23**	$ 3	$ 18
Post-employment benefits	**–**	**3**	–	3
Share-based benefits (2)	**1**	**38**	1	30
Termination benefits (3)	**–**	**2**	–	3
Total compensation	**$ 4**	**$ 66**	$ 4	$ 54

(1) Comprises salaries, statutory and non-statutory benefits related to senior officers and fees related to directors recognized during the year. Also includes annual incentive plan payments related to senior officers on a cash basis.
(2) Comprises grant-date fair values of awards granted in the year.
(3) Comprises payments made in the period to key management personnel and former key management personnel. Prior period amounts were restated to conform to the current period presentation.

Refer to the following Notes for additional details on related-party transactions:

Share-based payment plans

See Note 17 for details of these plans offered to directors and senior officers.

Post-employment benefit plans

See Note 18 for related-party transactions between CIBC and the post-employment benefit plans.

Equity-accounted associates and joint ventures

See Note 25 for details of our investments in equity-accounted associates and joint ventures.

Note 25 | Investments in equity-accounted associates and joint ventures

Joint ventures

CIBC is a 50/50 joint venture partner with The Bank of New York Mellon in two joint ventures: CIBC Mellon Trust Company and CIBC Mellon Global Securities Services Company (collectively referred to as CIBC Mellon), which provide trust and asset servicing, both in Canada. As at October 31, 2022, the carrying value of our investments in the joint ventures was $426 million (2021: $592 million), which was included in Corporate and Other.

As at October 31, 2022, loans to the joint ventures totalled nil (2021: $5 million) and undrawn credit commitments totalled $130 million (2021: $122 million).

CIBC, The Bank of New York Mellon, and CIBC Mellon have, jointly and severally, provided indemnities to customers of the joint ventures in respect of securities lending transactions. See Note 21 for additional details.

There was no unrecognized share of losses of any joint ventures, either for the year or cumulatively. In 2022 and 2021, none of our joint ventures experienced any significant restrictions to transfer funds in the form of cash dividends or distributions, or repayment of loans or advances.

The following table provides the summarized aggregate financial information related to our proportionate interest in the equity-accounted joint ventures:

$ millions, for the year ended October 31	**2022**	2021
Net income	**$ 52**	$ 51
OCI	**(218)**	(44)
Total comprehensive income (loss)	**$ (166)**	$ 7

Associates

As at October 31, 2022, the total carrying value of our investments in associates was $ 206 million (2021: $66 million). These investments comprise: listed associates with a carrying value of $33 million (2021: nil) and a fair value of $ 33 million (2021: nil), based on quoted prices in an active market categorized as level 1 valuation inputs within the fair value hierarchy; and unlisted associates with a carrying value of $ 173 million (2021: $66 million) and a fair value of $ 197 million (2021: $89 million), based on non-observable valuation inputs categorized as level 3 valuation inputs within the fair value hierarchy. Of the total carrying value of our investments in associates, $ 18 million (2021: $9 million) was included in Canadian Personal and Business Banking, $33 million (2021: nil) in Canadian Commercial Banking and Wealth Management, $ 7 million (2021: nil) in U.S. Commercial Banking and Wealth Management, $109 million (2021: $37 million) in Capital Markets, and $ 39 million (2021: $20 million) in Corporate and Other.

As at October 31, 2022, loans to associates totalled nil (2021: $34 million) and undrawn credit commitments totalled $ 1 million (2021: $1 million). We also had commitments to invest up to nil (2021: nil) in our associates.

There was no unrecognized share of losses of any associate, either for the year or cumulatively. In 2022 and 2021, none of our associates experienced any significant restrictions to transfer funds in the form of cash dividends or distributions, or repayment of loans or advances.

The following table provides the summarized aggregate financial information related to our proportionate interest in equity-accounted associates :

$ millions, for the year ended October 31	**2022**	2021
Net income (loss)	**$ (5)**	$ 4
OCI	**–**	1
Total comprehensive income (loss)	**$ (5)**	$ 5

Note 26 | Significant subsidiaries

The following is a list of significant subsidiaries in which CIBC, either directly or indirectly, owns 100% of the voting shares, except where noted.

$ millions, as at October 31, 2022

Subsidiary name [1]	Address of head or principal office	Book value of shares owned by CIBC [2]
Canada and U.S.		
CIBC Asset Management Inc.	Toronto, Ontario, Canada	$ 444
CIBC BA Limited	Toronto, Ontario, Canada	–[3]
CIBC Bancorp USA Inc.	Chicago, Illinois, U.S.	10,595
Canadian Imperial Holdings Inc.	New York, New York, U.S.	
CIBC Inc.	New York, New York, U.S.	
CIBC World Markets Corp.	New York, New York, U.S.	
CIBC Bank USA	Chicago, Illinois, U.S.	
CIBC Private Wealth Group, LLC	Atlanta, Georgia, U.S.	
CIBC Delaware Trust Company	Wilmington, Delaware, U.S.	
CIBC National Trust Company	Atlanta, Georgia, U.S.	
CIBC Private Wealth Advisors, Inc.	Chicago, Illinois, U.S.	
CIBC Investor Services Inc.	Toronto, Ontario, Canada	25
CIBC Life Insurance Company Limited	Toronto, Ontario, Canada	23
CIBC Mortgages Inc.	Toronto, Ontario, Canada	230
CIBC Securities Inc.	Toronto, Ontario, Canada	2
CIBC Trust Corporation	Toronto, Ontario, Canada	591
CIBC World Markets Inc.	Toronto, Ontario, Canada	306
CIBC Wood Gundy Financial Services Inc.	Toronto, Ontario, Canada	
CIBC Wood Gundy Financial Services (Quebec) Inc.	Montreal, Quebec, Canada	
INTRIA Items Inc.	Mississauga, Ontario, Canada	100
International		
CIBC Australia Ltd	Sydney, New South Wales, Australia	19
CIBC Capital Markets (Europe) S.A.	Luxembourg	550
CIBC Cayman Holdings Limited	George Town, Grand Cayman, Cayman Islands	1,742
CIBC Cayman Bank Limited	George Town, Grand Cayman, Cayman Islands	
CIBC Cayman Capital Limited	George Town, Grand Cayman, Cayman Islands	
CIBC Cayman Reinsurance Limited	George Town, Grand Cayman, Cayman Islands	
CIBC Investments (Cayman) Limited	George Town, Grand Cayman, Cayman Islands	2,820
FirstCaribbean International Bank Limited (91.7%)	Warrens, St. Michael, Barbados	
FirstCaribbean International Bank and Trust Company (Cayman) Limited (91.7%)	George Town, Grand Cayman, Cayman Islands	
CIBC Fund Administration Services (Asia) Limited (91.7%)	Hong Kong, China	
FirstCaribbean International Bank (Bahamas) Limited (87.3%)	Nassau, The Bahamas	
Sentry Insurance Brokers Ltd. (87.3%)	Nassau, The Bahamas	
FirstCaribbean International Bank (Barbados) Limited (91.7%)	Warrens, St. Michael, Barbados	
FirstCaribbean International Bank (Cayman) Limited (91.7%)	George Town, Grand Cayman, Cayman Islands	
FirstCaribbean International Finance Corporation (Netherlands Antilles) N.V. (91.7%)	Curacao, Netherlands Antilles	
FirstCaribbean International Bank (Curacao) N.V. (91.7%)	Curacao, Netherlands Antilles	
FirstCaribbean International Bank (Jamaica) Limited (91.7%)	Kingston, Jamaica	
FirstCaribbean International Bank (Trinidad and Tobago) Limited (91.7%)	Maraval, Port of Spain, Trinidad & Tobago	
FirstCaribbean International Trust Company (Bahamas) Limited (91.7%)	Nassau, The Bahamas	
FirstCaribbean International Wealth Management Bank (Barbados) Limited (91.7%)	Warrens, St. Michael, Barbados	
CIBC World Markets (Japan) Inc.	Tokyo, Japan	48

(1) Each subsidiary is incorporated or organized under the laws of the state or country in which the principal office is situated, except for Canadian Imperial Holdings Inc., CIBC Inc., CIBC World Markets Corp., CIBC Private Wealth Group, LLC, CIBC Private Wealth Advisors, Inc., and CIBC Bancorp USA Inc., which were incorporated or organized under the laws of the State of Delaware, U.S.; CIBC National Trust Company, which was organized under the laws of the U.S.; and CIBC World Markets (Japan) Inc., which was incorporated in Barbados.
(2) The book value of shares of subsidiaries is shown at cost and may include non-voting common and preferred shares. These amounts are eliminated upon consolidation.
(3) The book value of shares owned by CIBC is less than $1 million.

In addition to the above, we consolidate certain SEs where we have control over the SE. See Note 6 for additional details.

Note 27 | Financial instruments – disclosures

Certain disclosures required by IFRS 7 are provided in the shaded sections of the "MD&A – Management of risk", as permitted by IFRS. The following table provides a cross referencing of those disclosures in the MD&A.

Description	Section
For each type of risk arising from financial instruments, an entity shall disclose: the exposure to risks and how they arise; objectives, policies and processes used for managing the risks; methods used to measure the risk; and description of collateral.	Risk overview Credit risk Market risk Liquidity risk Operational risk Reputation and legal risks Conduct risk Regulatory compliance risk
Credit risk: gross exposure to credit risk, credit quality and concentration of exposures.	Credit risk
Market risk: trading portfolios – Value-at-Risk (VaR); stressed VaR, incremental risk charge, non-trading portfolios – interest rate risk, foreign exchange risk and equity risk.	Market risk
Liquidity risk: liquid assets, maturity of financial assets and liabilities, and credit commitments.	Liquidity risk

We have provided quantitative disclosures related to credit risk consistent with Basel guidelines in the "Credit risk" section of the MD&A. The table below sets out the categories of the on-balance sheet exposures that are subject to the credit risk framework as set out in the CAR Guideline issued by OSFI under the different Basel approaches based on the carrying value of those exposures in our consolidated financial statements. The credit risk framework includes CCR exposures arising from OTC derivatives, repo-style transactions and trades cleared through CCPs, as well as securitization exposures. Items not subject to the credit risk framework include exposures that are subject to the market risk framework, amounts that are not subject to capital requirements or are subject to deduction from capital, and amounts relating to CIBC's insurance subsidiaries, which are excluded from the scope of regulatory consolidation.

$ millions, as at October 31		AIRB approach	Standardized approach	Other credit risk [1]	Total subject to credit risk	Not subject to credit risk	Total consolidated balance sheet
2022	**Cash and deposits with banks**	**$ 47,670**	**$ 13,724**	**$ 2,458**	**$ 63,852**	**$ 9**	**$ 63,861**
	Securities	**110,695**	**14,678**	**–**	**125,373**	**50,506**	**175,879**
	Cash collateral on securities borrowed	**15,320**	**6**	**–**	**15,326**	**–**	**15,326**
	Securities purchased under resale agreements	**69,213**	**–**	**–**	**69,213**	**–**	**69,213**
	Loans	**457,858**	**57,650**	**1,663**	**517,171**	**2,985**	**520,156**
	Allowance for credit losses	**(2,317)**	**(756)**	**–**	**(3,073)**	**–**	**(3,073)**
	Derivative instruments	**43,031**	**4**	**–**	**43,035**	**–**	**43,035**
	Customers' liability under acceptances	**11,247**	**327**	**–**	**11,574**	**–**	**11,574**
	Other assets	**28,951**	**423**	**7,834**	**37,208**	**10,418**	**47,626**
	Total credit exposures	**$ 781,668**	**$ 86,056**	**$ 11,955**	**$ 879,679**	**$ 63,918**	**$ 943,597**
2021	Total credit exposures	$ 688,150	$ 69,886	$ 11,275	$ 769,311	$ 68,372	$ 837,683

(1) Includes credit risk exposures arising from other assets that are subject to the credit risk framework but are not included in the standardized or AIRB frameworks, including other balance sheet assets which are risk-weighted at 100%, significant investments in the capital of non-financial institutions, and amounts below the thresholds for capital deduction that are risk-weighted at 250%.

Note 28 | Offsetting financial assets and liabilities

The following table identifies the amounts that have been offset on the consolidated balance sheet in accordance with the requirements of IAS 32 "Financial Instruments: Presentation", and also those amounts that are subject to enforceable netting agreements but do not qualify for offsetting on the consolidated balance sheet either because we do not have a currently enforceable legal right to set-off the recognized amounts, or because we do not intend to settle on a net basis or to realize the asset and settle the liability simultaneously.

		Amounts subject to enforceable netting agreements							
					Related amounts not set-off on the consolidated balance sheet				
$ millions, as at October 31		Gross amounts of recognized financial assets	Gross amounts offset on the consolidated balance sheet [1]	Net amounts	Financial instruments [2]	Collateral received [3]	Net amounts	Amounts not subject to enforceable netting agreements [4]	Net amounts presented on the consolidated balance sheet
2022	**Financial assets**								
	Derivatives	**$ 39,731**	**$ (4)**	**$ 39,727**	**$ (25,999)**	**$ (5,974)**	**$ 7,754**	**$ 3,308**	**$ 43,035**
	Cash collateral on securities borrowed	**15,326**	**–**	**15,326**	**–**	**(14,893)**	**433**	**–**	**15,326**
	Securities purchased under resale agreements	**72,489**	**(3,276)**	**69,213**	**–**	**(65,720)**	**3,493**	**–**	**69,213**
		$ 127,546	**$ (3,280)**	**$ 124,266**	**$ (25,999)**	**$ (86,587)**	**$ 11,680**	**$ 3,308**	**$ 127,574**
	Financial liabilities								
	Derivatives	**$ 47,369**	**$ (4)**	**$ 47,365**	**$ (25,999)**	**$ (12,910)**	**$ 8,456**	**$ 4,975**	**$ 52,340**
	Cash collateral on securities lent	**4,853**	**–**	**4,853**	**–**	**(4,730)**	**123**	**–**	**4,853**
	Obligations related to securities sold under repurchase agreements	**80,447**	**(3,276)**	**77,171**	**–**	**(73,605)**	**3,566**	**–**	**77,171**
		$ 132,669	**$ (3,280)**	**$ 129,389**	**$ (25,999)**	**$ (91,245)**	**$ 12,145**	**$ 4,975**	**$ 134,364**
2021	**Financial assets**								
	Derivatives	$ 53,285	$ (22,668)	$ 30,617	$ (16,585)	$ (6,375)	$ 7,657	$ 5,295	$ 35,912
	Cash collateral on securities borrowed	12,368	–	12,368	–	(12,121)	247	–	12,368
	Securities purchased under resale agreements	71,777	(4,205)	67,572	–	(66,423)	1,149	–	67,572
		$ 137,430	$ (26,873)	$ 110,557	$ (16,585)	$ (84,919)	$ 9,053	$ 5,295	$ 115,852
	Financial liabilities								
	Derivatives	$ 49,607	$ (22,668)	$ 26,939	$ (16,585)	$ (6,617)	$ 3,737	$ 5,162	$ 32,101
	Cash collateral on securities lent	2,463	–	2,463	–	(2,331)	132	–	2,463
	Obligations related to securities sold under repurchase agreements	76,085	(4,205)	71,880	–	(70,567)	1,313	–	71,880
		$ 128,155	$ (26,873)	$ 101,282	$ (16,585)	$ (79,515)	$ 5,182	$ 5,162	$ 106,444

(1) Comprises amounts related to financial instruments which qualify for offsetting. This amount excludes derivatives which are settled-to-market (STM) as STM derivatives are settled on a daily basis, resulting in derecognition, rather than offsetting, of the related amounts. Beginning October 2022, a majority of derivatives cleared through LCH was elected to be STM, consistent with derivatives cleared through CME.
(2) Comprises amounts subject to set-off under enforceable netting agreements, such as ISDA agreements, derivative exchange or clearing counterparty agreements, global master repurchase agreements, and global master securities lending agreements. Under such arrangements, all outstanding transactions governed by the relevant agreement can be offset if an event of default or other predetermined event occurs.
(3) Collateral received and pledged amounts are reflected at fair value, but have been limited to the net balance sheet exposure so as not to include any over-collateralization.
(4) Includes exchange-traded derivatives and derivatives which areSTM.

The offsetting and collateral arrangements discussed above and other credit risk mitigation strategies used by CIBC are further explained in the "Credit risk" section of the MD&A. Certain amounts of securities received as collateral are restricted from being sold or re-pledged.

Note 29 | Interest income and expense

The table below provides the consolidated interest income and expense by accounting categories.

$ millions, for the year ended October 31		Interest income	Interest expense
2022	**Measured at amortized cost** [1][2]	**$ 19,140**	**$ 8,778**
	Debt securities measured at FVOCI [1]	**855**	**n/a**
	Other [3]	**2,184**	**760**
	Total	**$ 22,179**	**$ 9,538**
2021	Measured at amortized cost [1][2]	$ 12,816	$ 2,830
	Debt securities measured at FVOCI [1]	349	n/a
	Other [3]	1,576	452
	Total	$ 14,741	$ 3,282

(1) Interest income for financial instruments that are measured at amortized cost and debt securities that are measured at FVOCI is calculated using the effective interest rate method.
(2) Includes interest income on sublease-related assets and interest expense on lease liabilities under IFRS 16.
(3) Includes interest income and expense and dividend income for financial instruments that are mandatorily measured and designated at FVTPL and equity securities designated at FVOCI.
n/a Not applicable.

Note 30 | Segmented and geographic information

CIBC has four SBUs – Canadian Personal and Business Banking, Canadian Commercial Banking and Wealth Management, U.S. Commercial Banking and Wealth Management, and Capital Markets. These SBUs are supported by Corporate and Other.

Canadian Personal and Business Banking provides personal and business clients across Canada with financial advice, services and solutions through banking centres, as well as mobile and online channels to help make their ambitions a reality.

Canadian Commercial Banking and Wealth Management provides high-touch, relationship-oriented banking and wealth management services to middle-market companies, entrepreneurs, high-net-worth individuals and families across Canada, as well as asset management services to institutional investors.

U.S. Commercial Banking and Wealth Management provides high-touch, relationship-oriented banking and wealth management services across the U.S., focused on middle-market and mid-corporate companies, entrepreneurs, high-net-worth individuals and families, as well as personal and small business banking services in four U.S. Midwestern markets.

Capital Markets provides integrated global markets products and services, investment banking advisory and execution, corporate banking solutions and top-ranked research to our clients around the world. It includes Direct Financial Services which focuses on expanding CIBC's digital capabilities to provide a cohesive set of direct banking, direct investing and innovative multi-currency payment solutions for CIBC's clients.

Corporate and Other includes the following functional groups – Technology, Infrastructure and Innovation, Risk Management, People, Culture and Brand, Finance and Enterprise Strategy, as well as other support groups. The expenses of these functional and support groups are generally allocated to the business lines within the SBUs. The majority of the functional and support costs of CIBC Bank USA are recognized directly in the U.S. Commercial Banking and Wealth Management SBU. Corporate and Other also includes the results of CIBC FirstCaribbean and other strategic investments, as well as other income statement and balance sheet items not directly attributable to the business lines.

Business unit allocations

Revenue, expenses, and other balance sheet resources related to certain activities are generally allocated to the lines of business within the SBUs.

Treasury activities impact the financial results of the SBUs. Each line of business within our SBUs is charged or credited with a market-based cost of funds on assets and liabilities, respectively, which impacts the revenue performance of the SBUs. This market-based cost of funds takes into account the cost of maintaining sufficient regulatory capital to support business requirements, including the cost of preferred shares. Once the interest and liquidity risks inherent in our client-driven assets and liabilities are transfer priced into Treasury, they are managed within CIBC's risk framework and limits. Capital is attributed to the SBUs based on the estimated amount of regulatory capital required to support their businesses, which is intended to consistently measure and align the costs with the underlying benefits and risks associated with SBU activities. Earnings on unattributed capital remain in Corporate and Other.

We review our transfer pricing methodologies on an ongoing basis to ensure they reflect changing market environments and industry practices.

We use a Product Owner/Customer Segment/Distributor Channel allocation management model to measure and report the results of operations of various lines of business within our SBUs. The model uses certain estimates and methodologies to process internal transfers between the impacted lines of business for sales, renewals and trailer commissions as well as certain attributable costs. Periodically, the sales, renewals and trailer commission rates paid to customer segments for certain products/services are revised and applied prospectively.

The non-interest expenses of the functional and support groups are generally allocated to the business lines within the SBUs based on appropriate criteria and methodologies. The basis of allocation is reviewed periodically to reflect changes in support to business lines. Other costs not directly attributable to business lines remain in Corporate and Other.

We recognize provision for credit losses on both impaired (stage 3) and performing (stages 1 and 2) loans in the respective SBUs.

Results by reporting segments and geographic areas

$ millions, for the year ended October 31		Canadian Personal and Business Banking	Canadian Commercial Banking and Wealth Management	U.S. Commercial Banking and Wealth Management	Capital Markets	Corporate and Other	CIBC Total	Canada [1]	U.S. [1]	Caribbean [1]	Other countries [1]
2022	**Net interest income** [2]	**$ 6,657**	**$ 1,672**	**$ 1,655**	**$ 2,814**	**$ (157)**	**$ 12,641**	**$ 9,870**	**$ 1,732**	**$ 873**	**$ 166**
	Non-interest income [3][4]	**2,252**	**3,582**	**802**	**2,187**	**369**	**9,192**	**6,467**	**1,551**	**718**	**456**
	Total revenue	**8,909**	**5,254**	**2,457**	**5,001**	**212**	**21,833**	**16,337**	**3,283**	**1,591**	**622**
	Provision for (reversal of) credit losses	**876**	**23**	**218**	**(62)**	**2**	**1,057**	**864**	**191**	**1**	**1**
	Amortization and impairment [5]	**226**	**2**	**113**	**6**	**700**	**1,047**	**824**	**136**	**67**	**20**
	Other non-interest expenses	**4,749**	**2,654**	**1,215**	**2,431**	**707**	**11,756**	**9,299**	**1,690**	**535**	**232**
	Income (loss) before income taxes	**3,058**	**2,575**	**911**	**2,626**	**(1,197)**	**7,973**	**5,350**	**1,266**	**988**	**369**
	Income taxes [2]	**809**	**680**	**151**	**718**	**(628)**	**1,730**	**1,195**	**320**	**116**	**99**
	Net income (loss)	**$ 2,249**	**$ 1,895**	**$ 760**	**$ 1,908**	**$ (569)**	**$ 6,243**	**$ 4,155**	**$ 946**	**$ 872**	**$ 270**
	Net income (loss) attributable to:										
	Non-controlling interests	**$ –**	**$ –**	**$ –**	**$ –**	**$ 23**	**$ 23**	**$ –**	**$ –**	**$ 23**	**$ –**
	Equity shareholders	**2,249**	**1,895**	**760**	**1,908**	**(592)**	**6,220**	**4,155**	**946**	**849**	**270**
	Average assets [6][7]	**$ 305,070**	**$ 84,693**	**$ 53,983**	**$ 284,259**	**$ 172,208**	**$ 900,213**	**$ 685,956**	**$ 147,723**	**$ 43,123**	**$ 23,411**
2021	Net interest income [2]	$ 5,954	$ 1,291	$ 1,449	$ 2,701	$ 64	$ 11,459	$ 9,159	$ 1,470	$ 672	$ 158
	Non-interest income [3][4]	2,196	3,379	745	1,819	417	8,556	6,230	1,365	622	339
	Total revenue	8,150	4,670	2,194	4,520	481	20,015	15,389	2,835	1,294	497
	Provision for (reversal of) credit losses	350	(39)	(75)	(100)	22	158	320	(165)	21	(18)
	Amortization and impairment [5]	213	27	109	11	657	1,017	812	128	60	17
	Other non-interest expenses	4,201	2,416	1,012	2,106	783	10,518	8,423	1,382	504	209
	Income (loss) before income taxes	3,386	2,266	1,148	2,503	(981)	8,322	5,834	1,490	709	289
	Income taxes [2]	892	601	222	646	(485)	1,876	1,320	381	101	74
	Net income (loss)	$ 2,494	$ 1,665	$ 926	$ 1,857	$ (496)	$ 6,446	$ 4,514	$ 1,109	$ 608	$ 215
	Net income (loss) attributable to:										
	Non-controlling interests	$ –	$ –	$ –	$ –	$ 17	$ 17	$ –	$ –	$ 17	$ –
	Equity shareholders	2,494	1,665	926	1,857	(513)	6,429	4,514	1,109	591	215
	Average assets [6][7]	$ 272,645	$ 70,070	$ 46,733	$ 255,063	$ 165,110	$ 809,621	$ 624,791	$ 130,302	$ 36,777	$ 17,751

(1) Net income and average assets are allocated based on the geographic location where they are recorded.
(2) Capital Markets net interest income and income taxes include taxable equivalent basis (TEB) adjustments of $211 million (2021 - $204 million) with an equivalent offset in Corporate and Other.
(3) The fee and commission income within non-interest income consists primarily of underwriting and advisory fees, deposit and payment fees, credit fees, card fees, investment management and custodial fees, mutual fund fees and commissions on securities transactions. Underwriting and advisory fees are earned primarily in Capital Markets with the remainder earned in Canadian Commercial Banking and Wealth Management. Deposit and payment fees are earned primarily in Canadian Personal and Business Banking, with the remainder earned mainly in Canadian Commercial Banking and Wealth Management, Capital Markets and Corporate and Other. Credit fees are earned primarily in Canadian Commercial Banking and Wealth Management, Capital Markets, and U.S. Commercial Banking and Wealth Management. Card fees are earned primarily in Canadian Personal and Business Banking, with the remainder earned mainly in Corporate and Other. Investment management and custodial fees are earned primarily in Canadian Commercial Banking and Wealth Management and U.S. Commercial Banking and Wealth Management, with the remainder earned mainly in Corporate and Other. Mutual fund fees are earned primarily in Canadian Commercial Banking and Wealth Management and U.S. Commercial Banking and Wealth Management. Commissions on securities transactions are earned primarily in Capital Markets and Canadian Commercial Banking and Wealth Management.
(4) Includes intersegment revenue, which represents internal sales commissions and revenue allocations under the Product Owner/Customer Segment/Distributor Channel allocation management model.
(5) Comprises amortization and impairment of buildings, right-of-use assets, furniture, equipment, leasehold improvements, software and other intangible assets, and goodwill.
(6) Assets are disclosed on an average basis as this measure is most relevant to a financial institution and is the measure reviewed by management.
(7) Average balances are calculated as a weighted average of daily closing balances.

The following table provides a breakdown of revenue from our reporting segments:

$ millions, for the year ended October 31	**2022**	2021
Canadian Personal and Business Banking	**$ 8,909**	$ 8,150
Canadian Commercial Banking and Wealth Management		
Commercial banking	**$ 2,278**	$ 1,827
Wealth management	**2,976**	2,843
	$ 5,254	$ 4,670
U.S. Commercial Banking and Wealth Management		
Commercial banking	**$ 1,613**	$ 1,444
Wealth management [1]	**844**	750
	$ 2,457	$ 2,194
Capital Markets [2]		
Global markets	**$ 2,322**	$ 2,076
Corporate and investment banking	**1,700**	1,616
Direct financial services	**979**	828
	$ 5,001	$ 4,520
Corporate and Other [2]		
International banking	**$ 778**	$ 687
Other	**(566)**	(206)
	$ 212	$ 481

(1) Includes revenue related to the U.S. Paycheck Protection Program.
(2) Capital Markets revenue includes a TEB adjustment of $211 million (2021: $204 million) with an equivalent offset in Corporate and Other.

Note 31 | Future accounting policy changes

IFRS 17 "Insurance Contracts" (IFRS 17)

IFRS 17 "Insurance Contracts" (IFRS 17), issued in May 2017, replaces IFRS 4 "Insurance Contracts". On June 25, 2020, the IASB issued amendments to IFRS 17 partly aimed at helping companies implement the standard. IFRS 17, incorporating the amendments, is effective for annual reporting periods beginning on or after January 1, 2023, which for us will be November 1, 2023. IFRS 17 provides comprehensive guidance on the recognition, measurement, presentation and disclosure of insurance contracts we issue and reinsurance contracts we hold. IFRS 17 is to be applied retrospectively unless impracticable. We expect changes in the timing of revenue recognition for our insurance contracts and changes to our insurance contract liabilities as a result of IFRS 17.

We continue to evaluate the effect of this standard on our consolidated financial statements.

Exhibit B.3(c): Management's discussion and analysis excerpted from pages 1-107 of CIBC's 2022 Annual Report

Management's discussion and analysis

Management's discussion and analysis (MD&A) is provided to enable readers to assess CIBC's financial condition and results of operations as at and for the year ended October 31, 2022, compared with prior years. The MD&A should be read in conjunction with the audited consolidated financial statements. Unless otherwise indicated, all financial information in this MD&A has been prepared in accordance with International Financial Reporting Standards (IFRS or GAAP) and all amounts are expressed in Canadian dollars. Certain disclosures in the MD&A have been shaded as they form an integral part of the consolidated financial statements. The MD&A is current as of November 30, 2022. Additional information relating to CIBC, including the Annual Information Form, is available on SEDAR at www.sedar.com and on the United States (U.S.) Securities and Exchange Commission's (SEC) website at www.sec.gov. No information on CIBC's website (www.cibc.com) should be considered incorporated herein by reference. A glossary of terms used in the MD&A and the audited consolidated financial statements is provided on pages 101 to 107 of this Annual Report.

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A NOTE ABOUT FORWARD-LOOKING STATEMENTS: From time to time, we make written or oral forward-looking statements within the meaning of certain securities laws, including in this Annual Report, in other filings with Canadian securities regulators or the SEC and in other communications. All such statements are made pursuant to the "safe harbour" provisions of, and are intended to be forward-looking statements under applicable Canadian and U.S. securities legislation, including the U.S. Private Securities Litigation Reform Act of 1995. These statements include, but are not limited to, statements made in the "Message from the President and Chief Executive Officer", "Overview – Performance against objectives", "Economic and market environment – Outlook for calendar year 2023", "Significant events", "Financial performance overview – Taxes", "Strategic business units overview – Canadian Personal and Business Banking", "Strategic business units overview – Canadian Commercial Banking and Wealth Management", "Strategic business units overview – U.S. Commercial Banking and Wealth Management", "Strategic business units overview – Capital Markets", "Financial condition – Capital management", "Financial condition – Off-balance sheet arrangements", "Management of risk – Risk overview", "Management of risk – Top and emerging risks", "Management of risk – Credit risk", "Management of risk – Market risk", "Management of risk – Liquidity risk", "Accounting and control matters – Critical accounting policies and estimates", "Accounting and control matters – Accounting developments", "Accounting and control matters – Other regulatory developments" and "Accounting and control matters – Controls and procedures" sections of this report and other statements about our operations, business lines, financial condition, risk management, priorities, targets and commitments (including with respect to net-zero emissions), ongoing objectives, strategies, the regulatory environment in which we operate and outlook for calendar year 2023 and subsequent periods. Forward-looking statements are typically identified by the words "believe", "expect", "anticipate", "intend", "estimate", "forecast", "target", "objective" and other similar expressions or future or conditional verbs such as "will", "should", "would" and "could". By their nature, these statements require us to make assumptions, including the economic assumptions set out in the "Economic and market environment – Outlook for calendar year 2023" section of this report, and are subject to inherent risks and uncertainties that may be general or specific. Given the continuing impact of high inflation, rising interest rates and the war in Ukraine on the global economy, financial markets, and our business, results of operations, reputation and financial condition, there is inherently more uncertainty associated with our assumptions as compared to prior periods. A variety of factors, many of which are beyond our control, affect our operations, performance and results, and could cause actual results to differ materially from the expectations expressed in any of our forward-looking statements. These factors include: inflationary pressures; global supply-chain disruptions; geopolitical risk, including from the war in Ukraine, the occurrence, continuance or intensification of public health emergencies, such as the COVID-19 pandemic, and any related government policies and actions; credit, market, liquidity, strategic, insurance, operational, reputation, conduct and legal, regulatory and environmental risk; currency value and interest rate fluctuations, including as a result of market and oil price volatility; the effectiveness and adequacy of our risk management and valuation models and processes; legislative or regulatory developments in the jurisdictions where we operate, including the Organisation for Economic Co-operation and Development Common Reporting Standard, and regulatory reforms in the United Kingdom and Europe, the Basel Committee on Banking Supervision's global standards for capital and liquidity reform, and those relating to bank recapitalization legislation and the payments system in Canada; amendments to, and interpretations of, risk-based capital guidelines and reporting instructions, and interest rate and liquidity regulatory guidance; the resolution of legal and regulatory proceedings and related matters; the effect of changes to accounting standards, rules and interpretations; changes in our estimates of reserves and allowances; changes in tax laws; changes to our credit ratings; political conditions and developments, including changes relating to economic or trade matters; the possible effect on our business of international conflicts, such as the war in Ukraine, and terrorism; natural disasters, disruptions to public infrastructure and other catastrophic events; reliance on third parties to provide components of our business infrastructure; potential disruptions to our information technology systems and services; increasing cyber security risks which may include theft or disclosure of assets, unauthorized access to sensitive information, or operational disruption; social media risk; losses incurred as a result of internal or external fraud; anti-money laundering; the accuracy and completeness of information provided to us concerning clients and counterparties; the failure of third parties to comply with their obligations to us and our affiliates or associates; intensifying competition from established competitors and new entrants in the financial services industry including through internet and mobile banking; technological change; global capital market activity; changes in monetary and economic policy; general business and economic conditions worldwide, as well as in Canada, the U.S. and other countries where we have operations, including increasing Canadian household debt levels and global credit risks; climate change and other environmental and social risks; our success in developing and introducing new products and services, expanding existing distribution channels, developing new distribution channels and realizing increased revenue from these channels; changes in client spending and saving habits; our ability to attract and retain key employees and executives; our ability to successfully execute our strategies and complete and integrate acquisitions and joint ventures; the risk that expected benefits of an acquisition, merger or divestiture will not be realized within the expected time frame or at all; and our ability to anticipate and manage the risks associated with these factors. This list is not exhaustive of the factors that may affect any of our forward-looking statements. These and other factors should be considered carefully and readers should not place undue reliance on our forward-looking statements. Any forward-looking statements contained in this report represent the views of management only as of the date hereof and are presented for the purpose of assisting our shareholders and financial analysts in understanding our financial position, objectives and priorities and anticipated financial performance as at and for the periods ended on the dates presented, and may not be appropriate for other purposes. We do not undertake to update any forward-looking statement that is contained in this report or in other communications except as required by law.

Overview

CIBC is a leading and well-diversified North American financial institution committed to creating enduring value for all our stakeholders – our clients, team, communities and shareholders. We are guided by our purpose – to help make your ambition a reality, and we are activating our resources to create positive change and contribute to a more secure, equitable and sustainable future.

Across our bank and our businesses – Personal and Business Banking, Commercial Banking and Wealth Management, and Capital Markets – our 50,000 employees bring our purpose to life every day for our 13 million personal banking, business, public sector and institutional clients in Canada, the U.S. and around the world.

Our strategy

In 2022, our modern, relationship-oriented bank continued to focus on delivering superior client experience and top-tier shareholder returns while maintaining our financial strength, risk discipline and advancing our purpose-driven culture. Going forward, the execution of our client-focused strategy will enable us to continue driving long-term growth, and to build on our momentum as we focus on three strategic priorities:

- Further growing our market share of high-growth, high-touch client segments;
- Elevating the CIBC banking experience for all our clients through investments in digitization and technology, and further increasing connectivity across our businesses; and
- Investing in our future differentiator businesses that are positioned to win in faster growing markets.

Performance against objectives

CIBC reports a scorecard of financial measures that we use to evaluate and report on our progress to external stakeholders. These measures can be categorized into four key areas – earnings growth, operating leverage, profitability, and balance sheet strength. We have set through the cycle targets for each of these measures, which we currently define as three to five years, assuming a normal business environment and credit cycle. Our ability to achieve these objectives may be adversely affected by extraordinary developments and disruptions.

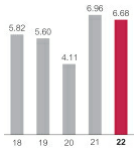
Throughout 2022, economic challenges driven by geopolitical and persistent supply-chain issues had an impact on our ability to achieve certain performance objectives.

Earnings growth

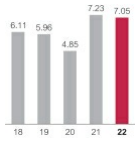
To assess our earnings growth, we monitor our earnings per share (EPS[1]). Our target of 5% to 10% growth reflects a simple average of annual adjusted[2] diluted EPS[1]. In 2022, against a backdrop of a challenging economic environment, our year-over-year reported and adjusted[2] diluted EPS[1] decreased by 4% and 2%, respectively. Our 3-year compound annual growth rates (CAGR)[3] for reported and adjusted [2] diluted EPS[1] were 6.1% and 5.8%, respectively, and our 5-year CAGR[3] for reported and adjusted [2] diluted EPS[1] were 3.5% and 4.9%, respectively.

Going forward, we have increased our target to deliver adjusted [2] diluted EPS[1] CAGR of 7% to 10% through the cycle.

Reported diluted EPS[1]
($)



Adjusted diluted EPS[1][2]
($)



Operating leverage

Operating leverage, defined as the difference between the year-over-year percentage change in revenue and year-over-year percentage change in non-interest expenses, is a measure of the relative growth rates of revenue and expenses. In 2022, both our reported and adjusted[2] operating leverage was (1.9)%, compared with 5.3% and 0.7%, respectively in 2021. Our 3-year simple average reported and adjusted[2] operating leverage was (0.2)% and (0.6)%, respectively, and our 5-year simple average reported and adjusted[2] operating leverage was 0.1% and 0.5%, respectively.

Going forward, we will continue to target positive adjusted [2] operating leverage through the cycle.

Reported operating leverage
(%)



Adjusted operating leverage[2]
(%)



(1) On April 7, 2022, CIBC shareholders approved atwo-for-one share split (Share Split) of CIBC's issued and outstanding common shares. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and per common share amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.
(2) Adjusted measures are non-GAAP measures. For additional information, see the"Non-GAAP measures" section.
(3) The 3-year compound annual growth rate (CAGR) is calculated from 2019 to 2022 and the 5-year CAGR is calculated from 2017 to 2022.

Profitability

We have three metrics to measure profitability, including two shareholder value targets:

1. Return on common shareholders' equity (ROE)

ROE, defined as the ratio of net income to average [2] common shareholders' equity, is a key measure of profitability. In 2022, our reported and adjusted[1] ROE were at 14.0% and 14.7%, respectively, compared with 16.1% and 16.7%, respectively, in 2021 and below our 2022 target of at least 15%. On a 3-year average basis, our reported and adjusted[1] ROE were 13.4% and 14.4%, respectively. On a 5-year average basis, our reported and adjusted[1] ROE were 14.2% and 15.2%, respectively.

Going forward, we have increased our adjusted [1] ROE target from at least 15% to at least 16% through the cycle by 2025.

2. Dividend payout ratio

Dividend payout ratio is defined as the ratio of common share dividends paid as a percentage of net income after preferred share dividends, premium on preferred share redemptions, and distributions on other equity instruments. Key criteria for considering dividend increases are our current level of payout relative to our target and our view on the sustainability of our current earnings level. In 2022, our reported and adjusted[1] dividend payout ratios were 48.8% and 46.3%, respectively, compared with 41.8% and 40.3%, respectively, in 2021. On a 3-year average basis, our reported and adjusted[1] dividend payout ratios were 53.8% and 48.9%, respectively. On a 5-year average basis, our reported and adjusted[1] dividend payout ratios were 51.3% and 47.4%, respectively.

Going forward, we will continue to target an adjusted [1] dividend payout ratio of 40% to 50% through the cycle.

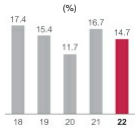
3. Total shareholder return (TSR)

TSR is the ultimate measure of shareholder value, and the output of delivering against the financial targets within our control. We have an objective to deliver a TSR that exceeds the industry average, which we have defined as the Standard & Poor's (S&P)/Toronto Stock Exchange (TSX) Composite Banks Index, over a rolling five-year period. For the three years ended October 31, 2022, our TSR was 28.5%, in line with the S&P/TSX Composite Banks Index of 29.0%. For the five years ended October 31, 2022, our TSR was 40.2% (2021: 91.9%), which was in line with the S&P/TSX Composite Banks Index return over the same period of 40.6%.

Reported return on common shareholders' equity



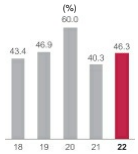
Adjusted return on common shareholders' equity[1]



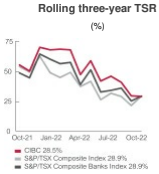
Reported dividend payout ratio[3]



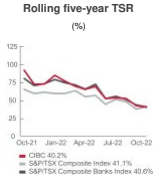
Adjusted dividend payout ratio[1][3]



Rolling three-year TSR



Rolling five-year TSR



Balance sheet strength

Maintaining a strong balance sheet is foundational to our long-term success. Our goal is to maintain strong capital and liquidity positions. We look to constantly balance our objectives of holding a prudent amount of excess capital for unexpected events and environmental uncertainties, investing in our core businesses, growing through acquisitions and returning capital to our shareholders.

1. Common Equity Tier 1 (CET1) ratio

We actively manage our capital to maintain a strong and efficient capital base while supporting our business growth and returning capital to our shareholders. For the year ended October 31, 2022, our CET1[4] ratio was 11.7%, compared with 12.4% in 2021, well above the current regulatory requirement set by OSFI.

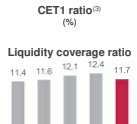
Going forward, we will continue to maintain a strong buffer to regulatory requirements.

2. Liquidity coverage ratio (LCR)

Our ability to meet our financial obligations is measured through the LCR ratio. It measures unencumbered high-quality liquid assets (HQLA) that can be converted into cash to meet liquidity needs in a 30-calendar-day liquidity stress scenario. The LCR standard requires that, absent a situation of financial stress, the value of the ratio be no lower than 100%.

For the quarter ended October 31, 2022, our three-month daily average LCR [4] was 129% compared to 127% for the same period last year.

CET1 ratio[3]



Liquidity coverage ratio



(1) Adjusted measures are non-GAAP measures. For additional information, see the"Non-GAAP measures" section.
(2) Average balances are calculated as a weighted average of daily closing balances.
(3) In response to the COVID-19 pandemic, effective March 2020, the Office of the Superintendent of Financial Institutions (OSFI) directed that all federally regulated financial institutions (FRFIs) halt share buybacks and dividend increases until further notice. The temporary measure was lifted effective November 4, 2021.
(4) CET1 is calculated pursuant to OSFI's Capital Adequacy Requirements (CAR) Guideline and LCR is calculated pursuant to OSFI's Liquidity Adequacy Requirements (LAR) Guideline, which are both based on Basel Committee on Banking Supervision (BCBS) standards.

Financial highlights

As at or for the year ended October 31		2022	2021	2020	2019	2018
Financial results ($ millions)						
Net interest income		**$ 12,641**	$ 11,459	$ 11,044	$ 10,551	$ 10,065
Non-interest income		**9,192**	8,556	7,697	8,060	7,769
Total revenue		**21,833**	20,015	18,741	18,611	17,834
Provision for credit losses		**1,057**	158	2,489	1,286	870
Non-interest expenses		**12,803**	11,535	11,362	10,856	10,258
Income before income taxes		**7,973**	8,322	4,890	6,469	6,706
Income taxes		**1,730**	1,876	1,098	1,348	1,422
Net income		**$ 6,243**	$ 6,446	$ 3,792	$ 5,121	$ 5,284
Net income attributable to non-controlling interests		**23**	17	2	25	17
Preferred shareholders and other equity instrument holders		**171**	158	122	111	89
Common shareholders		**6,049**	6,271	3,668	4,985	5,178
Net income attributable to equity shareholders		**$ 6,220**	$ 6,429	$ 3,790	$ 5,096	$ 5,267
Financial measures						
Reported efficiency ratio [1]		**58.6 %**	57.6 %	60.6 %	58.3 %	57.5 %
Reported operating leverage [1]		**(1.9)%**	5.3 %	(4.0)%	(1.5)%	2.4 %
Loan loss ratio [2]		**0.14 %**	0.16 %	0.26 %	0.29 %	0.26 %
Reported return on common shareholders' equity [1]		**14.0 %**	16.1 %	10.0 %	14.5 %	16.6 %
Net interest margin [1]		**1.40 %**	1.42 %	1.50 %	1.65 %	1.68 %
Net interest margin on average interest-earning assets [1][3]		**1.58 %**	1.59 %	1.69 %	1.84 %	1.88 %
Return on average assets [1][3]		**0.69 %**	0.80 %	0.52 %	0.80 %	0.88 %
Return on average interest-earning assets [1][3]		**0.78 %**	0.89 %	0.58 %	0.89 %	0.99 %
Reported effective tax rate		**21.7 %**	22.5 %	22.5 %	20.8 %	21.2 %
Common share information						
Per share ($) [4]	– basic earnings	**$ 6.70**	$ 6.98	$ 4.12	$ 5.61	$ 5.84
	– reported diluted earnings	**6.68**	6.96	4.11	5.60	5.82
	– dividends	**3.270**	2.920	2.910	2.800	2.660
	– book value [5]	**49.95**	45.83	42.03	39.94	36.92
Closing share price ($) [4]		**61.87**	75.09	49.69	56.16	56.84
Shares outstanding (thousands) [4]	– weighted-average basic	**903,312**	897,906	890,670	888,648	886,163
	– weighted-average diluted	**905,684**	900,365	892,042	890,915	889,254
	– end of period	**906,040**	901,656	894,171	890,683	885,653
Market capitalization ($ millions)		**$ 56,057**	$ 67,701	$ 44,431	$ 50,016	$ 50,341
Value measures						
Total shareholder return		**(13.56)%**	58.03 %	(5.90)%	4.19 %	4.70 %
Dividend yield (based on closing share price)		**5.3 %**	3.9 %	5.9 %	5.0 %	4.7 %
Reported dividend payout ratio [1]		**48.8 %**	41.8 %	70.7 %	49.9 %	45.5 %
Market value to book value ratio		**1.24**	1.64	1.18	1.41	1.54
Selected financial measures – adjusted [6]						
Adjusted efficiency ratio [7]		**56.4 %**	55.4 %	55.8 %	55.5 %	55.6 %
Adjusted operating leverage [7]		**(1.9)%**	0.7 %	(0.6)%	0.2 %	3.2 %
Adjusted return on common shareholders' equity		**14.7 %**	16.7 %	11.7 %	15.4 %	17.4 %
Adjusted effective tax rate		**21.9 %**	22.7 %	21.8 %	20.6 %	20.0 %
Adjusted diluted earnings per share ($) [4]		**7.05**	$ 7.23	$ 4.85	$ 5.96	$ 6.11
Adjusted dividend payout ratio		**46.3 %**	40.3 %	60.0 %	46.9 %	43.4 %
On- and off-balance sheet information ($ millions)						
Cash, deposits with banks and securities		**$ 239,740**	$ 218,398	$ 211,564	$ 138,669	$ 119,355
Loans and acceptances, net of allowance for credit losses		**528,657**	462,879	416,388	398,108	381,661
Total assets		**943,597**	837,683	769,551	651,604	597,099
Deposits		**697,572**	621,158	570,740	485,712	461,015
Common shareholders' equity [1]		**45,258**	41,323	37,579	35,569	32,693
Average assets [3]		**900,213**	809,621	735,492	639,716	598,441
Average interest-earning assets [1][3]		**799,224**	721,686	654,142	572,677	536,059
Average common shareholders' equity [1][3]		**43,354**	38,881	36,792	34,467	31,184
Assets under administration (AUA) [1][8][9]		**2,854,829**	2,963,221	2,364,005 [8]	2,423,240 [8]	2,303,962
Assets under management (AUM) [1][9]		**291,513**	316,834	261,037 [8]	249,596 [8]	225,379
Balance sheet quality (All-in basis) and liquidity measures [10]						
Risk-weighted assets (RWA) ($ millions)						
Total RWA		**$ 315,634**	$ 272,814	$ 254,871	$ 239,863	n/a
CET1 capital RWA		**n/a**	n/a	n/a	n/a	$ 216,144
Tier 1 capital RWA		**n/a**	n/a	n/a	n/a	216,303
Total capital RWA		**n/a**	n/a	n/a	n/a	216,462
Capital ratios						
CET1 ratio [11]		**11.7 %**	12.4 %	12.1 %	11.6 %	11.4 %
Tier 1 capital ratio [11]		**13.3 %**	14.1 %	13.6 %	12.9 %	12.9 %
Total capital ratio [11]		**15.3 %**	16.2 %	16.1 %	15.0 %	14.9 %
Leverage ratio		**4.4 %**	4.7 %	4.7 %	4.3 %	4.3 %
LCR [12]		**129 %**	127 %	145 %	125 %	128 %
Net stable funding ratio (NSFR)		**118 %**	118 %	n/a	n/a	n/a
Other information						
Full-time equivalent employees		**50,427**	45,282	43,853	45,157	44,220

(1) For additional information on the composition, see the "Glossary" section.
(2) The ratio is calculated as the provision for credit losses on impaired loans to average loans and acceptances, net of allowance for credit losses.
(3) Average balances are calculated as a weighted average of daily closing balances.
(4) On April 7, 2022, CIBC shareholders approved atwo-for-one share split (Share Split) of CIBC's issued and outstanding common shares. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and per common share amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.
(5) Common shareholders' equity divided by the number of common shares issued and outstanding at end of period.
(6) Adjusted measures are non-GAAP measures. Adjusted measures are calculated in the same manner as reported measures, except that financial information included in the calculation of adjusted measures is adjusted to exclude the impact of items of note. For additional information and a reconciliation of reported results to adjusted results, see the "Non-GAAP measures" section.
(7) Calculated on a taxable equivalent basis (TEB).
(8) Includes the full contract amount of AUA or custody under a 50/50 joint venture between CIBC and The Bank of New York Mellon of $2,258.1 billion as at October 31, 2022 (2021: $2,341.1 billion).
(9) AUM amounts are included in the amounts reported under AUA.
(10) RWA and our capital ratios are calculated pursuant to OSFI's CAR Guideline, the leverage ratio is calculated pursuant to OSFI's Leverage Requirements Guideline, and LCR and NSFR are calculated pursuant to OSFI's LAR Guideline, all of which are based on BCBS standards. For additional information, see the "Capital management" and "Liquidity risk" sections.
(11) Ratios reflect the expected credit loss (ECL) transitional arrangement announced by OSFI on March 27, 2020 in response to the onset of theCOVID-19 pandemic.
(12) Average for the three months ended October 31 for each respective year.
n/a Not applicable.

Economic and market environment

Year in review – 2022

Canada's economy registered healthy growth through the first half of 2022, but then joined the U.S. in showing signs of a deceleration in the second half of 2022 in the face of higher interest rates aimed at reducing inflation. Canada's growth benefitted from strength in consumer spending as public health constraints were further eased, funded by income gains from a strong jobs market and prior savings, while nominal exports increased as commodity prices peaked in the first half of the year. Rising interest rates in the latter half of the year caused mortgage demand to decelerate from the very high growth rates in place early in the year as higher interest rates slowed transactions volumes and eased house prices, while wider corporate bond spreads negatively impacted margins. Non-mortgage household credit demand picked up with greater discretionary services spending. Business loan demand remained healthy in both Canada and the U.S., reflecting inflation's impact on nominal measures of economic activity and wider spreads in the corporate bond market. Financial markets saw healthy merger and acquisition (M&A) volumes but a softer backdrop for CIBC wealth businesses and equity issuance, particularly in the latter half of the year, as market conditions weakened in the face of the economic shocks from the war in Ukraine, monetary tightening, and prospects for slower growth ahead. Deposit growth in Canada decelerated close to historical norms after being elevated earlier in the pandemic, with a shift towards term deposits as interest rates climbed.

Outlook for calendar year 2023

Global economic growth looks to be weak in 2023 in response to monetary policy tightening, as central banks attempt to ease demand and thereby bring inflation back to target levels. The eurozone and the United Kingdom (U.K.) are likely to see recessions as higher interest rates hit a region already vulnerable due to the spillover impacts from the war in Ukraine. China's economy could see some improvement after a year beset with lockdowns, but weakness in its property sector and softer export markets will see another year of below-average growth. The global slowdown will result in most commodity prices at lower average levels in 2023 than in 2022, although geopolitical risks to supply remain a risk for renewed upward pressure. Supply chains could see some improvements from the easing in demand pressures and a further lessening in COVID-19 severity as vaccinations and prior infections reduce the severity of new cases.

In Canada, the Bank of Canada is expected to increase overnight rates to 4.25% and maintain them at elevated levels through calendar 2023, thereby slowing demand to allow inflation to end next year near its 2% target. Weaker economic growth, improvements in supply chains, and softer average prices for food and energy will be key to getting inflation back to that target. Real gross domestic product (GDP) growth is expected to decelerate to 0.6% from an expected growth rate of roughly 3.5% in 2022, with a softening in housing and consumer spending in response to higher interest rates and a gradual climb in the unemployment rate to nearly 6% by the end of calendar 2023, up from an average of 5.3% in 2022. Long-term interest rates in both the U.S. and Canada could end 2023 at lower levels as the market starts to price-in a modest easing in central bank policy rates in 2024, and gains confidence that inflation will be under control.

In the U.S., the effort to contain inflation is likely to see the Federal Reserve take overnight rates just under 5% by early 2023, leaving them at that level through the remainder of the year. The resulting drag on housing and interest sensitive consumption is expected to hold real GDP growth to 0.7% in 2023, down from roughly 2% in 2022. That should see the unemployment rate climb from an average of 3.7% in 2022 to 4.2% by the end of 2023, allowing wage inflation to decelerate.

A softer pace for economic growth is likely to have broad implications across many of our strategic business units (SBUs). Rising unemployment and higher interest rates are likely to see a moderate decrease in business and household credit quality from very strong levels achieved in 2022. Deposit growth will be contained, as quantitative tightening will require bonds currently held by the central bank to be financed in the public markets, with higher rates resulting in greater growth in term deposits relative to short-term deposits. While the rising interest rate environment is starting to level off, we expect a modestly positive impact on the net interest margins for all our SBUs, but the high interest rates may have implications for credit quality in 2023 as economic growth slows in response to monetary tightening.

For Canadian Personal and Business Banking, mortgage growth is expected to further decelerate on softer home sales volumes and average house prices tied to the increase in interest rates. Although year-over-year non-mortgage consumer credit demand will be supported by additional volume gains in spending on services, lower inflation will feed into slower growth in dollar terms. Business lending is expected to register healthy growth, but is also likely to decelerate from the strong pace seen in 2022.

Volatility in asset markets has prompted investors to seek greater diversification in their portfolios, which could dampen the growth prospects of our Canadian and U.S. wealth management businesses in the near term.

Our Capital Markets business is expected to benefit from continued strength in merger and acquisition activity as corporate consolidations continue, while corporate bond issuance could pick up as longer term rates ease over the course of 2023. Loan demand growth in our Canadian and U.S. commercial banking businesses is expected to decelerate with softer economic growth and a slowing in multi-unit residential construction.

The economic outlook described above reflects numerous assumptions regarding the economic impact of recent and expected increases in interest rates, the easing of supply chain and inflationary pressures, the COVID-19 pandemic as well as the global economic risks emanating from the war in Ukraine. The measures taken by central banks to combat inflation could have a larger than expected impact on economic growth. Expectations for the pandemic reflect currently available information and are subject to change as new information on epidemiology and government health measures becomes available. The war in Ukraine could escalate into a broader conflict or result in a deeper cut in food and energy output that would add to pressures on inflation and global growth. As a result, actual experience may differ materially from expectations.

Our financial condition and our regulatory capital and liquidity positions continue to be strong, however, the downside risk to the economic outlook described above may result in us taking a more conservative approach to capital management. See the "Capital management" and "Liquidity risk" sections for further details. The impact of the increase in interest rates, the pandemic and the war in Ukraine on our risk environment are discussed in the "Top and emerging risks" section. Changes in the level of economic uncertainty continue to impact key accounting estimates and assumptions, particularly the estimation of ECLs. See "Accounting and control matters" and Note 5 to our consolidated financial statements for further details.

Significant events

Acquisition of Canadian Costco credit card portfolio

On March 4, 2022, we completed the acquisition of the Canadian Costco credit card portfolio, which had an outstanding balance of $2.9 billion, for cash consideration of $3.1 billion. We have also entered into a long-term agreement under which we have become the exclusive issuer of Costco-branded Mastercard credit cards in Canada. The combined transaction was accounted for as an asset acquisition and included in our Canadian Personal and Business Banking SBU. For additional information, see Note 3 to our consolidated financial statements.

Sale of certain banking assets in the Caribbean

On October 12, 2021, FirstCaribbean International Bank Limited (CIBC FirstCaribbean) announced that it had entered into agreements to sell its banking assets in St. Vincent, Grenada, Dominica, St. Kitts and Aruba. The sale of banking assets in Aruba was completed on February 25, 2022 upon the satisfaction of the closing conditions. The proposed sales of banking assets in St. Vincent and St. Kitts received regulatory approval in the third quarter of 2022 and are expected to close by the third quarter of 2023, subject to the satisfaction of closing conditions. The parties continue to pursue the regulatory approvals required to complete the transaction in Grenada, which may require amendments to the proposed transaction. The proposed transaction in Dominica will not be proceeding and operations in Dominica will cease on January 31, 2023. The impacts upon the closing of these transactions and closures are not expected to be material.

Financial performance overview

This section provides a review of our consolidated financial results for 2022. A review of our SBU results follows on pages 21 to 32. Refer to page 12 for a review of our financial performance for 2021.

2022 Financial results review

Reported net income for the year was $6,243 million, compared with $6,446 million in 2021.
Adjusted net income[1] for the year was $6,578 million, compared with $6,687 million in 2021.
Reported diluted EPS[2] for the year was $6.68, compared with $6.96 in 2021.
Adjusted diluted EPS[1][2] for the year was $7.05, compared with $7.23 in 2021.

2022

Net income was affected by the following items of note:

- $181 million ($133 million after-tax) in acquisition and integration-related costs as well as purchase accounting adjustments and provision for credit losses for performing loans[3] associated with the acquisition of the Canadian Costco credit card portfolio (Canadian Personal and Business Banking);
- $136 million ($100 million after-tax) increase in legal provisions (Corporate and Other);
- $98 million ($75 million after-tax) amortization of acquisition-related intangible assets ($14 million after-tax in Canadian Personal and Business Banking, $50 million after-tax in U.S. Commercial Banking and Wealth Management and $11 million after-tax in Corporate and Other); and
- $37 million ($27 million after-tax) charge related to the consolidation of our real estate portfolio (Corporate and Other).

The above items of note increased revenue by $16 million, increased provision for credit losses by $94 million, increased non-interest expenses by $374 million and decreased income taxes by $117 million. In aggregate, these items of note decreased net income by $335 million.

2021

Net income was affected by the following items of note:

- $125 million ($92 million after-tax) increase in legal provisions (Corporate and Other);
- $109 million ($80 million after-tax) charge related to the consolidation of our real estate portfolio (Corporate and Other);
- $79 million ($60 million after-tax) amortization of acquisition-related intangible assets ($50 million after-tax in U.S. Commercial Banking and Wealth Management and $10 million after-tax in Corporate and Other); and
- $12 million ($9 million after-tax) in acquisition and integration-related costs[3] associated with the acquisition of the Canadian Costco credit card portfolio (Canadian Personal and Business Banking).

The above items of note increased non-interest expenses by $325 million and decreased income taxes by $84 million. In aggregate, these items of note decreased net income by $241 million.

(1) Adjusted measures are non-GAAP measures. For additional information, see the"Non-GAAP measures" section.
(2) On April 7, 2022, CIBC shareholders approved atwo-for-one share split (Share Split) of CIBC's issued and outstanding common shares. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and per common share amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.
(3) Acquisition and integration costs are comprised of incremental costs incurred as part of planning for and executing the integration of the Canadian Costco credit card portfolio, including enabling franchising opportunities, the upgrade and conversion of systems and processes, project delivery, communication costs and client welcome bonuses. Purchase accounting adjustments include the accretion of the acquisition date fair value discount on the acquired Canadian Costco credit card receivables. Provision for credit losses for performing loans associated with the acquisition of the Canadian Costco credit card portfolio, included the stage 1 ECL allowance established immediately after the acquisition date and the impact of the migration of stage 1 accounts to stage 2 during the second quarter of 2022.

Net interest income and margin

$ millions, for the year ended October 31	**2022**	2021
Average interest-earning assets	**$ 799,224**	$ 721,686
Net interest income [1]	**12,641**	11,459
Net interest margin on average interest-earning assets	**1.58 %**	1.59 %

(1) Trading activities is based on the risk definition of trading for regulatory capital and trading market risk management purposes. Positions in a trading book are considered trading provided the book and positions continue to meet OSFI-defined trading book criteria set out in OSFI's CAR Guideline. Trading activities and related risk management strategies can periodically shift trading income between net interest income and non-interest income. Therefore, we view total trading income as the most appropriate measure of trading performance.

Net interest income was up $1,182 million or 10% from 2021, primarily due to volume growth across our businesses, partially offset by lower trading income.
Net interest margin on average interest-earning assets was comparable with 2021, primarily due to lower asset margins offset by higher deposit margins.
Additional information on net interest income and margin is provided in the "Supplementary annual financial information" section and in the "Strategic business units overview" section.

Non-interest income[1]

$ millions, for the year ended October 31	2022	2021
Underwriting and advisory fees	$ 557	$ 713
Deposit and payment fees	880	797
Credit fees	1,286	1,152
Card fees	437	460
Investment management and custodial fees [2][3]	1,760	1,621
Mutual fund fees [3]	1,776	1,772
Insurance fees, net of claims	351	358
Commissions on securities transactions	378	426
Gains (losses) from financial instruments measured/designated at fair value through profit or loss (FVTPL), net [4]	1,172	607
Gains (losses) from debt securities measured at fair value through other comprehensive income (FVOCI) and amortized cost, net	35	90
Foreign exchange other than trading	242	276
Income from equity-accounted associates and joint ventures [2]	47	55
Other	271	229
	$ 9,192	$ 8,556

(1) Trading activities is based on the risk definition of trading for regulatory capital and trading market risk management purposes. Positions in a trading book are considered trading provided the book and positions continue to meet OSFI-defined trading book criteria set out in OSFI's CAR Guideline. Trading activities and related risk management strategies can periodically shift trading income between net interest income and non-interest income. Therefore, we view total trading income as the most appropriate measure of trading performance.
(2) Custodial fees directly recognized by CIBC are included in Investment management and custodial fees. Our proportionate share of the custodial fees from the joint ventures which CIBC has with The Bank of New York Mellon are included within Income from equity-accounted associates and joint ventures.
(3) Investment management fees and mutual fund fees are driven by various factors, including the amount of AUM. Investment management fees in our asset management and private wealth management businesses are generally driven by the amount of AUM, while investment management fees in our retail brokerage business are driven by a combination of the amount of AUA and, to a lesser extent, other factors not directly related to the amount of AUA (e.g., flat fees on a per account basis).
(4) Includes $44 million of gains (2021: $87 million of losses) relating to non-trading financial instruments measured/designated at FVTPL.

Non-interest income was up $636 million or 7% from 2021.

Underwriting and advisory fees were down $156 million or 22%, primarily due to lower equity and debt issuance revenue.

Deposit and payment fees were up $83 million or 10%, primarily due to higher fees in Canadian Personal and Business Banking.

Credit fees were up $134 million or 12%, primarily due to growth in commercial borrowing.

Investment management and custodial fees were up $139 million or 9%, primarily due to higher average AUA and AUM in our wealth management businesses.

Gains (losses) from financial instruments measured/designated at FVTPL, net were up $565 million or 93%, primarily due to higher trading revenue.

Gains (losses) from debt securities measured at FVOCI and amortized cost, net were down $55 million or 61%, primarily due to lower net realized gains from dispositions of FVOCI debt securities.

Trading revenue (TEB)[1][2]

$ millions, for the year ended October 31	2022	2021
Trading revenue consists of:		
Net interest income [1]	$ 875	$ 1,020
Non-interest income [3]	1,128	694
	$ 2,003	$ 1,714
Trading revenue by product line:		
Interest rates	$ 335	$ 328
Foreign exchange	899	651
Equities [1]	611	548
Commodities	144	158
Other	14	29
	$ 2,003	$ 1,714

(1) Includes a TEB adjustment of $211 million (2021: $204 million) reported within Capital Markets. See "Strategic business units overview" section and Note 30 to our consolidated financial statements for further details.
(2) Trading activities is based on the risk definition of trading for regulatory capital and trading market risk management purposes. Positions in a trading book are considered trading provided the book and positions continue to meet OSFI-defined trading book criteria set out in OSFI's CAR Guideline.
(3) Reported as part of the Gains (losses) from financial instruments measured/designated at FVTPL in the consolidated statement of income, which consist of a gain of $1,128 million (2021: $694 million) related to trading financial instruments measured/designated at FVTPL and a gain of $44 million (2021: loss of $87 million) relating to non-trading financial instruments measured/designated at FVTPL.

Trading revenue was up $289 million or 17% from 2021, primarily due to higher foreign exchange and equity trading revenue.

Trading revenue comprises net interest income and non-interest income. Net interest income arises from interest and dividends relating to financial assets and liabilities associated with trading activities, other than derivatives, net of interest expense and interest income associated with funding these assets and liabilities. Non-interest income includes realized and unrealized gains and losses on securities mandatorily measured at FVTPL and income relating to changes in fair value of derivative financial instruments. Trading revenue excludes underwriting fees and commissions on securities transactions, which are shown separately in the consolidated statement of income. Trading activities and related risk management strategies can periodically shift income between net interest income and non-interest income. Therefore, we view total trading revenue as the most appropriate measure of trading performance.

Provision for credit losses

$ millions, for the year ended October 31	2022	2021
Provision for (reversal of) credit losses – impaired		
Canadian Personal and Business Banking	**$ 534**	$ 484
Canadian Commercial Banking and Wealth Management	**22**	6
U.S. Commercial Banking and Wealth Management	**113**	104
Capital Markets	**(31)**	32
Corporate and Other	**59**	76
	697	702
Provision for (reversal of) credit losses – performing		
Canadian Personal and Business Banking	**342**	(134)
Canadian Commercial Banking and Wealth Management	**1**	(45)
U.S. Commercial Banking and Wealth Management	**105**	(179)
Capital Markets	**(31)**	(132)
Corporate and Other	**(57)**	(54)
	360	(544)
	$ 1,057	$ 158

Provision for credit losses was up $899 million or 569% from 2021, as provisions for performing loans in the current year reflected an unfavourable change in our economic outlook, while the prior year benefitted from a favourable change in our economic outlook driven by the recovery from the COVID-19 pandemic.

For further details regarding provision for credit losses in our SBUs, refer to the "Strategic business units overview" section.

Non-interest expenses

$ millions, for the year ended October 31	2022	2021
Employee compensation and benefits		
Salaries [1]	**$ 3,770**	$ 3,213
Performance-based compensation	**2,460**	2,329
Benefits	**927**	908
	7,157	6,450
Occupancy costs [2]	**853**	916
Computer, software and office equipment	**2,297**	2,030
Communications	**352**	318
Advertising and business development	**334**	237
Professional fees	**313**	277
Business and capital taxes	**123**	111
Other	**1,374**	1,196
	$ 12,803	$ 11,535

(1) Includes termination benefits.
(2) Includes charges of $37 million (2021: $109 million), related to the consolidation of our real estate portfolio, shown as items of note.

Non-interest expenses were up $1,268 million or 11% from 2021.

Employee compensation and benefits were up $707 million or 11%, primarily due to higher employee-related and performance-based compensation.

Computer, software and office equipment were up $267 million or 13%, primarily due to higher spending on strategic initiatives.

Advertising and business development were up $97 million or 41%, primarily due to higher spending on strategic initiatives and higher travel and business development spending driven by the easing of COVID-19 travel restrictions.

Other expenses were up $178 million or 15%, as the current year included costs associated with the acquisition of the Canadian Costco credit card portfolio and an increase in legal provisions, both shown as items of note.

Taxes

$ millions, for the year ended October 31	2022	2021
Income taxes	$ 1,730	$ 1,876
Indirect taxes [1]		
Goods and Services Tax (GST), Harmonized Sales Tax (HST) and sales taxes	471	403
Payroll taxes	368	306
Capital taxes	84	77
Property and business taxes	73	70
Total indirect taxes	996	856
Total taxes	$ 2,726	$ 2,732
Reported effective tax rate	21.7 %	22.5 %
Total taxes as a percentage of net income before deduction of total taxes	30.4 %	29.8 %

(1) Certain amounts are based on a paid or payable basis and do not factor in capitalization and subsequent amortization.

Total income and indirect taxes were down $6 million from 2021.

Income tax expense was $1,730 million, down $146 million from 2021. This was due to both lower income and also an increase in the relative proportion of income subject to lower rates of income tax.

Indirect taxes were up $140 million from 2021, due to increases in both sales taxes and payroll taxes. Sales taxes increased by $68 million from 2021, primarily due to increased non-employee related non-interest expenses. Payroll taxes increased by $62 million from 2021 primarily due to increases in statutory pension, health care and unemployment insurance contributions driven by higher employee-related compensation. Indirect taxes are included in non-interest expenses.

In prior years, the Canada Revenue Agency (CRA) issued reassessments disallowing the deduction of Enron settlement payments and related legal expenses (the Enron expenses). In January 2019, CIBC entered into a settlement agreement with the CRA with respect to the portion of the Enron expenses deductible in Canada. The portion of the Enron expenses deductible in the U.S. has not yet been agreed to by the Internal Revenue Service. It is possible that adjustments may be required to the amount of tax benefits recognized in the U.S.

The CRA has reassessed CIBC approximately $1,602 million of additional income tax related to the denial of the tax deductibility of certain 2011 to 2017 Canadian corporate dividends, on the basis that certain dividends received were part of a "dividend rental arrangement", and similar matters. This includes approximately $182 million of additional income tax for the 2017 taxation year that was reassessed by the CRA in May 2022. The dividends that were subject to the reassessments are similar to those prospectively addressed by the rules in the 2015 and 2018 Canadian federal budgets. It is possible that subsequent years may be reassessed for similar matters. In August 2021, CIBC filed a Notice of Appeal with the Tax Court of Canada and the matter is now in litigation. CIBC is confident that its tax filing positions were appropriate and intends to defend itself vigorously. Accordingly, no amounts have been accrued in the consolidated financial statements.

In November 2021, the Tax Court of Canada ruled against CIBC on its 2007 foreign exchange capital loss reassessment (Decision). CIBC disagrees with the Decision and filed its Appeal in November 2021. The Appeal is scheduled to be heard in December 2022. CIBC remains confident that its tax filing position was appropriate. Accordingly, no amounts have been accrued in the consolidated financial statements. The exposure of additional tax and interest related to this and similar matters is approximately $300 million in addition to the potential inability to utilize approximately $600 million in unrecognized capital tax loss carryforwards.

Following the announcement of budget proposals in April 2022, the Canadian Federal government released draft legislation in August 2022, and subsequently introduced other draft legislation which went through first and second readings in Parliament in November 2022. These proposals included the introduction of a one-time 15% Canada Recovery Dividend tax (CRD) on banks and life insurer groups, based on the average of 2020 and 2021 taxable income in excess of $1.0 billion. Once substantively enacted, the CRD would become payable over a five-year period in equal increments. The draft legislation also includes a prospective 1.5% increase in the tax rate applied to taxable income in excess of $100 million earned by banks and life insurers. We will account for these measures in future periods once they become substantively enacted, which is generally interpreted to occur at the point of a third reading in a Canadian Parliament held by a minority government. Based on the draft legislation, a charge to income tax expense of approximately $550 million would be recognized for the full amount of the CRD obligation upon its substantive enactment.

Foreign exchange

The estimated impact of U.S. dollar translation on key lines of our consolidated statement of income, as a result of changes in average exchange rates, is as follows:

$ millions, for the year ended October 31	2022 vs. 2021	2021 vs. 2020
Estimated increase (decrease) in:		
Total revenue	$ 143	$ (307)
Provision for credit losses	6	13
Non-interest expenses	65	(141)
Income taxes	10	(26)
Net income	62	(153)
Impact on EPS [1]:		
Basic	$ 0.07	$ (0.17)
Diluted	0.07	(0.17)
Average USD appreciation (depreciation) relative to CAD	2.9 %	(6.6)%

(1) On April 7, 2022, CIBC shareholders approved a two-for-one share split (Share Split) of CIBC's issued and outstanding common shares. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and per common share amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.

Fourth quarter review

$ millions, except per share amounts, for the three months ended	2022				2021			
	Oct. 31	**Jul. 31**	**Apr. 30**	**Jan. 31**	Oct. 31	Jul. 31	Apr. 30	Jan. 31
Revenue								
Canadian Personal and Business Banking	**$ 2,262**	**$ 2,321**	**$ 2,143**	**$ 2,183**	$ 2,128	$ 2,056	$ 1,941	$ 2,025
Canadian Commercial Banking and Wealth Management	**1,316**	**1,338**	**1,303**	**1,297**	1,240	1,207	1,135	1,088
U.S. Commercial Banking and Wealth Management	**653**	**604**	**591**	**609**	562	539	532	561
Capital Markets [1]	**1,182**	**1,199**	**1,316**	**1,304**	1,012	1,140	1,194	1,174
Corporate and Other [1]	**(25)**	**109**	**23**	**105**	122	114	130	115
Total revenue	**$ 5,388**	**$ 5,571**	**$ 5,376**	**$ 5,498**	$ 5,064	$ 5,056	$ 4,932	$ 4,963
Net interest income	**$ 3,185**	**$ 3,236**	**$ 3,088**	**$ 3,132**	$ 2,980	$ 2,893	$ 2,747	$ 2,839
Non-interest income	**2,203**	**2,335**	**2,288**	**2,366**	2,084	2,163	2,185	2,124
Total revenue	**5,388**	**5,571**	**5,376**	**5,498**	5,064	5,056	4,932	4,963
Provision for (reversal of) credit losses	**436**	**243**	**303**	**75**	78	(99)	32	147
Non-interest expenses	**3,483**	**3,183**	**3,114**	**3,023**	3,135	2,918	2,756	2,726
Income before income taxes	**1,469**	**2,145**	**1,959**	**2,400**	1,851	2,237	2,144	2,090
Income taxes	**284**	**479**	**436**	**531**	411	507	493	465
Net income	**$ 1,185**	**$ 1,666**	**$ 1,523**	**$ 1,869**	$ 1,440	$ 1,730	$ 1,651	$ 1,625
Net income attributable to:								
Non-controlling interests	**$ 7**	**$ 6**	**$ 5**	**$ 5**	$ 4	$ 5	$ 4	$ 4
Equity shareholders	**1,178**	**1,660**	**1,518**	**1,864**	1,436	1,725	1,647	1,621
EPS – basic [2]	**$ 1.26**	**$ 1.79**	**$ 1.63**	**$ 2.02**	$ 1.54	$ 1.88	$ 1.78	$ 1.78
– diluted [2]	**1.26**	**1.78**	**1.62**	**2.01**	1.54	1.88	1.78	1.78

(1) Capital Markets revenue and income taxes are reported on a TEB with an equivalent offset in the revenue and income taxes of Corporate and Other.
(2) On April 7, 2022, CIBC shareholders approved atwo-for-one share split (Share Split) of CIBC's issued and outstanding common shares. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and per common share amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.

Compared with Q4/21

Net income for the quarter was $1,185 million, down $255 million or 18% from the fourth quarter of 2021.

Net interest income was up $205 million, primarily due to volume growth across our businesses, partially offset by lower trading income.

Non-interest income was up $119 million or 6%, primarily due to higher trading income, partially offset by lower treasury and market-related fee revenue.

Provision for credit losses was up $358 million or 459% from the same quarter last year. The current quarter included a provision for credit losses on performing loans of $217 million, while the same quarter last year included a provision reversal of $34 million. Provision for credit losses on impaired loans was up $107 million, mainly attributable to Canadian Personal and Business Banking, and U.S. Commercial Banking and Wealth Management.

Non-interest expenses were up $348 million or 11%, primarily due to higher employee-related compensation, higher spending on strategic initiatives, including the Canadian Costco credit card portfolio, and an increase in legal provisions, shown as an item of note.

Income tax expense was down $127 million or 31%, primarily due to lower income.

Compared with Q3/22

Net income for the quarter was down $481 million or 29% from the prior quarter.

Net interest income was down $51 million or 2%, primarily due to lower product spreads and lower trading income, partially offset by volume growth across our businesses.

Non-interest income was down $132 million or 6%, primarily due to lower treasury and market-related fee revenue.

Provision for credit losses was up $193 million or 79% from the prior quarter. Provision for credit losses on performing loans was up $130 million, primarily due to an unfavourable change in our economic outlook. Provision for credit losses on impaired loans was up $63 million, as a result of increases across all of our SBUs.

Non-interest expenses were up $300 million or 9%, primarily due to employee-related and performance-based compensation, an increase in legal provisions and the charge related to the consolidation of our real estate portfolio, both shown as items of note.

Income tax expense was down $195 million or 41%, primarily due to lower income.

Quarterly trend analysis

Our quarterly results are modestly affected by seasonal factors. The second quarter has fewer days as compared with the other quarters, generally leading to lower earnings. The summer months (July – third quarter and August – fourth quarter) typically experience lower levels of market activity, which affects our brokerage, investment management, and Capital Markets activities.

Revenue

Revenue in our lending and deposit-taking businesses is generally driven by volume growth, fees related to client transaction activity and the interest rate environment. Our wealth management businesses are driven by net sales activity impacting AUA and AUM, the level of client investment activity and market conditions. Capital Markets revenue is also influenced, to a large extent, by market conditions affecting client trading and underwriting activity.

Canadian Personal and Business Banking has benefitted from loan and deposit growth throughout the period, as well as increased client transaction activity as the economy recovered from the early stages of the COVID-19 pandemic. Earlier periods were negatively impacted by the low interest rate environment, which has started to improve with interest rate increases in recent quarters.

Canadian Commercial Banking and Wealth Management revenue has benefitted from commercial banking volume growth as well as from strong markets. In Commercial Banking, loan and deposit revenue growth was driven by strong client demand and more recently from an increase in interest rates. In Wealth Management, AUA and AUM growth has been challenged over the past few quarters as a result of volatile markets caused by global concerns surrounding inflation, supply chain issues and geopolitical uncertainty.

U.S. Commercial Banking and Wealth Management has benefitted from organic client acquisitions that are driving increased loans, deposits, AUM and fee income. Loan growth has also accelerated due to the economic recovery in 2021 and into the first half of 2022, although recently

decelerated due to softer economic growth, rising interest rates and inflation. Wealth Management AUA and AUM growth has been hindered over the past few quarters by market depreciation, partially offset by strong sales momentum.

Capital Markets had increased revenue from underwriting and advisory activities in the second and third quarters of 2021, and lower trading revenue in the fourth quarter of 2021. The first and second quarters of 2022 had higher trading revenue.

Corporate and Other included the impact of an increase in funding costs in the first and second quarters of 2021 from the excess liquidity that built up during the early stages of the pandemic, as well as an increase in funding costs starting in the second quarter of 2022 from an increase in credit spreads. In 2021, the interest rate environment and narrower margins negatively impacted revenue, while the gradual increase in interest rates in 2022 have resulted in higher margins in International banking.

Provision for credit losses

Provision for credit losses is dependent upon the credit cycle in general, on the credit performance of the loan portfolios, and changes in our economic outlook. While the uncertainty relating to the COVID-19 pandemic has reduced significantly, we still operate in an uncertain macroeconomic environment due to concerns related to rising interest rates, high levels of inflation and supply chain disruptions related to geopolitical events, slower economic growth and the continued measures imposed in some countries to combat the spread of COVID-19. There is considerable judgment involved in the estimation of credit losses in the current environment.

All four quarters of 2021 and the first quarter of 2022 reflect a moderate improvement in economic conditions as well as our economic outlook. With a faster than expected pace of interest rate increases, along with rising inflation, continued supply chain disruption and the increase in global geopolitical concerns, our provision for credit losses on performing loans increased in the second, third and fourth quarters of 2022.

In Canadian Personal and Business Banking, lower insolvencies and write-offs in credit cards relative to pre-pandemic levels impacted the first, third and fourth quarters of 2021, and the first and second quarters of 2022. The decrease in insolvencies was in line with the national Canadian trend. The low level of write-offs in the first quarter of 2021 were a result of the assistance offered to clients from our payment deferral programs and government support, as well as lower client spending. In contrast, the second quarter of 2021 included higher write-offs in credit cards, mainly attributable to a relatively small segment of client balances that were previously in the payment deferral programs that continued to underperform and eventually were written off after exiting the programs. Lower write-offs in the third and fourth quarters of 2021 and the first and second quarters of 2022 benefitted from the household savings that built up during the pandemic. Commencing in the second quarter of 2022, our loan losses included write-offs from the seasoning of the acquired Canadian Costco credit card portfolio.

In Canadian Commercial Banking and Wealth Management, impaired loan losses continue to remain at a relatively low level.

In U.S. Commercial Banking and Wealth Management, the first quarter of 2021, and the first, second and fourth quarters of 2022 included higher provisions on impaired loans.

In Capital Markets, the first quarter of 2021 included higher provisions on impaired loans in the utilities sector.

In Corporate and Other, the third quarter of 2021 included higher provisions on impaired loans in CIBC FirstCaribbean.

Non-interest expenses

Non-interest expenses have fluctuated over the period largely due to changes in employee compensation expenses, investments in strategic initiatives and movement in foreign exchange rates. The third and fourth quarters of 2021, and the second and fourth quarters of 2022 included increases in legal provisions in Corporate and Other, all shown as items of note. The fourth quarter of 2021 and the fourth quarter of 2022 included charges related to the consolidation of our real estate portfolio as a result of our move to our new global headquarters.

Income taxes

Income taxes vary with changes in income subject to tax, and the jurisdictions in which the income is earned. Taxes can also be affected by the impact of significant items and the level of tax-exempt income.

Review of 2021 financial performance

$ millions, for the year ended October 31		Canadian Personal and Business Banking	Canadian Commercial Banking and Wealth Management	U.S. Commercial Banking and Wealth Management	Capital Markets [1]	Corporate and Other [1]	CIBC Total
2021	Net interest income	$ 5,954	$ 1,291	$ 1,449	$ 2,701	$ 64	$ 11,459
	Non-interest income	2,196	3,379	745	1,819	417	8,556
	Total revenue	8,150	4,670	2,194	4,520	481	20,015
	Provision for (reversal of) credit losses	350	(39)	(75)	(100)	22	158
	Non-interest expenses	4,414	2,443	1,121	2,117	1,440	11,535
	Income (loss) before income taxes	3,386	2,266	1,148	2,503	(981)	8,322
	Income taxes	892	601	222	646	(485)	1,876
	Net income (loss)	$ 2,494	$ 1,665	$ 926	$ 1,857	$ (496)	$ 6,446
	Net income (loss) attributable to:						
	Non-controlling interests	$ –	$ –	$ –	$ –	$ 17	$ 17
	Equity shareholders	2,494	1,665	926	1,857	(513)	6,429
2020	Net interest income	$ 5,849	$ 1,248	$ 1,422	$ 2,354	$ 171	$ 11,044
	Non-interest income	2,073	2,873	621	1,699	431	7,697
	Total revenue	7,922	4,121	2,043	4,053	602	18,741
	Provision for credit losses	1,189	303	487	311	199	2,489
	Non-interest expenses	4,308	2,179	1,126	1,929	1,820	11,362
	Income (loss) before income taxes	2,425	1,639	430	1,813	(1,417)	4,890
	Income taxes	640	437	55	505	(539)	1,098
	Net income (loss)	$ 1,785	$ 1,202	$ 375	$ 1,308	$ (878)	$ 3,792
	Net income (loss) attributable to:						
	Non-controlling interests	$ –	$ –	$ –	$ –	$ 2	$ 2
	Equity shareholders	1,785	1,202	375	1,308	(880)	3,790

(1) Capital Markets revenue and income taxes are reported on a TEB with an equivalent offset in the revenue and income taxes of Corporate and Other.

The following discussion provides a comparison of our results of operations for the years ended October 31, 2021 and 2020.

Overview

Net income for 2021 was $6,446 million, compared with $3,792 million in 2020. The increase in net income of $2,654 million was due to lower provision for credit losses and higher revenue, partially offset by higher non-interest expenses.

Consolidated CIBC

Net interest income

Net interest income was up $415 million or 4% from 2020, primarily due to volume growth across our businesses and higher trading revenue, partially offset by lower product spreads as a result of changes in the interest rate environment and the impact of foreign exchange translation.

Non-interest income

Non-interest income was up $859 million or 11% from 2020, primarily due to higher equity and debt issuance revenue and advisory activity, higher fee-based revenue driven by higher average AUA and AUM reflecting market appreciation and net sales in our wealth management businesses, and growth in fees related to commercial borrowing.

Provision for credit losses

Provision for credit losses was down $2,331 million or 94% from 2020, as 2021 reflected an improvement in economic conditions as well as our economic outlook, while 2020 was adversely impacted by the onset of the COVID-19 pandemic.

Non-interest expenses

Non-interest expenses were up $173 million or 2% from 2020, primarily due to higher performance-based compensation.

Income taxes

Income tax expense was up $778 million or 71% from 2020, primarily due to higher income.

Revenue by segment

Canadian Personal and Business Banking

Revenue was up $228 million or 3% from 2020, primarily due to volume growth and higher fee income, partially offset by lower product spreads largely as a result of changes in the interest rate environment.

Canadian Commercial Banking and Wealth Management

Revenue was up $549 million or 13% from 2020. Commercial banking revenue was up $164 million or 10%, primarily due to higher fees and volume growth, partially offset by lower product spreads. Wealth management revenue was up $385 million or 16%, primarily due to higher fee-based revenue driven by higher average AUA and AUM reflecting market appreciation and net sales, and higher commission revenue from increased client activity.

U.S. Commercial Banking and Wealth Management

Revenue was up $151 million or 7% from 2020. Commercial banking revenue was up $23 million or 2%, primarily due to volume growth and higher fees, partially offset by lower product spreads. Wealth management revenue was up $128 million or 28%, primarily due to higher fee-based revenue driven by higher average AUA and AUM reflecting market appreciation and net sales, higher product spreads, partially driven by loans made under the U.S. Paycheck Protection Program (PPP), and volume growth.

Capital Markets

Revenue was up $467 million or 12% from 2020. Global markets revenue was up $77 million or 4%, primarily due to higher revenue from our equity derivatives trading business, partially offset by lower fixed income and foreign exchange trading revenue. Corporate and investment banking revenue was up $272 million or 20%, primarily due to higher equity and debt underwriting activity, higher advisory revenue and higher corporate banking revenue. Direct financial services revenue was up $118 million or 17%, primarily due to higher volumes and growth in our direct brokerage trading, and innovative foreign exchange and payments business.

Corporate and Other

Revenue was down $121 million or 20% from 2020. International banking revenue was down $47 million, primarily due to the impact of foreign exchange translation, and lower U.S. dollar revenue in CIBC FirstCaribbean driven by lower product spreads, partially offset by higher ECL charges on debt securities in 2020, volume growth and higher fees. Other revenue was down $74 million, primarily due to lower revenue from our strategic investments, interest income in 2020 related to the settlement of certain income tax matters, a higher TEB adjustment and lower treasury revenue.

Non-GAAP measures

We use a number of financial measures to assess the performance of our business lines as described below. Some measures are calculated in accordance with GAAP (IFRS), while other measures do not have a standardized meaning under GAAP, and accordingly, these measures may not be comparable to similar measures used by other companies. Investors may find these non-GAAP measures, which include non-GAAP financial measures and non-GAAP ratios as defined in National Instrument 52-112 "Non-GAAP and Other Financial Measures Disclosure", useful in understanding how management views underlying business performance.

Adjusted measures

Management assesses results on a reported and adjusted basis and considers both as useful measures of performance. Adjusted measures, which include adjusted total revenue, adjusted provision for credit losses, adjusted non-interest expenses, adjusted income before income taxes, adjusted income taxes and adjusted net income, in addition to the adjusted measures noted below, remove items of note from reported results to calculate our adjusted results. Items of note include the amortization of intangible assets, and certain items of significance that arise from time to time which management believes are not reflective of underlying business performance. We believe that adjusted measures provide the reader with a better understanding of how management assesses underlying business performance and facilitates a more informed analysis of trends. While we believe that adjusted measures may facilitate comparisons between our results and those of some of our Canadian peer banks, which make similar adjustments in their public disclosure, it should be noted that there is no standardized meaning for adjusted measures under GAAP.

We also adjust our results to gross up tax-exempt revenue on certain securities to a TEB, being the amount of fully taxable revenue, which, were it to have incurred tax at the statutory income tax rate, would yield the same after-tax revenue. See the "Strategic business units overview" section and Note 30 to our consolidated financial statements for further details.

Adjusted diluted EPS
We adjust our reported diluted EPS to remove the impact of items of note, net of income taxes, to calculate the adjusted EPS.

Adjusted efficiency ratio
We adjust our reported revenue and non-interest expenses to remove the impact of items of note and gross up tax-exempt revenue to bring it to a TEB, to calculate the adjusted efficiency ratio.

Adjusted operating leverage
We adjust our reported revenue and non-interest expenses to remove the impact of items of note and gross up tax-exempt revenue to bring it to a TEB, to calculate the adjusted operating leverage.

Adjusted dividend payout ratio
We adjust our reported net income attributable to common shareholders to remove the impact of items of note, net of income taxes, to calculate the adjusted dividend payout ratio.

Adjusted return on common shareholders' equity
We adjust our reported net income attributable to common shareholders to remove the impact of items of note, net of income taxes, to calculate the adjusted return on common shareholders' equity.

Adjusted effective tax rate
We adjust our reported income before income taxes and reported income taxes to remove the impact of items of note, to calculate the adjusted effective tax rate.

Pre-provision, pre-tax earnings

Pre-provision, pre-tax earnings is calculated as revenue net of non-interest expenses, and provides the reader with an assessment of our ability to generate earnings to cover credit losses through the credit cycle, as well as an additional basis for comparing underlying business performance between periods by excluding the impact of provision for credit losses, which involves the application of judgments and estimates related to matters that are uncertain and can vary significantly between periods. We adjust our pre-provision, pre-tax earnings to remove the impact of items of note to calculate the adjusted pre-provision, pre-tax earnings. As discussed above, we believe that adjusted measures provide the reader with a better understanding of how management assesses underlying business performance and facilitates a more informed analysis of trends.

Allocated common equity

Common equity is allocated to the SBUs based on the estimated amount of regulatory capital required to support their businesses (as determined for the consolidated bank pursuant to OSFI's regulatory capital requirements and internal targets). Unallocated common equity is reported in Corporate and Other. Allocating capital on this basis provides a consistent framework to evaluate the returns of each SBU commensurate with the risk assumed. In 2022, we increased the common equity allocated to our SBUs to 11% of CET1 capital requirements for each SBU, reflecting an increase from 10% in 2021. For additional information, see the "Risks arising from business activities" section.

Segmented return on equity

We use return on equity on a segmented basis as one of the measures for performance evaluation and resource allocation decisions. While return on equity for total CIBC provides a measure of return on common equity, return on equity on a segmented basis provides a similar metric based on allocated common equity to our SBUs. As a result, segmented return on equity is a non-GAAP ratio. Segmented return on equity is calculated as net income attributable to common shareholders for each SBU expressed as a percentage of average allocated common equity, which is the average of monthly allocated common equity during the period. In 2022, we increased the common equity allocated to our SBUs, as noted above.

The following table provides a reconciliation of GAAP (reported) results to non-GAAP (adjusted) results on a segmented basis.

$ millions, for the year ended October 31, 2022	Canadian Personal and Business Banking	Canadian Commercial Banking and Wealth Management	U.S. Commercial Banking and Wealth Management	Capital Markets	Corporate and Other	CIBC Total	U.S. Commercial Banking and Wealth Management (US$ millions)
Operating results – reported							
Total revenue	$ 8,909	$ 5,254	$ 2,457	$ 5,001	$ 212	$ 21,833	$ 1,902
Provision for (reversal of) credit losses	876	23	218	(62)	2	1,057	169
Non-interest expenses	4,975	2,656	1,328	2,437	1,407	12,803	1,028
Income (loss) before income taxes	3,058	2,575	911	2,626	(1,197)	7,973	705
Income taxes	809	680	151	718	(628)	1,730	117
Net income (loss)	2,249	1,895	760	1,908	(569)	6,243	588
Net income attributable to non-controlling interests	–	–	–	–	23	23	–
Net income (loss) attributable to equity shareholders	2,249	1,895	760	1,908	(592)	6,220	588
Diluted EPS ($) [1]						$ 6.68	
Impact of items of note [2]							
Revenue							
Acquisition and integration-related costs as well as purchase accounting adjustments and provision for credit losses for performing loans [3]	$ (16)	$ –	$ –	$ –	$ –	$ (16)	$ –
Impact of items of note on revenue	(16)	–	–	–	–	(16)	–
Provision for (reversal of) credit losses							
Acquisition and integration-related costs as well as purchase accounting adjustments and provision for credit losses for performing loans [3]	(94)	–	–	–	–	(94)	–
Impact of items of note on provision for (reversal of) credit losses	(94)	–	–	–	–	(94)	–
Non-interest expenses							
Amortization of acquisition-related intangible assets	(18)	–	(68)	–	(12)	(98)	(53)
Acquisition and integration-related costs as well as purchase accounting adjustments and provision for credit losses for performing loans [3]	(103)	–	–	–	–	(103)	–
Charge related to the consolidation of our real estate portfolio	–	–	–	–	(37)	(37)	–
Increase in legal provisions	–	–	–	–	(136)	(136)	–
Impact of items of note on non-interest expenses	(121)	–	(68)	–	(185)	(374)	(53)
Total pre-tax impact of items of note on net income	199	–	68	–	185	452	53
Income taxes							
Amortization of acquisition-related intangible assets	4	–	18	–	1	23	14
Acquisition and integration-related costs as well as purchase accounting adjustments and provision for credit losses for performing loans [3]	48	–	–	–	–	48	–
Charge related to the consolidation of our real estate portfolio	–	–	–	–	10	10	–
Increase in legal provisions	–	–	–	–	36	36	–
Impact of items of note on income taxes	52	–	18	–	47	117	14
Total after-tax impact of items of note on net income	$ 147	$ –	$ 50	$ –	$ 138	$ 335	$ 39
Impact of items of note on diluted EPS ($) [1]						$ 0.37	
Operating results – adjusted [4]							
Total revenue – adjusted [5]	$ 8,893	$ 5,254	$ 2,457	$ 5,001	$ 212	$ 21,817	$ 1,902
Provision for (reversal of) credit losses – adjusted	782	23	218	(62)	2	963	169
Non-interest expenses – adjusted	4,854	2,656	1,260	2,437	1,222	12,429	975
Income (loss) before income taxes – adjusted	3,257	2,575	979	2,626	(1,012)	8,425	758
Income taxes – adjusted	861	680	169	718	(581)	1,847	131
Net income (loss) – adjusted	2,396	1,895	810	1,908	(431)	6,578	627
Net income attributable to non-controlling interests – adjusted	–	–	–	–	23	23	–
Net income (loss) attributable to equity shareholders – adjusted	2,396	1,895	810	1,908	(454)	6,555	627
Adjusted diluted EPS ($) [1]						$ 7.05	

(1) On April 7, 2022, CIBC shareholders approved a two-for-one share split (Share Split) of CIBC's issued and outstanding common shares. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and per common share amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.

(2) Items of note are removed from reported results to calculate adjusted results.

(3) Acquisition and integration costs, shown as an item of note starting in the fourth quarter of 2021, are comprised of incremental costs incurred as part of planning for and executing the integration of the Canadian Costco credit card portfolio, including enabling franchising opportunities, the upgrade and conversion of systems and processes, project delivery, communication costs and client welcome bonuses. Purchase accounting adjustments shown as an item of note starting in the second quarter of 2022, include the accretion of the acquisition date fair value discount on the acquired Canadian Costco credit card receivables. Provision for credit losses for performing loans associated with the acquisition of the Canadian Costco credit card portfolio, included the stage 1 ECL allowance established immediately after the acquisition date and the impact of the migration of stage 1 accounts to stage 2 during the second quarter of 2022. Integration costs, shown as an item of note from the second quarter of 2017 to the fourth quarter of 2019, are comprised of direct and incremental costs incurred as part of planning for and executing the integration of the businesses of The PrivateBank (subsequently rebranded as CIBC Bank USA) and Geneva Advisors with CIBC, including enabling cross-sell opportunities and expansion of services in the U.S. market, the upgrade and conversion of systems and processes, project management, integration-related travel, severance, consulting fees and marketing costs related to rebranding activities. Transaction costs, shown as an item of note from the second quarter of 2017 to the fourth quarter of 2019, included legal and other advisory fees, as well as interest adjustments relating to the obligation payable to dissenting shareholders. Purchase accounting adjustments, shown as an item of note from the fourth quarter of 2017 to the fourth quarter of 2019, include the accretion of the acquisition date fair value discount on the acquired loans of The PrivateBank, and changes in the fair value of contingent consideration relating to the Geneva Advisors and Wellington Financial acquisitions.

(4) Adjusted to exclude the impact of items of note. Adjusted measures are non-GAAP measures.

(5) CIBC total results excludes a taxable equivalent basis (TEB) adjustment of $211 million (2021: $204 million). Our adjusted efficiency ratio and adjusted operating leverage are calculated on a TEB.

The following table provides a reconciliation of GAAP (reported) results to non-GAAP (adjusted) results on a segmented basis.

$ millions, for the year ended October 31, 2021	Canadian Personal and Business Banking	Canadian Commercial Banking and Wealth Management	U.S. Commercial Banking and Wealth Management	Capital Markets	Corporate and Other	CIBC Total	U.S. Commercial Banking and Wealth Management (US$ millions)
Operating results – reported							
Total revenue	$ 8,150	$ 4,670	$ 2,194	$ 4,520	$ 481	$ 20,015	$ 1,748
Provision for (reversal of) credit losses	350	(39)	(75)	(100)	22	158	(61)
Non-interest expenses	4,414	2,443	1,121	2,117	1,440	11,535	893
Income (loss) before income taxes	3,386	2,266	1,148	2,503	(981)	8,322	916
Income taxes	892	601	222	646	(485)	1,876	177
Net income (loss)	2,494	1,665	926	1,857	(496)	6,446	739
Net income attributable to non-controlling interests	–	–	–	–	17	17	–
Net income (loss) attributable to equity shareholders	2,494	1,665	926	1,857	(513)	6,429	739
Diluted EPS ($) [1]						$ 6.96	
Impact of items of note [2]							
Non-interest expenses							
Amortization of acquisition-related intangible assets	$ –	$ –	$ (68)	$ –	$ (11)	$ (79)	$ (54)
Acquisition and integration-related costs [3]	(12)	–	–	–	–	(12)	–
Charge related to the consolidation of our real estate portfolio	–	–	–	–	(109)	(109)	–
Increase in legal provisions	–	–	–	–	(125)	(125)	–
Impact of items of note on non-interest expenses	(12)	–	(68)	–	(245)	(325)	(54)
Total pre-tax impact of items of note on net income	12	–	68	–	245	325	54
Income taxes							
Amortization of acquisition-related intangible assets	–	–	18	–	1	19	14
Acquisition and integration-related costs [3]	3	–	–	–	–	3	–
Charge related to the consolidation of our real estate portfolio	–	–	–	–	29	29	–
Increase in legal provisions	–	–	–	–	33	33	–
Impact of items of note on income taxes	3	–	18	–	63	84	14
Total after-tax impact of items of note on net income	$ 9	$ –	$ 50	$ –	$ 182	$ 241	$ 40
Impact of items of note on diluted EPS ($) [1]						$ 0.27	
Operating results – adjusted [4]							
Total revenue – adjusted [5]	$ 8,150	$ 4,670	$ 2,194	$ 4,520	$ 481	$ 20,015	$ 1,748
Provision for (reversal of) credit losses – adjusted	350	(39)	(75)	(100)	22	158	(61)
Non-interest expenses – adjusted	4,402	2,443	1,053	2,117	1,195	11,210	839
Income (loss) before income taxes – adjusted	3,398	2,266	1,216	2,503	(736)	8,647	970
Income taxes – adjusted	895	601	240	646	(422)	1,960	191
Net income (loss) – adjusted	2,503	1,665	976	1,857	(314)	6,687	779
Net income attributable to non-controlling interests – adjusted	–	–	–	–	17	17	–
Net income (loss) attributable to equity shareholders – adjusted	2,503	1,665	976	1,857	(331)	6,670	779
Adjusted diluted EPS ($) [1]						$ 7.23	

See previous page for footnote references.

The following table provides a reconciliation of GAAP (reported) results to non-GAAP (adjusted) results on a segmented basis.

$ millions, for the year ended October 31, 2020	Canadian Personal and Business Banking	Canadian Commercial Banking and Wealth Management	U.S. Commercial Banking and Wealth Management	Capital Markets	Corporate and Other	CIBC Total	U.S. Commercial Banking and Wealth Management (US$ millions)
Operating results – reported							
Total revenue	$ 7,922	$ 4,121	$ 2,043	$ 4,053	$ 602	$ 18,741	$ 1,520
Provision for (reversal of) credit losses	1,189	303	487	311	199	2,489	358
Non-interest expenses	4,308	2,179	1,126	1,929	1,820	11,362	838
Income (loss) before income taxes	2,425	1,639	430	1,813	(1,417)	4,890	324
Income taxes	640	437	55	505	(539)	1,098	42
Net income (loss)	1,785	1,202	375	1,308	(878)	3,792	282
Net income attributable to non-controlling interests	–	–	–	–	2	2	–
Net income (loss) attributable to equity shareholders	1,785	1,202	375	1,308	(880)	3,790	282
Diluted EPS ($) [1]						$ 4.11	
Impact of items of note [2]							
Non-interest expenses							
Amortization of acquisition-related intangible assets	$ (8)	$ (1)	$ (83)	$ –	$ (13)	$ (105)	$ (62)
Charge related to the consolidation of our real estate portfolio	–	–	–	–	(114)	(114)	–
Increase in legal provisions	–	–	–	–	(70)	(70)	–
Gain as a result of plan amendments related to pension and other post-employment plans	–	–	–	–	79	79	–
Restructuring charges, primarily relating to employee severance and related costs	–	–	–	–	(339)	(339)	–
Goodwill impairment charge related to our controlling interest in CIBC FirstCaribbean	–	–	–	–	(248)	(248)	–
Impact of items of note on non-interest expenses	(8)	(1)	(83)	–	(705)	(797)	(62)
Total pre-tax impact of items of note on net income	8	1	83	–	705	797	62
Income taxes							
Amortization of acquisition-related intangible assets	2	–	22	–	1	25	17
Charge related to the consolidation of our real estate portfolio	–	–	–	–	30	30	–
Increase in legal provisions	–	–	–	–	19	19	–
Gain as a result of plan amendments related to pension and other post-employment plans	–	–	–	–	(21)	(21)	–
Restructuring charges, primarily relating to employee severance and related costs	–	–	–	–	89	89	–
Impact of items of note on income taxes	2	–	22	–	118	142	17
Total after-tax impact of items of note on net income	$ 6	$ 1	$ 61	$ –	$ 587	$ 655	$ 45
Impact of items of note on diluted EPS ($) [1]						$ 0.74	
Operating results – adjusted [4]							
Total revenue – adjusted [5]	$ 7,922	$ 4,121	$ 2,043	$ 4,053	$ 602	$ 18,741	$ 1,520
Provision for (reversal of) credit losses – adjusted	1,189	303	487	311	199	2,489	358
Non-interest expenses – adjusted	4,300	2,178	1,043	1,929	1,115	10,565	776
Income (loss) before income taxes – adjusted	2,433	1,640	513	1,813	(712)	5,687	386
Income taxes – adjusted	642	437	77	505	(421)	1,240	59
Net income (loss) – adjusted	1,791	1,203	436	1,308	(291)	4,447	327
Net income attributable to non-controlling interests – adjusted	–	–	–	–	2	2	–
Net income (loss) attributable to equity shareholders – adjusted	1,791	1,203	436	1,308	(293)	4,445	327
Adjusted diluted EPS ($) [1]						$ 4.85	

See previous pages for footnote references.

The following table provides a reconciliation of GAAP (reported) results to non-GAAP (adjusted) results on a segmented basis.

$ millions, for the year ended October 31, 2019	Canadian Personal and Business Banking	Canadian Commercial Banking and Wealth Management	U.S. Commercial Banking and Wealth Management	Capital Markets	Corporate and Other	CIBC Total	U.S. Commercial Banking and Wealth Management (US$ millions)
Operating results – reported							
Total revenue	$ 8,240	$ 4,027	$ 1,911	$ 3,475	$ 958	$ 18,611	$ 1,438
Provision for (reversal of) credit losses	889	163	73	160	1	1,286	55
Non-interest expenses	4,459	2,106	1,114	1,802	1,375	10,856	838
Income (loss) before income taxes	2,892	1,758	724	1,513	(418)	6,469	545
Income taxes	766	471	76	396	(361)	1,348	58
Net income (loss)	2,126	1,287	648	1,117	(57)	5,121	487
Net income attributable to non-controlling interests	–	–	–	–	25	25	–
Net income (loss) attributable to equity shareholders	2,126	1,287	648	1,117	(82)	5,096	487
Diluted EPS ($) [1]						$ 5.60	
Impact of items of note [2]							
Revenue							
Settlement of certain income tax matters	$ –	$ –	$ –	$ –	$ (67)	$ (67)	$ –
Purchase accounting adjustments [3]	–	–	(34)	–	–	(34)	(26)
Impact of items of note on revenue	–	–	(34)	–	(67)	(101)	(26)
Non-interest expenses							
Amortization of acquisition-related intangible assets	(9)	(1)	(88)	–	(11)	(109)	(66)
Transaction and integration-related costs as well as purchase accounting adjustments [3]	–	–	–	–	11	11	–
Increase in legal provisions	–	–	–	–	(28)	(28)	–
Goodwill impairment charge related to our controlling interest in CIBC FirstCaribbean	–	–	–	–	(135)	(135)	–
Charge for payment made to Air Canada, including related sales tax and transaction costs	(227)	–	–	–	–	(227)	–
Impact of items of note on non-interest expenses	(236)	(1)	(88)	–	(163)	(488)	(66)
Total pre-tax impact of items of note on net income	236	1	54	–	96	387	40
Income taxes							
Amortization of acquisition-related intangible assets	2	–	23	–	2	27	17
Transaction and integration-related costs as well as purchase accounting adjustments [3]	–	–	(9)	–	(3)	(12)	(7)
Increase in legal provisions	–	–	–	–	7	7	–
Settlement of certain income tax matters	–	–	–	–	(18)	(18)	–
Charge for payment made to Air Canada, including related sales tax and transaction costs	60	–	–	–	–	60	–
Impact of items of note on income taxes	62	–	14	–	(12)	64	10
Total after-tax impact of items of note on net income	$ 174	$ 1	$ 40	$ –	$ 108	$ 323	$ 30
Impact of items of note on diluted EPS ($) [1]						$ 0.36	
Operating results – adjusted [4]							
Total revenue – adjusted [5]	$ 8,240	$ 4,027	$ 1,877	$ 3,475	$ 891	$ 18,510	$ 1,412
Provision for (reversal of) credit losses – adjusted	889	163	73	160	1	1,286	55
Non-interest expenses – adjusted	4,223	2,105	1,026	1,802	1,212	10,368	772
Income (loss) before income taxes – adjusted	3,128	1,759	778	1,513	(322)	6,856	585
Income taxes – adjusted	828	471	90	396	(373)	1,412	68
Net income – adjusted	2,300	1,288	688	1,117	51	5,444	517
Net income attributable to non-controlling interests – adjusted	–	–	–	–	25	25	–
Net income attributable to equity shareholders – adjusted	2,300	1,288	688	1,117	26	5,419	517
Adjusted diluted EPS ($) [1]						$ 5.96	

See previous pages for footnote references.

The following table provides a reconciliation of GAAP (reported) results to non-GAAP (adjusted) results on a segmented basis.

$ millions, for the year ended October 31, 2018	Canadian Personal and Business Banking	Canadian Commercial Banking and Wealth Management	U.S. Commercial Banking and Wealth Management	Capital Markets	Corporate and Other	CIBC Total	U.S. Commercial Banking and Wealth Management (US$ millions)
Operating results – reported							
Total revenue	$ 8,595	$ 3,836	$ 1,760	$ 2,935	$ 708	$ 17,834	$ 1,366
Provision for (reversal of) credit losses	741	5	79	(30)	75	870	61
Non-interest expenses	4,395	2,067	1,023	1,492	1,281	10,258	794
Income (loss) before income taxes	3,459	1,764	658	1,473	(648)	6,706	511
Income taxes	919	478	97	387	(459)	1,422	75
Net income (loss)	2,540	1,286	561	1,086	(189)	5,284	436
Net income attributable to non-controlling interests	–	–	–	–	17	17	–
Net income (loss) attributable to equity shareholders	2,540	1,286	561	1,086	(206)	5,267	436
Diluted EPS ($) [1]						$ 5.82	
Impact of items of note [2]							
Revenue							
Purchase accounting adjustments [3]	$ –	$ –	$ (55)	$ –	$ (8)	$ (63)	$ (43)
Incremental losses on debt securities and loans in CIBC FirstCaribbean resulting from the Barbados government debt restructuring	–	–	–	–	61	61	–
Impact of items of note on revenue	–	–	(55)	–	53	(2)	(43)
Provision for (reversal of) credit losses							
Incremental losses on debt securities and loans in CIBC FirstCaribbean resulting from the Barbados government debt restructuring	–	–	–	–	(28)	(28)	–
Impact of items of note on provision for (reversal of) credit losses	–	–	–	–	(28)	(28)	–
Non-interest expenses							
Amortization of acquisition-related intangible assets	(12)	(1)	(91)	–	(11)	(115)	(71)
Transaction and integration-related costs as well as purchase accounting adjustments [3]	–	–	–	–	(79)	(79)	–
Impact of items of note on non-interest expenses	(12)	(1)	(91)	–	(90)	(194)	(71)
Total pre-tax impact of items of note on net income	12	1	36	–	171	220	28
Income taxes							
Amortization of acquisition-related intangible assets	3	–	26	–	1	30	21
Transaction and integration-related costs as well as purchase accounting adjustments [3]	–	–	(17)	–	2	(15)	(13)
Increase in legal provisions	–	–	–	–	–	–	–
Incremental losses on debt securities and loans in CIBC FirstCaribbean resulting from the Barbados government debt restructuring	–	–	–	–	19	19	–
Charge from net tax adjustments resulting from U.S. tax reforms	–	–	–	–	(88)	(88)	–
Impact of items of note on income taxes	3	–	9	–	(66)	(54)	8
Total after-tax impact of items of note on net income	9	1	27	–	237	274	20
After-tax impact of items of note on non-controlling interests	–	–	–	–	5	5	–
After-tax impact of items of note on net income attributable to equity shareholders	$ 9	$ 1	$ 27	$ –	$ 232	$ 269	$ 20
Impact of items of note on diluted EPS ($) [1]						$ 0.29	
Operating results – adjusted [4]							
Total revenue – adjusted [5]	$ 8,595	$ 3,836	$ 1,705	$ 2,935	$ 761	$ 17,832	$ 1,323
Provision for (reversal of) credit losses – adjusted	741	5	79	(30)	47	842	61
Non-interest expenses – adjusted	4,383	2,066	932	1,492	1,191	10,064	723
Income (loss) before income taxes – adjusted	3,471	1,765	694	1,473	(477)	6,926	539
Income taxes – adjusted	922	478	106	387	(525)	1,368	83
Net income – adjusted	2,549	1,287	588	1,086	48	5,558	456
Net income attributable to non-controlling interests – adjusted	–	–	–	–	22	22	–
Net income attributable to equity shareholders – adjusted	2,549	1,287	588	1,086	26	5,536	456
Adjusted diluted EPS ($) [1]						$ 6.11	

See previous pages for footnote references.

The following table provides a reconciliation of GAAP (reported) net income to non-GAAP (adjusted) pre-provision, pre-tax earnings on a segmented basis.

$ millions, for the year ended October 31		Canadian Personal and Business Banking	Canadian Commercial Banking and Wealth Management	U.S. Commercial Banking and Wealth Management	Capital Markets	Corporate and Other	CIBC Total	U.S. Commercial Banking and Wealth Management (US$ millions)
2022	**Net income (loss)**	**$ 2,249**	**$ 1,895**	**$ 760**	**$ 1,908**	**$ (569)**	**$ 6,243**	**$ 588**
	Add: provision for (reversal of) credit losses	**876**	**23**	**218**	**(62)**	**2**	**1,057**	**169**
	Add: income taxes	**809**	**680**	**151**	**718**	**(628)**	**1,730**	**117**
	Pre-provision (reversal), pre-tax earnings (losses) [1]	**3,934**	**2,598**	**1,129**	**2,564**	**(1,195)**	**9,030**	**874**
	Pre-tax impact of items of note [2][3]	**105**	**–**	**68**	**–**	**185**	**358**	**53**
	Adjusted pre-provision (reversal), pre-tax earnings (losses) [4]	**$ 4,039**	**$ 2,598**	**$ 1,197**	**$ 2,564**	**$ (1,010)**	**$ 9,388**	**$ 927**
2021	Net income (loss)	$ 2,494	$ 1,665	$ 926	$ 1,857	$ (496)	$ 6,446	$ 739
	Add: provision for (reversal of) credit losses	350	(39)	(75)	(100)	22	158	(61)
	Add: income taxes	892	601	222	646	(485)	1,876	177
	Pre-provision (reversal), pre-tax earnings (losses) [1]	3,736	2,227	1,073	2,403	(959)	8,480	855
	Pre-tax impact of items of note [2]	12	–	68	–	245	325	54
	Adjusted pre-provision (reversal), pre-tax earnings (losses) [4]	$ 3,748	$ 2,227	$ 1,141	$ 2,403	$ (714)	$ 8,805	$ 909
2020	Net income (loss)	$ 1,785	$ 1,202	$ 375	$ 1,308	$ (878)	$ 3,792	$ 282
	Add: provision for (reversal of) credit losses	1,189	303	487	311	199	2,489	358
	Add: income taxes	640	437	55	505	(539)	1,098	42
	Pre-provision (reversal), pre-tax earnings (losses) [1]	3,614	1,942	917	2,124	(1,218)	7,379	682
	Pre-tax impact of items of note [2]	8	1	83	–	705	797	62
	Adjusted pre-provision (reversal), pre-tax earnings (losses) [4]	$ 3,622	$ 1,943	$ 1,000	$ 2,124	$ (513)	$ 8,176	$ 744
2019	Net income (loss)	$ 2,126	$ 1,287	$ 648	$ 1,117	$ (57)	$ 5,121	$ 487
	Add: provision for (reversal of) credit losses	889	163	73	160	1	1,286	55
	Add: income taxes	766	471	76	396	(361)	1,348	58
	Pre-provision (reversal), pre-tax earnings (losses) [1]	3,781	1,921	797	1,673	(417)	7,755	600
	Pre-tax impact of items of note [2]	236	1	54	–	96	387	40
	Adjusted pre-provision (reversal), pre-tax earnings (losses) [4]	$ 4,017	$ 1,922	$ 851	$ 1,673	$ (321)	$ 8,142	$ 640
2018	Net income (loss)	$ 2,540	$ 1,286	$ 561	$ 1,086	$ (189)	$ 5,284	$ 436
	Add: provision for (reversal of) credit losses	741	5	79	(30)	75	870	61
	Add: income taxes	919	478	97	387	(459)	1,422	75
	Pre-provision (reversal), pre-tax earnings (losses) [1]	4,200	1,769	737	1,443	(573)	7,576	572
	Pre-tax impact of items of note [2]	12	1	36	–	171	220	28
	Adjusted pre-provision (reversal), pre-tax earnings (losses) [4]	$ 4,212	$ 1,770	$ 773	$ 1,443	$ (402)	$ 7,796	$ 600

(1) Non-GAAP measure.
(2) Items of note are removed from reported results to calculate adjusted results.
(3) Excludes the impact of the provision for credit losses for performing loans from the acquisition of the Canadian Costco credit card portfolio, as the amount is included in the add back of provision for (reversal of) credit losses.
(4) Adjusted to exclude the impact of items of note. Adjusted measures are non-GAAP measures.

Strategic business units overview

CIBC has four SBUs – Canadian Personal and Business Banking, Canadian Commercial Banking and Wealth Management, U.S. Commercial Banking and Wealth Management, and Capital Markets. These SBUs are supported by the following functional groups – Technology, Infrastructure and Innovation, Risk Management, People, Culture and Brand, Finance and Enterprise Strategy, as well as other support groups, which all are included within Corporate and Other. The expenses of these functional and support groups are generally allocated to the business lines within the SBUs. The majority of the functional and support costs of CIBC Bank USA are recognized directly in the U.S. Commercial Banking and Wealth Management SBU. Corporate and Other also includes the results of CIBC FirstCaribbean and other strategic investments, as well as other income statement and balance sheet items not directly attributable to the business lines.

Business unit allocations

Revenue, expenses, and other balance sheet resources related to certain activities are generally allocated to the lines of business within the SBUs.

Treasury activities impact the financial results of the SBUs. Each line of business within our SBUs is charged or credited with a market-based cost of funds on assets and liabilities, respectively, which impacts the revenue performance of the SBUs. This market-based cost of funds takes into account the cost of maintaining sufficient regulatory capital to support business requirements, including the cost of preferred shares. Once the interest and liquidity risks inherent in our client-driven assets and liabilities are transfer priced into Treasury, they are managed within CIBC's risk framework and limits. Capital is attributed to the SBUs based on the estimated amount of regulatory capital required to support their businesses, which is intended to consistently measure and align the costs with the underlying benefits and risks associated with SBU activities. Earnings on unattributed capital remain in Corporate and Other. We review our transfer pricing methodologies on an ongoing basis to ensure they reflect changing market environments and industry practices.

We use a Product Owner/Customer Segment/Distributor Channel allocation management model to measure and report the results of operations of various lines of business within our SBUs. The model uses certain estimates and methodologies to process internal transfers between the impacted lines of business for sales, renewals and trailer commissions as well as certain attributable costs. Periodically, the sales, renewals and trailer commission rates paid to customer segments for certain products/services are revised and applied prospectively.

The non-interest expenses of the functional and support groups are generally allocated to the business lines within the SBUs based on appropriate criteria and methodologies. The basis of allocation is reviewed periodically to reflect changes in support to business lines. Other costs not directly attributable to business lines remain in Corporate and Other.

We recognize provision for credit losses on both impaired (stage 3) and performing (stages 1 and 2) loans in the respective SBUs.

Revenue, taxable equivalent basis

Certain SBUs evaluate revenue on a TEB. In order to arrive at the TEB amount, the SBUs gross up tax-exempt revenue on certain securities to a TEB, being the amount of fully taxable revenue, which, were it to have incurred tax at the statutory income tax rate, would yield the same after-tax revenue. Simultaneously, an equivalent amount is booked as an income tax expense resulting in no impact on the net income of the SBUs. This measure enables comparability of revenue arising from both taxable and tax-exempt sources. The total TEB adjustments of the SBUs are offset in revenue and income tax expense in Corporate and Other.

Canadian Personal and Business Banking

Canadian Personal and Business Banking provides personal and business clients across Canada with financial advice, services and solutions through banking centres, as well as mobile and online channels to help make their ambitions a reality.

Our business strategy

We are focused on helping our clients achieve their ambitions, and delivering sustainable, market-leading performance. To achieve this, our strategy continues to comprise three key priorities:

- Introducing more opportunities for our clients to deal with us digitally by investing in digital and real-time remote capabilities;
- Providing our team with the tools to deliver an excellent experience for our clients consistent with a one-team approach; and
- Delivering personalized advice to our clients in a way that is meaningful and relevant to each of them.

2022 progress

In 2022, we demonstrated positive momentum, with our strongest net client growth since 2017, as we welcomed new clients to our bank. Looking at our client experience, we improved to 2nd place in the J.D. Power Client Satisfaction survey, up from 5th last year. In addition, we continued to narrow our primary clients' net promoter score gap to the leader in the Ipsos Customer Satisfaction Index study. With excellent revenue diversification, we remained focused on generating high-value growth despite headwinds. We drove unprecedented growth in our everyday bank account openings and leading market share growth in lending. We also continued to support our clients' homeownership ambitions by enhancing the mortgage origination and renewal process, and helping them navigate rising interest rates. We will maintain focus on our three strategic priorities and build on our 2022 momentum and success.

Introducing more opportunities for our clients to deal with us digitally

- Ranked #1 in Online Banking Satisfaction by J.D. Power and recognized by Digital Banker for Outstanding Digital Client Experience in Mobile Banking as well as for using in-house research and client feedback to improve digital journeys.
- Introduced CIBC Smart Start, our enhanced youth and student banking offer which provides market-leading value. Clients can open a new account digitally and enjoy no-fee banking, including free direct investing through CIBC Investor's Edge, until the age of 25.
- Announced a strategic investment to bring a new merchant services platform called Tyl by CIBC to Canada.
- Delivered a market-leading *Interac* e-Transfer feature, enabling clients to set recurring or future-dated e-Transfer payments.
- Announced a new collaboration with Willful, a digital solution for estate planning, making financial planning easier and affordable for clients.
- Introduced more digital options for clients to renew their mortgage online, including an enhanced online pre-qualification tool.
- Improved the digital onboarding experience allowing clients to start banking within minutes by adding a digital debit card to their mobile wallet and automatically linking new cards to their profiles.

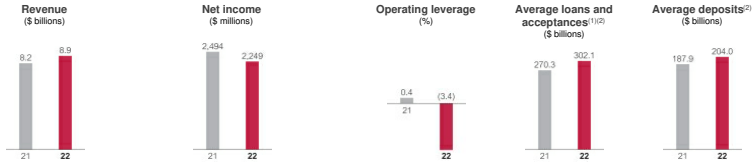
Providing our team with the tools to deliver an excellent experience for our clients

- Ranked #1 on *Investment Executive* 2022 Report Card on Banks, for the seventh consecutive year.
- Announced an agreement with nCino, to digitize the end-to-end account open and lending experience for both business clients and team members.
- Introduced accessible credit, debit and Smart prepaid card sleeves for clients who are blind, have low vision or specific conditions such as glaucoma, including the card name, number and expiry date in braille or larger print.
- Launched Smart Interest on the CIBC eAdvantage Savings Account for clients who save $200 or more each month.
- Welcomed more than two million Costco Mastercard clients and focused on ensuring they were successfully transitioned to their new card.
- Demonstrated our commitment to inclusion by hosting our first virtual Global Accessibility Awareness Day, sponsoring the MaRS CIBC Inclusive Design Challenge, and removing barriers to services and products for underserved clients including seniors and persons with disabilities.

Delivering personalized advice to our clients in a way that is meaningful and relevant to each of them

- Named in *The Globe and Mail's* 2022 Best B2B Brands for our client engagement throughout the pandemic.
- Launched the CIBC Black Entrepreneur Program, which includes a $15 million commitment for business loans of up to $250,000 to accelerate the start-up and growth of their businesses.
- Improved the mortgage experience by engaging clients ahead of prime rate increases to help them manage rising interest rates.
- Supported displaced Ukrainians with our newcomer banking offer, helped them find Ukrainian-speaking advisors, and provided welcome kits.
- Helped clients learn how to integrate climate action into their everyday lives through our new CIBC Climate Centre on cibc.com, which provides a number of insights on saving energy and how to have a positive impact on the environment.

2022 financial review



(1) Loan amounts are stated before any related allowances.
(2) Average balances are calculated as a weighted average of daily closing balances.

Our focus for 2023

In Canadian Personal and Business Banking our objective is to deliver sustainable, market-leading performance with a focus on helping our clients achieve their ambitions. Our strategy remains centred on three key priorities:

- Deliver personalized advice to our clients in a way that is meaningful to them;
- Introduce more opportunities for our clients to deal with us digitally; and
- Provide our team with the tools to deliver an excellent experience for our clients.

Results[1]

$ millions, for the year ended October 31	2022	2021
Revenue	**$ 8,909**	$ 8,150
Provision for (reversal of) credit losses		
Impaired	**534**	484
Performing	**342**	(134)
Provision for credit losses	**876**	350
Non-interest expenses	**4,975**	4,414
Income before income taxes	**3,058**	3,386
Income taxes	**809**	892
Net income	**$ 2,249**	$ 2,494
Net income attributable to:		
Equity shareholders	**$ 2,249**	$ 2,494
Total revenue		
Net interest income	**$ 6,657**	$ 5,954
Non-interest income [2]	**2,252**	2,196
	$ 8,909	$ 8,150
Net interest margin on average interest-earning assets [3][4]	**2.21 %**	2.21 %
Efficiency ratio	**55.8 %**	54.2 %
Operating leverage	**(3.4)%**	0.4 %
Return on equity [5]	**28.2 %**	38.1 %
Average allocated common equity [5]	**$ 7,987**	$ 6,554
Average assets ($ billions) [3]	**$ 305.1**	$ 272.6
Average loans and acceptances ($ billions) [3]	**$ 302.1**	$ 270.3
Average deposits ($ billions) [3]	**$ 204.0**	$ 187.9
Full-time equivalent employees	**13,840**	12,629

(1) For additional segmented information, see Note 30 to the consolidated financial statements.
(2) Includes intersegment revenue, which represents internal sales commissions and revenue allocations under the Product Owner/Customer Segment/Distributor Channel allocation management model.
(3) Average balances are calculated as a weighted average of daily closing balances.
(4) For additional information on the composition, see the "Glossary" section.
(5) For additional information, see the "Non-GAAP measures" section.

Financial overview

Net income was down $245 million or 10% from 2021, primarily due to higher non-interest expenses and a higher provision for credit losses, partially offset by higher revenue.

Revenue

Revenue was up $759 million or 9% from 2021, primarily due to volume growth and higher fee income.

Net interest income was up $703 million or 12% from 2021, primarily due to deposit and loan growth, including from the acquisition of the Canadian Costco credit card portfolio. Non-interest income was up $56 million or 3% from 2021, primarily due to higher fee income.

Net interest margin on average interest-earning assets was comparable with 2021, mainly due to higher deposit margins and the impact of the Canadian Costco credit card portfolio, partially offset by lower loan margins.

Provision for credit losses

Provision for credit losses was up $526 million or 150% from 2021. The current year included a provision for credit losses on performing loans mainly due to an unfavourable change in our economic outlook and the acquisition of the Canadian Costco credit card portfolio, while the prior year included a provision reversal due to a favourable change in our economic outlook driven by the recovery from the COVID-19 pandemic. Provision for credit losses on impaired loans was up due to higher provisions reflective of higher impaired balances, with write-offs being comparable to the prior year.

Non-interest expenses

Non-interest expenses were up $561 million or 13% from 2021, primarily due to higher spending on strategic initiatives, including the Canadian Costco credit card portfolio, and higher employee-related compensation.

Income taxes

Income taxes were down $83 million or 9% from 2021, primarily due to lower income.

Average assets

Average assets were up $32.5 billion or 12% from 2021, primarily due to growth in residential mortgages, as well as the acquisition of the Canadian Costco credit card portfolio.

Canadian Commercial Banking and Wealth Management

Canadian Commercial Banking and Wealth Management provides high-touch, relationship-oriented banking and wealth management services to middle-market companies, entrepreneurs, high-net-worth individuals and families across Canada, as well as asset management services to institutional investors.

Our business strategy

We are focused on building and enhancing client relationships, being Canada's leader in financial advice and generating long-term consistent growth. To deliver on this, our three key strategic priorities continue to be:

- Delivering risk-controlled growth in our Commercial Bank;
- Accelerating the growth of Private Wealth; and
- Evolving our Asset Management business.

2022 progress

In 2022, we had positive momentum on our client-focused journey and delivered strong growth across our SBU. As the economic environment continued to evolve, our purpose-driven culture, combined with the bank's solid capital position and disciplined risk and expense management approach, helped us to deliver consistent financial performance. In Commercial Banking, we had strong demand for both loans and deposits, and we continue to streamline and simplify the digital experience for our clients. In Private Wealth, we made progress on our growth trajectory with a key focus on advisor support programs and new technology. In Asset Management, we further incorporated a comprehensive ESG framework into all actively managed investment strategies. And finally, we had strong referral momentum across our internal teams resulting in deeper client relationships and reinforcing our commitment to helping our clients achieve their ambitions.

Delivering risk-controlled growth in our Commercial Bank

- Improved client and employee experience by modernizing our systems and streamlining processes.
- Continued to enhance programs tailored to high-growth industries through our National Industries Program team including centralized marketing and tools to support enriched client conversations.
- Further expanded CIBC Innovation Banking across North America, providing strategic advice, cash management and funding to technology and life science companies at each stage of their business cycle.
- Launched dedicated Commercial Banking Inclusion and Diversity and ESG committees, including training modules on addressing gender bias and the importance of an inclusive workplace and inclusive client interactions.

Accelerating the growth of Private Wealth

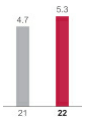
- *Investment Executive* Brokerage Report Card ranked CIBC second overall among the Big 6 banks in 2022.
- Launched exclusive private banking offers for entrepreneurs, executives, and their children to onboard new relationships, and deepen existing ones.
- Deepened client relationships through increased financial planning and the onboarding of new Wealth Planning Professionals to further support our integrated wealth offer and help clients achieve their ambitions, resulting in a 40% increase versus last year with over 4,500 plans delivered, contributing an additional $4 billion in AUA.
- Created a new program to increase partner referrals across the bank to help clients fulfill their broader wealth needs.
- Achieved 57% higher net flows versus last year in CIBC Wood Gundy related to an ongoing client-focused approach and commitments to financial planning.
- Launched refreshed competitive recruiting programs to build capacity and gain market share, including an Associate Development Program to enhance career and succession planning.
- Created frontline capacity through streamlined credit processes and centralizing administrative functions.
- Launched digital signature with our CIBC Wood Gundy and CIBC Private Investment Counsel for account openings and maintenance activities.
- *The Globe and Mail* named 30 CIBC Wood Gundy advisors to Canada's Top Wealth Advisors list with three advisors ranked in the *top 10*.

Evolving our Asset Management business

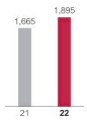
- Ranked #3 among Big 6 banks in long-term mutual fund sales as a percent of AUM.
- Launched CIBC Asset Management (CAM) Chartered Financial Analyst (CFA) Indigenous Scholarship for individuals in our communities that identify as Indigenous who are working towards completing their CFA designation.
- Announced a three-year partnership with the new Ivey School of Business Women in Asset Management Program designed to overcome the under representation of individuals who self-identify as women in asset management, including an introduction to career opportunities, and CIBC Asset Management internships.
- Incorporated a climate policy in CAM's Responsible Investing Policy.
- Launched inaugural CAM Annual ESG & Stewardship Report which includes tracking climate-specific company engagements.
- Continued to create new efficiencies and enhance the client experience, including launching the first phase of our investment platform simplification to further streamline account structures, improve onboarding and client reporting and provide enhanced portfolio management capabilities for advisors.
- Launched several alternative investment products for Private Wealth clients and launched two PIMCO bond funds for Private Wealth and Personal and Business Banking clients.

2022 financial review

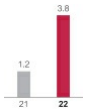
Revenue
($ billions)



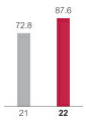
Net income
($ millions)



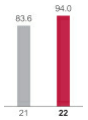
Operating leverage
(%)



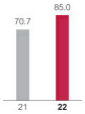
Average loans[1][2]
($ billions)



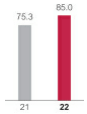
Average deposits[2]
($ billions)



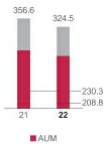
Average commercial banking loans[1][2][3]
($ billions)



Average commercial banking deposits[2]
($ billions)



Assets under administration and management[4]
($ billions)



Canadian retail mutual funds and exchange-traded funds
($ billions)



(1) Loan amounts are stated before any related allowances.
(2) Average balances are calculated as a weighted average of daily closing balances.
(3) Comprises loans and acceptances and notional amount of letters of credit.
(4) AUM amounts are included in the amounts reported under AUA.

Our focus for 2023

In Commercial Banking and Wealth Management, our ambition is to become the leader in financial advice to both personal and business clients. We remain focused on three strategic priorities:

- Delivering risk-controlled growth in our Commercial Bank, while fostering strong referrals across CIBC;
- Accelerating the growth of Private Wealth to deepen client relationships; and
- Evolving our Asset Management business to increase connectivity within our own bank channels and to launch new technologies to support clients and advisors.

Results[1]

$ millions, for the year ended October 31	2022	2021
Revenue		
Commercial banking	**$ 2,278**	$ 1,827
Wealth management	**2,976**	2,843
Total revenue	**5,254**	4,670
Provision for (reversal of) credit losses		
Impaired	**22**	6
Performing	**1**	(45)
Provision for (reversal of) credit losses	**23**	(39)
Non-interest expenses	**2,656**	2,443
Income before income taxes	**2,575**	2,266
Income taxes	**680**	601
Net income	**$ 1,895**	$ 1,665
Net income attributable to:		
Equity shareholders	**$ 1,895**	$ 1,665
Total revenue		
Net interest income	**$ 1,672**	$ 1,291
Non-interest income[2]	**3,582**	3,379
	$ 5,254	$ 4,670
Net interest margin on average interest-earning assets[3][4]	**3.37 %**	3.25 %
Efficiency ratio	**50.5 %**	52.3 %
Operating leverage	**3.8 %**	1.2 %
Return on equity[5]	**22.9 %**	24.5 %
Average allocated common equity[5]	**$ 8,275**	$ 6,794
Average assets ($ billions)[3]	**$ 84.7**	$ 70.1
Average loans ($ billions)[3]	**$ 87.6**	$ 72.8
Average deposits ($ billions)[3]	**$ 94.0**	$ 83.6
AUA ($ billions)	**$ 324.5**	$ 356.6
AUM ($ billions)	**$ 208.8**	$ 230.3
Full-time equivalent employees	**5,711**	5,241

(1) For additional segmented information, see Note 30 to the consolidated financial statements.
(2) Includes intersegment revenue, which represents internal sales commissions and revenue allocations under the Product Owner/Customer Segment/Distributor Channel allocation management model.
(3) Average balances are calculated as a weighted average of daily closing balances.
(4) For additional information on the composition, see the "Glossary" section.
(5) For additional information, see the "Non-GAAP measures" section.

Financial overview

Net income was up $230 million or 14% from 2021, primarily due to higher revenue, partially offset by higher non-interest expenses and a provision for credit losses in the current year compared with a provision reversal in the prior year.

Revenue

Revenue was up $584 million or 13% from 2021.

Commercial banking revenue was up $451 million or 25%, primarily due to higher net interest income from loan and deposit growth, higher deposit spreads that benefitted from the rising interest rate environment, and higher fees.

Wealth management revenue was up $133 million or 5%, primarily due to higher fee-based revenue driven by higher average AUA and AUM reflecting market appreciation and the impact of net sales, and higher net interest income, mainly from deposits, partially offset by lower commission revenue from decreased client activity.

Net interest margin on average interest-earning assets was up 12 basis points primarily due to higher deposit margins, partially offset by lower loan margins.

Provision for (reversal of) credit losses

Provision for credit losses was up $62 million or 159% from 2021. The current year included a small provision for credit losses on performing loans, while the prior year included a provision reversal due to a favourable change in our economic outlook driven by the recovery from the COVID-19 pandemic. Provision for credit losses on impaired loans was up mainly attributable to the education, health and social services sector.

Non-interest expenses

Non-interest expenses were up $213 million or 9% from 2021, primarily due to higher spending on strategic initiatives, and higher performance-based and employee-related compensation.

Income taxes

Income taxes were up $79 million or 13% from 2021, primarily due to higher income.

Average assets

Average assets were up $14.6 billion or 21% from 2021, primarily due to growth in commercial loans.

Assets under administration

AUA on a spot basis were down $32.1 billion or 9% from 2021, primarily due to market depreciation. AUM amounts are included in the amounts reported under AUA.

U.S. Commercial Banking and Wealth Management

U.S. Commercial Banking and Wealth Management provides high-touch, relationship-oriented banking and wealth management services across the U.S., focused on middle-market and mid-corporate companies, entrepreneurs, high-net-worth individuals and families, as well as personal and small business banking services in four U.S. Midwestern markets.

Our business strategy

Our goal is to grow our purpose-built U.S. commercial and wealth management franchise focused on the private economy and high-growth client segments through a focus on organic growth and seamless connectivity to our Capital Markets and Canadian Commercial Banking and Wealth Management franchises. Our key strategic priorities continue to be:

- Building and deepening client relationships;
- Strengthening and diversifying our deposit base;
- Improving efficiency through data and technology; and
- Advancing the growth and transformation of our business.

2022 progress

In 2022, our continued focus on deep-rooted relationship banking continues to attract new clients and at the same time provides us with opportunities to do more with existing clients. As a result, we drove strong loan, deposit and AUM/AUA net flows. Investments in our business to support growth allow us to continue to expand the products and services we offer, improve processes and technology and meet client needs.

Building and deepening client relationships

- Drove solid loan and deposit growth, including continued expansion of our private banking business with existing commercial and wealth clients.
- Generated strong growth in AUM and AUA net flows, which helped to offset the impact of volatile investment markets during the year.
- Leveraged our strong partnership with our Capital Markets franchise to provide a wider range of products and services to U.S. commercial and wealth clients.
- Ranked as a Top Ten Registered Investment Advisor by *Barron's* for the third consecutive year.

Strengthening and diversifying our deposit base

- Maintained a diversified funding strategy through our commercial, private banking and retail clients.
- Continued growth in private banking.
- Expanded deposit gathering, including leveraging the rising rate environment to attract new clients to our CIBC Agility online savings platform.

Improving efficiency through data and technology

- Advanced the implementation of customer relationship management and data strategy initiatives to further the connectivity between teams, provide a consolidated view of our businesses and support a strong risk management infrastructure.
- Continued to refine client-facing processes making it easier for clients to bank with us, including launching the Zelle ® person-to-person payment platform.
- Began implementation of a consolidated wealth management system to improve client service.

Advancing the growth and transformation of our business

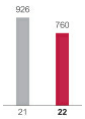
- Expanded Commercial Banking industry specialties with the launch of Equipment Financing, and added Junior Debt lending and advisory services.
- Further enhanced our risk and change management infrastructure to support our growth.

2022 financial review

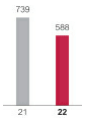
Revenue
(US$ billions)



Net income
($ millions)



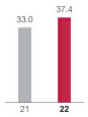
Net income
(US$ millions)



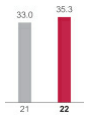
Operating leverage
(% in U.S. dollars)



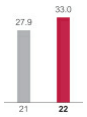
Average loans[1][2]
(US$ billions)



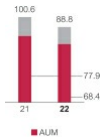
Average deposits[2]
(US$ billions)



Average commercial banking loans[1][2]
(US$ billions)



Assets under administration and management[3]
(US$ billions)



(1) Loan amounts are stated before any related allowances.
(2) Average balances are calculated as a weighted average of daily closing balances.
(3) AUM amounts are included in the amounts reported under AUA.

Our focus for 2023

To build on our momentum across U.S. Commercial Banking and Wealth Management, we will continue to focus on helping our clients achieve their ambitions by:

- Growing Commercial Banking by delivering expertise and unique solutions leveraging the strength of our franchise to provide lending and deposit services;
- Expanding Private Wealth and Private Banking with the high-net-worth and ultra-high-net-worth segments, and in fast-growing markets; and
- Investing in people, technology and infrastructure to scale our platform, strengthen our risk management capabilities, enhance data-driven decision making and create greater efficiencies.

Results in Canadian dollars[1]

$ millions, for the year ended October 31	2022	2021
Revenue		
Commercial banking	$ **1,613**	$ 1,444
Wealth management [2]	**844**	750
Total revenue [3]	**2,457**	2,194
Provision for (reversal of) credit losses		
Impaired	**113**	104
Performing	**105**	(179)
Provision for (reversal of) credit losses	**218**	(75)
Non-interest expenses	**1,328**	1,121
Income before income taxes	**911**	1,148
Income taxes	**151**	222
Net income	$ **760**	$ 926
Net income attributable to:		
Equity shareholders	$ **760**	$ 926
Total revenue [3]		
Net interest income	$ **1,655**	$ 1,449
Non-interest income	**802**	745
	$ **2,457**	$ 2,194
Average allocated common equity [5]	$ **10,422**	$ 8,975
Average assets ($ billions) [4]	$ **54.0**	$ 46.7
Average loans ($ billions) [4]	$ **48.3**	$ 41.4
Average deposits ($ billions) [4]	$ **45.6**	$ 41.4
AUA ($ billions) [6]	$ **121.0**	$ 124.5
AUM ($ billions) [6]	$ **93.2**	$ 96.4
Full-time equivalent employees	**2,472**	2,170

(1) For additional segmented information, see Note 30 to the consolidated financial statements.
(2) Includes revenue related to the U.S. Paycheck Protection Program.
(3) Included $8 million of income relating to the accretion of the acquisition date fair value discount on the acquired loans of The PrivateBank (2021: $15 million).
(4) Average balances are calculated as a weighted average of daily closing balances.
(5) For additional information, see the "Non-GAAP measures" section.
(6) Includes certain Canadian Commercial Banking and Wealth Management assets that U.S. Commercial Banking and Wealth Management providessub-advisory services for.

Results in U.S. dollars[1]

US$ millions, for the year ended October 31	2022	2021
Revenue		
Commercial banking	**$ 1,249**	$ 1,151
Wealth management [2]	**653**	597
Total revenue [3]	**1,902**	1,748
Provision for (reversal of) credit losses		
Impaired	**87**	82
Performing	**82**	(143)
Provision for (reversal of) credit losses	**169**	(61)
Non-interest expenses	**1,028**	893
Income before income taxes	**705**	916
Income taxes	**117**	177
Net income	**$ 588**	$ 739
Net income attributable to:		
Equity shareholders	**$ 588**	$ 739
Total revenue [3]		
Net interest income	**$ 1,281**	$ 1,154
Non-interest income	**621**	594
	$ 1,902	$ 1,748
Net interest margin on average interest-earning assets [4][5]	**3.42 %**	3.50 %
Efficiency ratio	**54.0 %**	51.1 %
Operating leverage	**(6.3)%**	8.5 %
Return on equity [6]	**7.3 %**	10.3 %
Average allocated common equity [6]	**$ 8,066**	$ 7,149
Average assets ($ billions) [4]	**$ 41.7**	$ 37.2
Average loans ($ billions) [4]	**$ 37.4**	$ 33.0
Average deposits ($ billions) [4]	**$ 35.3**	$ 33.0
AUA ($ billions) [7]	**$ 88.8**	$ 100.6
AUM ($ billions) [7]	**$ 68.4**	$ 77.9

(1) For additional segmented information, see Note 30 to the consolidated financial statements.
(2) Includes revenue related to the U.S. Paycheck Protection Program.
(3) Included US$6 million of income relating to the accretion of the acquisition date fair value discount on the acquired loans of The PrivateBank (2021: US$12 million).
(4) Average balances are calculated as a weighted average of daily closing balances.
(5) For additional information on the composition, see the "Glossary" section.
(6) For additional information, see the "Non-GAAP measures" section.
(7) Includes certain Canadian Commercial Banking and Wealth Management assets that U.S. Commercial Banking and Wealth Management providessub-advisory services for.

Financial overview

Net income was down $166 million or 18% (US$151 million or 20%) from 2021, primarily due to a provision for credit losses in the current year compared with a provision reversal in the prior year and higher non-interest expenses, partially offset by higher revenue.

Revenue

Revenue was up US$154 million or 9% from 2021.

Commercial banking revenue was up US$98 million or 9%, primarily due to higher net interest income from loan growth and higher fees from loan syndication, partially offset by lower loan margins.

Wealth management revenue was up US$56 million or 9%, primarily due to higher net interest income from deposit growth, higher deposit margins, and higher fee-based revenue driven by higher average AUA and AUM balances and net sales.

Net interest margin on average interest-earning assets was down 8 basis points, primarily due to lower loan margins, and lower loan repayment fees due to the PPP, partially offset by higher deposit margins.

Provision for (reversal of) credit losses

The current year included a provision for credit losses of US$169 million, while the prior year included a provision reversal of US$61 million. The current year included a provision for credit losses on performing loans due to unfavourable portfolio migration and model parameter updates, while the prior year included a provision reversal due to a favourable change in our economic outlook driven by the recovery from the COVID-19 pandemic. Provision for credit losses on impaired loans was up due to higher provisions in the capital goods manufacturing sector, partially offset by lower provisions in the real estate and construction sector.

Non-interest expenses

Non-interest expenses were up US$135 million or 15% from 2021, primarily due to higher employee-related and performance-based compensation, and higher spending of US$94 million on strategic initiatives in support of growth in our commercial banking platform and infrastructure build in our U.S. franchise.

Income taxes

Income taxes were down US$60 million or 34% from 2021, primarily due to lower income.

Average assets

Average assets were up US$4.5 billion or 12% from 2021, primarily due to growth in loans.

Assets under administration

AUA were down US$11.8 billion or 12% from 2021, primarily due to market depreciation, partially offset by net sales. AUM amounts are included in the amounts reported under AUA.

Capital Markets

Capital Markets provides integrated global markets products and services, investment banking advisory and execution, corporate banking solutions and top-ranked research to our clients around the world. It includes Direct Financial Services which focuses on expanding CIBC's digital capabilities to provide a cohesive set of direct banking, direct investing and innovative multi-currency payment solutions for CIBC's clients.

Our business strategy

Our goal is to deliver leading capital markets solutions to our North American and international clients by providing best-in-class insight, advice and execution. To enable CIBC's strategy and priorities, we collaborate with our partners across our bank to deepen and enhance client relationships. Our three key strategic priorities continue to be:

- Delivering the leading capital markets platform in Canada to our core clients;
- Building a North American client platform with global capabilities; and
- Focusing on connectivity to accelerate the growth of Direct Financial Services and deepen relationships across our bank.

2022 progress

In 2022, we continued to make progress on our strategic priorities with an emphasis on deepening client relationships, growing in the U.S. and enhancing connectivity across the bank. Collectively, these efforts have built a well-diversified Capital Markets business that delivers consistent performance and growth. Our growth in 2022 was enabled by our strong focus on our clients and favourable market conditions in Global Markets. In addition, we further expanded our Direct Financial Services business to generate more recurring revenue and attract new clients seeking a convenient, digitally-enabled banking and investing model.

Delivering the leading capital markets platform in Canada to our core clients

- Continued delivering industry-leading advice and capital markets solutions by expanding our Energy, Infrastructure and Transition group to complement our existing platform and enable the transition to a lower carbon future.
- Strengthened our platform by continuing to invest in talent and technology, including investments in our talent and simplifying processes to support our client-focused culture.
- Committed $100 million in limited partnership investments dedicated to investing in key climate tech and energy transition funds, driving the development of new climate innovations.
- Announced multi-year partnerships with the University of Calgary, the Schulich School of Business, and McGill University, to help foster the energy transition ecosystem and enable new ideas and develop a new generation of leaders.

Building a North American client platform with global capabilities

- Made a strategic investment in New York and London co-headquartered specialized private markets firm Sera Global, which is aligned with our strategy to accelerate our momentum in the U.S.
- Achieved top 10 ranking in financing for the renewable industry across North America for transactions that closed from January 1, 2022 to September 30, 2022 (North American Renewables League Tables by *Inframation*).
- Expanded Carbonplace (formally known as Project Carbon) with three new members, providing settlements infrastructure and systems for marketplaces and exchanges in the voluntary carbon market, helping to enable the sustainability ambitions of our clients.
- Recipient of Global Finance's North American Regional Awards for Outstanding Leadership in Transition & Sustainability Linked Bonds and for Outstanding Leadership in Green Bonds.
- CIBC Cleary Gull was the recipient of M&A Atlas Americas Awards for Americas Industries Manufacturing Deal of the Year (Middle Market) and USA Deal of the Year (Small Markets).

Focusing on connectivity to accelerate the growth of Direct Financial Services and deepen relationships across our bank

- Expanded our industry-first Canadian Depositary Receipts lineup as part of our ongoing commitment to developing innovative, market-based solutions that meet investor needs.
- Broadened the banking services available to clients through Simplii Financial, becoming the first Canadian digital banking brand to offer recurring and future-dated *Interac* e-Transfer transactions and establish a digital gift card marketplace, in addition to launching a U.S. dollar savings account, partnerships with Visa Direct and MoneyGram, and winning Best Bank in Canada for Value for Money by Ipsos.
- Continued to enhance our offerings to clients within our Global Money Transfer platform, with services such as Cash Pickup and Digital Identity Verification.

As a leading capital markets franchise in Canada and banking partner to our clients around the world, Capital Markets acted as:

- Financial advisor to Blackstone Infrastructure Partners on its US$3 billion equity investment in Invenergy Renewable Holdings LLC to accelerate renewable development activities.
- Financial advisor to Innergex Renewable Energy Inc. on its acquisition of Aela Generación S.A. and Aela Energía SpA, one of Chile's largest independent power producers of renewable energy, for a transaction value of US$686 million; lead on a $173 million issue of common shares and provision of acquisition credit facilities in support of the transaction; also, joint lead placement agent on a US$710 million dual tranche private placement of senior notes for Aela Generación S.A. and assisted in the implementation of a financial risk management strategy.
- Financial advisor to Cameco Corporation on the acquisition of Westinghouse Electric Company, through a strategic partnership with Brookfield Renewable Partners, for a transaction value of US$7.9 billion (closing expected in the second half of 2023); lead on a US$748 million issue of common shares and joint bookrunner, joint lead arranger and administrative agent on a US$600 million senior term loan facility and joint bookrunner, joint lead arranger and syndication agent on a US$1 billion senior 364-day bridge facility in support of the acquisition.

- Exclusive financial advisor to TELUS Corporation on its acquisition of LifeWorks Inc. for a transaction value of $2.9 billion.
- Exclusive financial advisor to Resolute Forest Products Inc. on its sale to Paper Excellence Group for a transaction value of US$2.7 billion (expected to close in the first half of 2023).
- Joint bookrunner on a number of corporate green/sustainable bonds including TELUS Corporation's $1.1 billion sustainability-linked notes, iA Financial Corporation's $300 million sustainable debentures and Ontario Power Generation's $300 million green notes offerings as well as joint bookrunner for the Government of Canada's $5 billion green bonds, Province of Ontario's $1.75 billion green bond, Province of Quebec's $1 billion green notes and European Investment Bank's $1.4 billion climate awareness bond offerings.
- Led the structuring and execution of a number of Sustainability-Linked Loans (SLLs) in Canada, including acting as joint bookrunner, co-lead arranger and sustainability structuring agent on a SLL overlay to the $750 million Revolver for Cogeco Communications Inc. and acting as co-sustainability structuring agent for Hydro One's amendments to incorporate the SLL structure to the existing $2.3 billion Hydro One Inc. and $250 million Hydro One Limited syndicated credit facilities. Hydro One is the first organization in Canada to incorporate increasing Indigenous procurement spend as a key sustainability performance measure in the loan.

2022 financial review



Our focus for 2023

To support our bank's long-term objectives, Capital Markets remains focused on delivering profitable growth by deepening client relationships and collaborating with our partners across our bank to help make our clients' ambitions a reality. We will continue to do this by:

- Maintaining our focused approach to client coverage in Canada;
- Growing our North American platform by further expanding our U.S. reach and broadening the services offered to clients; and
- Strengthening our connectivity, technology and innovation efforts to bring more of our bank's offerings to our clients.

Results[1]

$ millions, for the year ended October 31	2022	2021
Revenue		
Global markets	**$ 2,322**	$ 2,076
Corporate and investment banking	**1,700**	1,616
Direct financial services	**979**	828
Total revenue[2]	**5,001**	4,520
Provision for (reversal of) credit losses		
Impaired	**(31)**	32
Performing	**(31)**	(132)
Reversal of credit losses	**(62)**	(100)
Non-interest expenses	**2,437**	2,117
Income before income taxes	**2,626**	2,503
Income taxes[2]	**718**	646
Net income	**$ 1,908**	$ 1,857
Net income attributable to:		
Equity shareholders	**$ 1,908**	$ 1,857
Efficiency ratio	**48.7 %**	46.8 %
Operating leverage	**(4.4)%**	1.7 %
Return on equity[3]	**21.3 %**	25.6 %
Average allocated common equity[3]	**$ 8,978**	$ 7,241
Average assets ($ billions)[4]	**$ 284.3**	$ 255.1
Average loans and acceptances ($ billions)[4]	**$ 62.5**	$ 47.8
Average deposits ($ billions)[4]	**$ 100.5**	$ 86.0
Full-time equivalent employees[5]	**2,384**	2,225

(1) For additional segmented information, see Note 30 to the consolidated financial statements.
(2) Revenue and income taxes are reported on a TEB. Accordingly, revenue and income taxes include a TEB adjustment of $211 million (2021: $204 million). The equivalent amounts are offset in the revenue and income taxes of Corporate and Other.
(3) For additional information, see the "Non-GAAP measures" section.
(4) Average balances are calculated as a weighted average of daily closing balances.
(5) In 2021, 79 full-time equivalent employees related to Simplii Financial's call centre operations were transferred to Capital Markets from Corporate and Other, with no financial impact as the costs were previously allocated to Direct financial services.

Financial overview
Net income was up $51 million or 3% from 2021, primarily due to higher revenue, partially offset by higher non-interest expenses and a lower provision reversal in the current year.

Revenue
Revenue was up $481 million or 11% from 2021.

Global markets revenue was up $246 million or 12%, primarily due to higher foreign exchange, global collateral finance and equity derivatives trading revenue, partially offset by lower commodities trading revenue.

Corporate and investment banking revenue was up $84 million or 5%, primarily due to higher corporate banking and advisory revenue, and higher gains from our investment portfolios, partially offset by lower equity and debt underwriting activity.

Direct financial services revenue was up $151 million or 18%, primarily due to higher revenue from Simplii Financial, and higher volumes and growth in our foreign exchange and payments business, partially offset by lower trading volumes in direct investing.

Provision for (reversal of) credit losses
Provision reversal of credit losses was down $38 million or 38% from 2021. The provision reversal of credit losses on performing loans was down as the prior year included a favourable change in our economic outlook driven by the recovery from the COVID-19 pandemic, and favourable portfolio migration. The current year included a provision reversal of credit losses on impaired loans attributable to the oil and gas, and utilities sectors, while the prior year included a provision for credit losses mainly in the utilities sector.

Non-interest expenses
Non-interest expenses were up $320 million or 15% from 2021, primarily due to higher spending on strategic initiatives, and higher employee-related and performance-based compensation.

Income taxes
Income taxes were up $72 million or 11% from 2021, primarily due to higher income.

Average assets
Average assets were up $29.2 billion or 11% from 2021, primarily due to higher loan balances, trading securities and higher derivative valuation.

Corporate and Other

Corporate and Other includes the following functional groups – Technology, Infrastructure and Innovation, Risk Management, People, Culture and Brand, Finance and Enterprise Strategy, as well as other support groups. The expenses of these functional and support groups are generally allocated to the business lines within the SBUs. The majority of the functional and support costs of CIBC Bank USA are recognized directly in the U.S. Commercial Banking and Wealth Management SBU. Corporate and Other also includes the results of CIBC FirstCaribbean and other strategic investments, as well as other income statement and balance sheet items not directly attributable to the business lines.

Results[1]

$ millions, for the year ended October 31	2022	2021
Revenue		
International banking	$ **778**	$ 687
Other	**(566)**	(206)
Total revenue[2]	**212**	481
Provision for (reversal of) credit losses		
Impaired	**59**	76
Performing	**(57)**	(54)
Provision for credit losses	**2**	22
Non-interest expenses	**1,407**	1,440
Loss before income taxes	**(1,197)**	(981)
Income taxes[2]	**(628)**	(485)
Net income (loss)	$ **(569)**	$ (496)
Net income (loss) attributable to:		
Non-controlling interests	$ **23**	$ 17
Equity shareholders	**(592)**	(513)
Full-time equivalent employees	**26,020**	23,017

(1) For additional segmented information, see Note 30 to the consolidated financial statements.
(2) Revenue and income taxes of Capital Markets are reported on a TEB. The equivalent amounts are offset in the revenue and income taxes of Corporate and Other. Accordingly, revenue and income taxes include a TEB adjustment of $211 million (2021: $204 million).

Financial overview

Net loss was up $73 million from 2021, due to lower revenue, partially offset by lower non-interest expenses and lower provision for credit losses.

Revenue

Revenue was down $269 million from 2021.

International banking revenue was up $91 million, primarily due to the impact of foreign exchange translation, higher net product spreads that benefitted from the rising interest rate environment, and higher fee-based revenue in CIBC FirstCaribbean.

Other revenue was down $360 million, primarily due to lower treasury revenue related to an increase in funding costs from higher credit and liquidity spreads.

Provision for (reversal of) credit losses

Provision for credit losses was down $20 million from 2021. The provision reversal of credit losses on performing loans was comparable to the prior year. The provision for credit losses on impaired loans was down due to lower provisions in CIBC FirstCaribbean.

Non-interest expenses

Non-interest expenses were down $33 million from 2021, mainly due to a lower charge related to the consolidation of our real estate portfolio, shown as an item of note, and lower unallocated corporate support costs, partially offset by higher employee termination costs and higher expenses in CIBC FirstCaribbean.

Income taxes

Income tax benefit was up $143 million from 2021, primarily due to a higher loss.

Financial condition

Review of condensed consolidated balance sheet

$ millions, as at October 31	2022	2021
Assets		
Cash and deposits with banks	**$ 63,861**	$ 56,997
Securities	**175,879**	161,401
Securities borrowed and purchased under resale agreements	**84,539**	79,940
Loans and acceptances	**528,657**	462,879
Derivative instruments	**43,035**	35,912
Other assets	**47,626**	40,554
	$ 943,597	$ 837,683
Liabilities and equity		
Deposits	**$ 697,572**	$ 621,158
Obligations related to securities lent, sold short and under repurchase agreements	**97,308**	97,133
Derivative instruments	**52,340**	32,101
Acceptances	**11,586**	10,961
Other liabilities	**28,117**	24,961
Subordinated indebtedness	**6,292**	5,539
Equity	**50,382**	45,830
	$ 943,597	$ 837,683

Assets

Total assets as at October 31, 2022 were up $105.9 billion or 13% from 2021, of which approximately $27 billion was due to the appreciation of the U.S. dollar.

Cash and deposits with banks increased by $6.9 billion or 12%, primarily due to higher short-term placements in Treasury.

Securities increased by $14.5 billion or 9%, primarily due to increases in U.S. Treasury and Canadian government debt securities, partially offset by decreases in corporate equity. Further details on the composition of securities is provided in Note 4 to the consolidated financial statements.

Securities borrowed and purchased under resale agreements increased by $4.6 billion or 6%, primarily due to client-driven activities.

Net loans and acceptances increased by $65.8 billion or 14%, primarily due to increases in business and government loans, which included the impact of foreign exchange translation, Canadian residential mortgages, and the credit card portfolio, which included the addition of the Canadian Costco credit card portfolio acquired in the second quarter. Further details on the composition of loans and acceptances are provided in the "Supplementary annual financial information" section and Note 5 to the consolidated financial statements.

Derivative instruments increased by $7.1 billion or 20%, largely driven by increases in foreign exchange derivatives valuation, partially offset by a decrease in equity derivatives valuation.

Other assets increased by $7.1 billion or 17%, primarily due to increases in collateral pledged for derivatives, software and other intangibles, and tax receivables, partially offset by a decrease in broker receivables.

Liabilities

Total liabilities as at October 31, 2022 were up $101.4 billion or 13% from 2021, of which approximately $27 billion was due to the appreciation of the U.S. dollar.

Deposits increased by $76.4 billion or 12%, primarily due to increased wholesale funding and business and government deposits, both of which included the impact of foreign exchange translation, and domestic retail volume growth. Further details on the composition of deposits are provided in the "Supplementary annual financial information" section and Note 10 to the consolidated financial statements.

Obligations related to securities lent, sold short and under repurchase agreements was comparable with the prior year.

Derivative instruments increased by $20.2 billion or 63%, largely driven by increases in foreign exchange and interest rate derivatives valuation, partially offset by a decrease in equity derivatives valuation.

Acceptances increased by $0.6 billion or 6%, driven by client activities.

Other liabilities increased by $3.2 billion or 13%, primarily due to increases in accrued interest payable and broker payables.

Subordinated indebtedness increased by $0.8 billion or 14%, primarily due to the issuance of subordinated indebtedness in the second quarter. For further details see the "Capital management" section.

Equity

Equity as at October 31, 2022 increased $4.6 billion or 10% from 2021, primarily due to a net increase in retained earnings, accumulated other comprehensive income resulting from a net foreign currency translation gain related to our net investment in foreign operations, the issuance of a limited recourse capital note in the third quarter and the issuance of preferred shares in the fourth quarter, partially offset by net losses recognized in other comprehensive income related to debt securities measured at FVOCI and net losses on cash flow hedges, and the redemption of preferred shares in the third quarter. For further details see the "Capital management" section.

Capital management

Our capital strength protects our depositors and creditors from risks inherent in our businesses. Our overall capital management objective is to maintain a strong and efficient capital base that:

- Acts as a buffer to absorb unexpected losses while providing sustainable returns to our shareholders;
- Enables our businesses to grow and execute on our strategy;
- Demonstrates balance sheet strength and our commitment to prudent balance sheet management; and
- Supports us in maintaining a favourable credit standing and raising additional capital or other funding on attractive terms.

We actively manage our capital to meet these objectives in support of our overall enterprise strategy. We also consider the economic outlook, and the overall operating environment when deploying our capital and may choose to operate with greater levels of capital based on our view of potential downside risks.

Capital management and planning framework

We maintain a capital management policy that establishes our capital management principles in the context of our risk appetite to support our capital management objectives. Our capital management policy is reviewed and approved by the Board of Directors (the Board) in support of our Internal Capital Adequacy Assessment Process (ICAAP). The policy includes guidelines that relate to capital strength, capital mix, dividends and return of capital, and unconsolidated capital adequacy of regulated entities, based on regulatory requirements and our risk appetite. The level of capital and capital ratios are continually monitored relative to our regulatory minimums and internal targets and the amount of capital required may change in relation to our business growth, risk appetite, and the business and regulatory environment.

Capital planning is a crucial element of our overall financial planning process and establishment of strategic objectives and is developed in accordance with the capital management policy. Each year, a capital plan and three-year outlook are developed as part of the financial plan, which establishes targets for the coming year and business plans to achieve those targets. The capital plan is also stress-tested as a part of our enterprise-wide stress testing process to ensure CIBC is adequately capitalized through severe but plausible stress scenarios (see the "Enterprise-wide stress testing" section for further details). Our capital position and forecasts are monitored throughout the year and assessed against the capital plan.

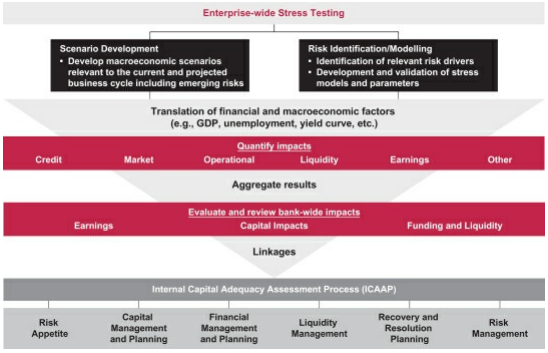
The Board, with endorsement from the Risk Management Committee (RMC), provides oversight of CIBC's capital management through the approval of our risk appetite, capital policy and plan. The RMC is provided with regular updates on our capital position including performance to date, updated forecasts, and any material regulatory developments that may impact our future capital position. Treasury is responsible for the overall management of capital including planning, forecasting, and execution of the plan, with senior management oversight provided by the Global Asset Liability Committee (GALCO).

Enterprise-wide stress testing

We perform enterprise-wide stress testing on at least an annual basis. The results are an integral part of our ICAAP, as defined by Pillar 2 of the Basel III Accord, wherein we identify and measure our risks on an ongoing basis in order to ensure that the capital available is sufficient to cover all risks across CIBC, including the impacts of stress testing. We maintain a process that determines plausible but stressed economic scenarios such as global recessions and housing price shocks, and then apply these stress scenarios to our bank-wide exposures to determine the impact on the consolidated statement of income, RWA requirements, and consequently, key capital ratios. This helps us analyze the potential risks within our portfolios and establish prudent capital levels in excess of the regulatory minimum requirements. All of the elements of capital are monitored throughout the year and the capital plan is adjusted as appropriate.

Management determines the range of scenarios to be tested. Macroeconomic stress test scenarios are designed to be both severe and plausible and designed to be consistent with OSFI's stress testing framework to ensure that they are comprehensive.

The following diagram summarizes the enterprise-wide stress testing process including the development of scenarios, identification of risk drivers and linkages to our other bank-wide ICAAP processes. The process includes syndication with our economists and lines of business to ensure scenarios are relevant to our businesses and there is a consistent interpretation of the scenarios across CIBC.



Stress test scenarios are designed to capture a wide range of macroeconomic and financial variables that are relevant to assess the impact on our specific portfolios. This includes, for example, GDP, unemployment, house prices, interest rates and equity prices.

The stress testing process is comprehensive, using a bottoms-up analysis of each of our bank-wide portfolios, and the results are analyzed on a product, location and sector basis. Our stress testing approach combines the use of statistical models and expert judgment to ensure the results are reasonable in estimating the impacts of the stress scenarios.

Stress testing methodologies and results are subject to a detailed review and challenge from both our lines of business and Risk Management. Stress testing results are presented for review to the RMC and are also shared with the Board and OSFI. The results of our enterprise-wide stress testing are used to highlight any vulnerabilities and ensure we remain well capitalized against regulatory and management expectations.

A key objective of the enterprise-wide stress tests is to identify key areas of exposure and foster discussion of management actions that would be taken to mitigate the impact of stress scenarios. Contingency planning and strategies for extreme stress scenarios are included in the development and maintenance of CIBC's recovery and resolution plans. These plans include credible remedial actions that may be considered to counteract and recover from stress, or promote CIBC's orderly resolution with limited systemic impacts. Additional information on stress testing is provided in the "Management of risk" section.

Recovery plan

FRFIs must maintain robust and credible recovery plans that identify options to restore financial strength and viability when under severe stress. CIBC continues to maintain and update its recovery plan in line with OSFI requirements and industry best practices.

Resolution plan

The Canada Deposit Insurance Corporation (CDIC) Resolution Planning By-law establishes a statutory framework pursuant to which domestic systemically important banks (D-SIBs) submit and maintain resolution plans that are critical to support resolvability and financial sector stability. CDIC, Canada's resolution authority for its member institutions, including D-SIBs, has issued guidance for the development, maintenance and testing of comprehensive resolution plans and related strategies to demonstrate their operational capability, thus ensuring resolvability can be achieved in an orderly fashion. CIBC's resolution plan has been developed and maintained in alignment with guidance and is in compliance with CDIC's Resolution Planning By-law.

Regulatory capital requirements

Our regulatory capital requirements are determined in accordance with guidelines issued by OSFI, which are based upon the capital standards developed by the BCBS.

Regulatory capital consists of CET1, Tier 1 and Tier 2 capital. The tiers of regulatory capital indicate increasing quality/permanence and the ability to absorb losses. The major components of our regulatory capital are summarized as follows:



(1) Excluding AOCI relating to cash flow hedges and changes to fair value option (FVO) liabilities attributable to changes in own credit risk.
(2) In response to the COVID 19 pandemic, OSFI has provided regulatory flexibility by implementing transitional arrangements for the treatment of expected loss provisioning, such that part of the allowances that would otherwise be included in Tier 2 capital will instead qualify for inclusion in CET1 capital subject to certain scalars and limitations until the end of fiscal 2022. The transitional arrangement will no longer apply in Q1 2023. See the "Continuous enhancement to regulatory capital requirements" section for additional details.

Qualifying regulatory capital instruments must be capable of absorbing loss at the point of non-viability of the financial institution.

OSFI requires all institutions to achieve target capital ratios which include buffers. Targets may be higher for certain institutions at OSFI's discretion. CIBC has been designated by OSFI as a domestic systemically important bank (D-SIB) in Canada. D-SIBs are subject to a CET1 surcharge equal to 1.0% of RWA. In addition, OSFI expects D-SIBs to hold a Domestic Stability Buffer (DSB) requirement intended to address Pillar 2 risks that are not adequately captured in the Pillar 1 capital requirements. The DSB is currently set at 2.5% but can range from 0% to 2.5% of RWA. Additionally, banks need to hold an incremental countercyclical capital buffer equal to their weighted-average buffer requirement in Canada and across certain other jurisdictions where they have private sector credit exposures. OSFI's current targets are summarized below:

As at October 31, 2022	Minimum	Capital conservation buffer	D-SIB buffer	Pillar 1 targets(1)	Domestic Stability Buffer(2)	Target including all buffer requirements
CET1 ratio	**4.5 %**	**2.5 %**	**1.0 %**	**8.0 %**	**2.5 %**	**10.5 %**
Tier 1 capital ratio	**6.0 %**	**2.5 %**	**1.0 %**	**9.5 %**	**2.5 %**	**12.0 %**
Total capital ratio	**8.0 %**	**2.5 %**	**1.0 %**	**11.5 %**	**2.5 %**	**14.0 %**

(1) The countercyclical capital buffer applicable to CIBC is insignificant as at October 31, 2022.
(2) On June 22, 2022, OSFI announced the DSB will remain at 2.5% of total RWA. This level remains unchanged from October 31, 2021.

In the first quarter of 2022, we increased the common equity allocated to our SBUs based on a target CET1 ratio of 11%, from 10% in 2021, for the purpose of capital management. Further increases are possible as a result of the downside risks inherent in the economic outlook.

Capital adequacy requirements are applied on a consolidated basis consistent with our financial statements, except for our insurance subsidiaries (CIBC Cayman Reinsurance Limited and CIBC Life Insurance Company Limited), which are excluded from the regulatory scope of consolidation. The basis of consolidation applied to our financial statements is described in Note 1 to the consolidated financial statements. CIBC Life Insurance Company Limited is subject to OSFI's Life Insurance Capital Adequacy Test.

Risk-weighted assets

The following table provides a summary of permissible regulatory capital approaches and those adopted by CIBC:

Risk category	Permissible regulatory capital approaches	Approach adopted by CIBC
Credit risk[1]	Basel provides three approaches for calculating credit risk capital requirements: • Standardized • Foundation • Advanced internal ratings-based (AIRB) OSFI expects financial institutions in Canada with Total capital in excess of $5 billion to use the AIRB approach for all material portfolios and credit businesses. OSFI provides two approaches for calculating counterparty credit risk (CCR) for derivatives transactions: • Standardized Approach (SA-CCR) • Internal Model Method (IMM) OSFI provides four approaches for calculating CCR for repo-style transactions: • Comprehensive approach, with supervisory haircuts • Comprehensive approach, with own estimate haircuts • Repo VaR approach • IMM Permitted approaches for equity positions in the banking book (which includes equity investments in funds) include: • Standardized • Market-based • Look-through • Mandate-based • Fall-back Basel provides the following approaches for calculating capital requirements for securitization positions: • Internal Ratings-Based Approach (SEC-IRBA) • Internal Assessment Approach (SEC-IAA) • External Ratings-Based Approach (SEC-ERBA) • Standardized Approach (SEC-SA)	We have adopted the AIRB approach for the majority of our credit portfolios. Under this methodology, we utilize our own internal estimates to determine probability of default (PD), loss given default (LGD), maturity, and exposure at default (EAD) for lending products and securities. We utilize the standardized approach for credit portfolios within CIBC Bank USA and CIBC FirstCaribbean. We periodically review portfolios under the standardized approach for consideration of adoption of the AIRB approach. Effective April 30, 2020, CIBC has adopted the IMM approach for calculating CCR exposure for qualifying derivative transactions. Certain transactions remain under the SA-CCR approach. The comprehensive approach, with supervisory haircuts, is used for credit risk mitigation for repo-style transactions. We use the standardized approach for equity positions in the banking book and both the look-through and mandate-based approaches for equity investments in funds. We use SEC-IRBA, SEC-IAA, SEC-ERBA and SEC-SA for securitization exposures in the banking book.
Market risk	Market risk capital requirements can be determined under the following approaches: • Standardized • Internal models Internal models involve the use of internal VaR models to measure market risk and determine the appropriate capital requirement. The stressed VaR and incremental risk charge (IRC) also form part of the internal models approach.	We use the internal models approach to calculate market risk capital. Our internal market risk models comprise VaR, stressed VaR, IRC and a capital charge for risk not captured in VaR. We also use SEC-ERBA for trading book securitization positions.
Operational risk	Operational risk capital requirements can be determined under the following approaches: • Basic indicator approach • Standardized approach	We use the standardized approach based on OSFI rules to calculate operational risk capital.

(1) Includes CCR.

We also calculate a capital floor based on the standardized approaches. If our capital requirement is lower than that calculated by reference to the standardized approaches with a floor adjustment factor applied, currently at 70%, an adjustment to our RWA would be required.

Continuous enhancement to regulatory capital requirements

The BCBS and OSFI have published a number of proposals for changes to the existing regulatory capital requirements to strengthen the regulation, supervision, and practices of banks, as well as to respond to changes in market conditions as a result of the COVID-19 pandemic, with the overall objective of enhancing financial stability. The discussion below provides a summary of BCBS and OSFI publications that have been issued since our 2021 Annual Report and transitional arrangements in response to the COVID-19 pandemic.

Basel III reforms and revised Pillar 3 disclosure requirements

On January 31, 2022, OSFI released final capital, leverage, liquidity and disclosure guidelines that incorporate the final Basel III reforms, as well as certain updates to the treatment of credit valuation adjustments (CVA), market risk hedges of other valuation adjustments of over-the-counter (OTC) derivatives and management of operational risk. The implementation date for these changes is the second quarter of 2023, with the exceptions of revisions to the CVA and market risk frameworks, which is the first quarter of 2024. The revisions to the LAR Guideline will be implemented as of April 1, 2023. Primary changes include:

- Revisions to both the internal ratings-based (IRB) approach and standardized approach to credit risk;
- Revised operational, market risk and CVA frameworks;
- Updated CET1 capital deductions for certain assets;
- An updated capital output floor based on the revised standardized approach noted above, with the phase-in of the floor factor over three years commencing in the second quarter of 2023;
- Modification to the Leverage Ratio framework, including a buffer requirement for D-SIBs; and
- Enhancements to the LAR Guideline, including changes to net cumulative cash flow (NCCF) requirements.

OSFI also announced revisions to existing Pillar 3 disclosure to be implemented in the second quarter of 2023 and new Pillar 3 disclosure to be implemented in the fourth quarter of 2023 for D-SIBs.

On November 11, 2021, the BCBS published "Revisions to market risk disclosure requirements", which included a number of adjustments to reflect the revised market risk framework introduced in January 2019. OSFI has not adopted the related changes and currently requires implementation of the 2019 market risk framework in the first quarter of 2024.

Transitional arrangements for the capital treatment of expected loss provisioning

In response to the COVID-19 pandemic, OSFI introduced transitional arrangements for ECL provisioning that are available under the Basel Framework. These transitional arrangements were effective immediately upon being announced by OSFI on March 27, 2020 and result in a portion of allowances that would otherwise be included in Tier 2 capital qualifying for inclusion in CET1 capital. The amount of ECL allowances eligible for inclusion in CET1 capital is determined based on the increase in stage 1 and stage 2 allowances relative to balances as at January 31, 2020 as a baseline. This amount is then adjusted for tax effects and is subject to a scaling factor that decreases over time. The scaling factor has been set at 70% for fiscal 2020, 50% for fiscal 2021, and 25% for fiscal 2022. For exposures under the IRB approach, the lower of this amount and excess allowances otherwise eligible for inclusion in Tier 2 capital is included as CET1 capital under the transitional arrangements. The temporary transitional arrangements for ECL provisioning will no longer apply after October 31, 2022.

Leverage ratio

On April 9, 2020, OSFI announced temporary exclusion of central bank reserves and qualifying sovereign-issued securities from the leverage ratio exposure measure in response to the onset of the COVID-19 pandemic. Starting January 1, 2022, the temporary exclusion of qualifying sovereign-issued securities from the leverage ratio exposure measure was no longer applicable. On September 13, 2022, OSFI announced that the temporary exclusion of central bank reserves from the leverage exposure measure will be no longer applicable effective April 1, 2023. As noted above, effective February 1, 2023, D-SIBs will be expected to have leverage ratios that meet or exceed 3.5%, including a leverage ratio buffer introduced under the modified Leverage Ratio framework as part of Basel III reforms.

We continue to monitor and prepare for developments impacting regulatory capital requirements and disclosures.

Regulatory capital and ratios

The components of our regulatory capital and ratios under Basel III are presented in the table below:

$ millions, as at October 31	2022	2021
Common Equity Tier 1 (CET1) capital: instruments and reserves		
Directly issued qualifying common share capital plus related stock surplus	**$ 14,841**	$ 14,461
Retained earnings	**28,823**	25,793
AOCI (and other reserves)	**1,594**	1,069
Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)	**107**	116
CET1 capital before regulatory adjustments	**45,365**	41,439
CET1 capital: regulatory adjustments		
Prudential valuation adjustments	**23**	18
Goodwill (net of related tax liabilities)	**5,268**	4,877
Other intangibles other than mortgage-servicing rights (net of related tax liabilities)	**2,289**	1,737
Deferred tax assets excluding those arising from temporary differences (net of related tax liabilities)	**15**	7
Defined benefit pension fund net assets (net of related tax liabilities)	**1,071**	1,051
Other deductions or regulatory adjustments to CET1 as determined by OSFI (1)	**(170)**	(209)
Other	**(136)**	207
Total regulatory adjustments to CET1 capital	**8,360**	7,688
CET1 capital	**37,005**	33,751
Additional Tier 1 (AT1) capital: instruments		
Directly issued qualifying AT1 instruments plus related stock surplus (2)	**4,923**	4,325
Directly issued capital instruments subject to phase out from AT1 (3)	**–**	251
AT1 instruments issued by subsidiaries and held by third parties (amount allowed in AT1)	**18**	17
AT1 capital	**4,941**	4,593
Tier 1 capital (T1 = CET1 + AT1)	**41,946**	38,344
Tier 2 capital: instruments and provisions		
Directly issued qualifying Tier 2 instruments plus related stock surplus (4)	**5,716**	4,945
Directly issued capital instruments subject to phase out from Tier 2	**–**	451
Tier 2 instruments issued by subsidiaries and held by third parties (amount allowed in Tier 2)	**25**	22
General allowances	**576**	440
Tier 2 capital (T2)	**6,317**	5,858
Total capital (TC = T1 + T2)	**$ 48,263**	$ 44,202
Total RWA	**$ 315,634**	$ 272,814
Capital ratios		
CET1 ratio	**11.7 %**	12.4 %
Tier 1 capital ratio	**13.3 %**	14.1 %
Total capital ratio	**15.3 %**	16.2 %

(1) Includes the impact of the ECL transitional arrangement announced by OSFI on March 27, 2020 in response to the onset of theCOVID-19 pandemic. The transitional arrangement results in a portion of ECL allowances that would otherwise be included in Tier 2 capital qualifying for inclusion in CET1 capital. The amount is subject to certain adjustments and limitations until the end of 2022.
(2) Comprised of non-viability contingent capital (NVCC) preferred shares and Limited Recourse Capital Notes (LRCN).
(3) Comprised of CIBC Tier 1 Notes – Series B due June 30, 2108. On November 1, 2021, CIBC Capital Trust redeemed all $300 million of its Tier 1 Notes – Series B.
(4) Comprised of certain debentures which qualify as NVCC.

CET1 ratio

The CET1 ratio at October 31, 2022 decreased 0.7% from October 31, 2021, driven by the impact of an increase in RWA, partially offset by the increase in CET1 capital.

The increase in RWA was primarily due to increased book size from organic growth, the impact of foreign exchange translation, the acquisition of the Canadian Costco credit card portfolio, increased operational risk levels and capital model updates.

The increase in CET1 capital was primarily the result of internal capital generation (net income less dividends and distributions) and the impact of foreign currency translation, partially offset by a decrease in AOCI related to debt securities measured at FVOCI and higher intangible assets including the impact from the acquisition of the Canadian Costco credit card portfolio.

Tier 1 capital ratio

The Tier 1 capital ratio at October 31, 2022 decreased 0.8% from October 31, 2021, primarily due to the factors affecting the CET1 ratio noted above, the redemption of Non-cumulative Class A Preferred Shares Series 45 (NVCC) (Series 45 shares) and the redemption of CIBC Tier 1 notes which were subject to phase-out rules for capital instruments. These factors are partially offset by the issuance of Limited Recourse Capital Notes Series 3 (LRCN Series 3 Notes) and Non-cumulative Class A Preferred Shares Series 56 (NVCC) (Series 56 shares). See the "Capital initiatives" section below for further details.

Total capital ratio

The Total capital ratio at October 31, 2022 decreased 0.9% from October 31, 2021, primarily due to the factors affecting the Tier 1 capital ratio noted above and the phase-out of non-qualifying subordinated indebtedness, partially offset by a $1.0 billion issuance of Tier 2 capital instrument in the current year. See the "Capital initiatives" section below for further details.

Movement in total regulatory capital

Changes in regulatory capital under Basel III are presented in the table below:

$ millions, for the year ended October 31	2022	2021
CET1 capital		
Balance at beginning of year	**$ 33,751**	$ 30,876
Shares issued in lieu of cash dividends (add back)	**153**	132
Other issue of common shares	**248**	326
Purchase of common shares for cancellation	**(29)**	–
Premium on purchase of common shares for cancellation	**(105)**	–
Net income attributable to equity shareholders	**6,220**	6,429
Dividends and distributions	**(3,125)**	(2,780)
Change in AOCI balances		
Currency translation differences	**1,753**	(1,115)
Securities measured at FVOCI	**(889)**	(43)
Cash flow hedges [1]	**(799)**	(137)
Fair value change of FVO liabilities attributable to changes in credit risk	**262**	12
Post-employment defined benefit plans	**198**	917
Removal of own credit spread (net of tax)	**(468)**	(9)
Shortfall of allowance to expected losses	**–**	–
Goodwill and other intangible assets (deduction, net of related tax liabilities)	**(943)**	225
Other, including regulatory adjustments and transitional arrangements [1][2]	**778**	(1,082)
CET1 capital balance at end of year	**$ 37,005**	$ 33,751
AT1 capital		
Balance at beginning of year	**$ 4,593**	$ 3,899
AT1 eligible capital issues	**1,400**	750
Impact of the cap on inclusion for instruments subject to phase out [3]	**(251)**	(51)
Redeemed capital	**(800)**	–
Other, including regulatory adjustments	**(1)**	(5)
AT1 capital balance at end of year	**$ 4,941**	$ 4,593
Tier 2 capital		
Balance at beginning of year	**$ 5,858**	$ 6,194
New Tier 2 eligible capital issues	**1,000**	1,000
Redeemed capital	**–**	(1,000)
Impact of the cap on inclusion for instruments subject to phase out	**(451)**	(150)
Other, including change in regulatory adjustments [2]	**(90)**	(186)
Tier 2 capital balance at end of year	**$ 6,317**	$ 5,858
Total capital balance at end of year	**$ 48,263**	$ 44,202

(1) Net change in cash flow hedges is included in "Change in AOCI balances" then derecognized in "Other, including regulatory adjustments and transitional arrangements".
(2) Includes the impact of the ECL transitional arrangement announced by OSFI on March 27, 2020 in response to the onset of theCOVID-19 pandemic. The transitional arrangement results in a portion of ECL allowances that would otherwise be included in Tier 2 capital qualifying for inclusion in CET1 capital. The amount is subject to certain adjustments and limitations until the end of fiscal 2022.
(3) On November 1, 2021, CIBC Capital Trust, a trust wholly owned by CIBC, redeemed all $300 million of its Tier 1 Notes – Series B, of which $251 million was recognized as AT1 capital as at October 31, 2021.

Components of risk-weighted assets

The components of our RWA and corresponding minimum total capital requirements are presented in the table below:

$ millions, as at October 31	2022		2021	
	RWA	**Minimum total capital required** [1]	RWA	Minimum total capital required [1]
Credit risk [2]				
Standardized approach				
Corporate	**$ 56,160**	**$ 4,493**	$ 43,768	$ 3,501
Sovereign	**1,446**	**116**	1,418	113
Banks	**446**	**36**	382	31
Real estate secured personal lending	**2,467**	**197**	2,153	172
Other retail	**3,824**	**306**	976	78
Trading book	**101**	**8**	416	33
Equity	**810**	**65**	654	52
Securitization	**557**	**44**	768	61
	65,811	**5,265**	50,535	4,041
AIRB approach [3]				
Corporate	**108,472**	**8,678**	92,808	7,425
Sovereign [4]	**3,478**	**278**	3,125	250
Banks	**3,663**	**293**	3,711	297
Real estate secured personal lending	**27,396**	**2,192**	22,508	1,801
Qualifying revolving retail	**14,591**	**1,167**	13,636	1,091
Other retail	**11,358**	**909**	9,525	762
Equity	**686**	**55**	564	45
Trading book	**5,354**	**428**	5,484	439
Securitization	**1,810**	**145**	1,246	100
Adjustment for scaling factor	**10,500**	**840**	9,082	727
	187,308	**14,985**	161,689	12,937
Other credit RWA [5]	**13,261**	**1,061**	12,913	1,033
Total credit risk (before adjustment for CVA phase-in)	**266,380**	**21,311**	225,137	18,011
Market risk (Internal Models and IRB Approach)				
VaR	**921**	**74**	1,575	126
Stressed VaR	**4,002**	**320**	3,887	311
Incremental risk charge	**1,426**	**114**	2,583	206
Securitization and other	**2,881**	**230**	1,061	85
Total market risk	**9,230**	**738**	9,106	728
Operational risk	**33,328**	**2,666**	31,397	2,512
Total RWA before adjustments for CVA phase-in	**$ 308,938**	**$ 24,715**	$ 265,640	$ 21,251
CVA capital charge				
Total RWA	**$ 6,696**	**$ 536**	$ 7,174	$ 574
Total RWA after adjustments for CVA phase-in				
Total RWA	**$ 315,634**	**$ 25,251**	$ 272,814	$ 21,825

(1) Refers to the minimum standard established by the BCBS before the application of the capital conservation buffer and any other capital buffers that may be established by regulators from time to time. It is calculated by multiplying RWA by 8%.
(2) Credit risk includes CCR, which comprises derivative and repo-style transactions. Credit risk for CIBC Bank USA and CIBC FirstCaribbean are calculated under the standardized approach.
(3) Includes RWA relating to equity investments in funds and certain commercial loans which are determined using the supervisory slotting approach.
(4) Includes residential mortgages insured by Canada Mortgage and Housing Corporation (CMHC), an agency of the Government of Canada, and government-guaranteed student loans.
(5) Comprises RWA relating to derivative and repo-style transactions cleared through qualified central counterparties (QCCPs), settlement risk, and other assets that are subject to the credit risk framework but are not included in the standardized or IRB frameworks, including other balance sheet assets that are risk-weighted at 100%, significant investments in the capital of non-financial institutions that are risk-weighted at 1,250%, and amounts below the thresholds for deduction that are risk-weighted at 250%.

The increase in credit risk RWA was primarily due to increased book size, the impact of foreign exchange translation, the acquisition of the Canadian Costco credit card portfolio, and capital model updates.

The increase in market risk RWA was primarily driven by movement in risk levels, which includes changes in open positions and the market rates affecting these positions.

The increase in operational risk RWA was driven by changes in gross income, as defined by OSFI.

Leverage ratio

The Basel III capital standards include a non-risk-based capital metric, the leverage ratio, to supplement risk-based capital requirements. The leverage ratio is defined as Tier 1 capital divided by the leverage ratio exposure. The leverage ratio exposure is defined under the standards as the sum of:

(i) On-balance sheet assets less Tier 1 capital regulatory adjustments;
(ii) Derivative exposures;
(iii) Securities financing transaction exposures; and
(iv) Off-balance sheet exposures (such as commitments, direct credit substitutes, letters of credit, and securitization exposures).

OSFI expects federally regulated deposit-taking institutions to have leverage ratios that meet or exceed 3.0%. This minimum may be higher for certain institutions at OSFI's discretion. See the "Continuous enhancement to regulatory capital requirements" section for recently announced capital measures impacting the leverage ratio.

$ millions, as at October 31	**2022**	2021
Tier 1 capital	**$ 41,946**	$ 38,344
Leverage ratio exposure	**961,791**	823,343
Leverage ratio	**4.4 %**	4.7 %

The leverage ratio at October 31, 2022, decreased by 0.3% from October 31, 2021, as the impact of an increase in Tier 1 capital was more than offset by the impact of an increase in leverage ratio exposure. The increase in leverage ratio exposure was primarily driven by an increase in on-balance sheet exposures and the reversal of the temporary exclusion of qualifying sovereign-issued securities from the exposure measure.

Total loss absorbing capacity requirements

OSFI also requires D-SIBs to maintain a supervisory target total loss absorbing capacity (TLAC) ratio (which builds on the risk-based capital ratios) and a minimum TLAC leverage ratio (which builds on the leverage ratio).

TLAC is required to ensure that a non-viable D-SIB has sufficient loss absorbing capacity to support its recapitalization. This would, in turn, facilitate an orderly resolution of the D-SIB while minimizing adverse impacts on the financial sector stability and taxpayers. TLAC is defined as the aggregate of total capital and other TLAC instruments primarily comprised of bail-in eligible instruments with residual maturity greater than 365 days.

OSFI expects D-SIBs to have a minimum risk-based TLAC ratio of 21.5% plus the then applicable DSB requirement (2.5% as noted above), and a minimum TLAC leverage ratio of 6.75%, beginning in the first quarter of fiscal 2022.

$ millions, as at October 31	**2022**	2021
TLAC available	**$ 95,136**	$ 76,701
Total RWA	**315,634**	272,814
Leverage ratio exposure [1]	**961,791**	823,343
TLAC ratio	**30.1 %**	28.1 %
TLAC leverage ratio	**9.9 %**	9.3 %

(1) The temporary exclusion of qualifying sovereign-issued securities from the leverage ratio exposure measure in response to the onset of theCOVID-19 pandemic was no longer applicable beginning in the first quarter of 2022. Central bank reserves continue to be excluded from the measure. On September 13, 2022, OSFI announced that the temporary exclusion of central bank reserves from the leverage exposure measure will be no longer applicable effective April 1, 2023.

The TLAC ratio at October 31, 2022 increased 2.0% from October 31, 2021, driven by the increase in TLAC, partially offset by the impact of an increase in RWA. The increase in TLAC was primarily due to issuances of bail-in eligible liabilities.

The TLAC leverage ratio at October 31, 2022 increased 0.6% from October 31, 2021, primarily due to an increase in TLAC, partially offset by an increase in the leverage ratio exposure as noted above.

Share split

In February 2022, CIBC's Board of Directors approved a two-for-one share split (Share Split) of CIBC's issued and outstanding common shares to be effected through an amendment to CIBC's by-laws. On April 7, 2022, CIBC shareholders approved the Share Split. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and per common share amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.

Capital initiatives

On March 13, 2020, following the onset of the COVID-19 pandemic, OSFI imposed temporary measures on FRFIs to cease dividend increases and share buybacks in order to ensure that the additional capital available is used to support Canadian lending activities. The temporary measures were lifted by OSFI effective November 4, 2021. The following were the main capital initiatives undertaken since our 2021 Annual Report:

Normal Course Issuer Bid (NCIB)

On December 9, 2021, we announced that the TSX had accepted the notice of our intention to commence a NCIB. Purchases under this bid will be completed upon the earlier of: (i) CIBC purchasing 20 million common shares (on a post share split basis); (ii) CIBC providing a notice of termination; or (iii) December 12, 2022. For the year ended October 31, 2022, we purchased and cancelled 1,800,000 common shares (on a post share split basis) at an average price of $74.43 for a total amount of $134 million, all of which occurred during the first quarter.

Employee share purchase plan

Pursuant to the employee share purchase plan, we issued 2,302,876 common shares (on a post share split basis) for consideration of $163 million for the year ended October 31, 2022.

Shareholder investment plan

Pursuant to the shareholder investment plan, we issued 2,272,831 common shares (on a post share split basis) for consideration of $153 million for the year ended October 31, 2022.

Dividends

Our quarterly common share dividend was increased from $0.805 per share to $0.830 per share for the quarter ending July 31, 2022.

On November 30, 2022, the CIBC Board of Directors approved an increase in our quarterly common share dividend from $0.830 per share to $0.850 per share for the quarter ending January 31, 2023.

Common and preferred share dividends are declared quarterly at the discretion of the Board. The declaration and payment of dividends is governed by Section 79 of the *Bank Act* (Canada), the terms of the preferred shares, as explained in Note 15 to the consolidated financial statements.

Subordinated indebtedness

On April 7, 2022, we issued $1.0 billion principal amount of 4.20% Debentures due April 7, 2032 (subordinated indebtedness). The Debentures bear interest at a fixed rate of 4.20% per annum (paid semi-annually) until April 7, 2027, and at Daily Compounded Canadian Overnight Repo Rate Average (CORRA) plus 1.69% per annum (paid quarterly) thereafter until maturity on April 7, 2032. The debenture qualifies as Tier 2 capital.

Limited Recourse Capital Notes Series 3 (LRCN Series 3 Notes)

On June 15, 2022, we issued $800 million principal amount of 7.150% LRCN Series 3 Notes (NVCC) (subordinated indebtedness). The LRCN Series 3 Notes mature on July 28, 2082, and bear interest at a fixed rate of 7.150% per annum (paid semi-annually) until July 28, 2027. Starting on July 28, 2027, and every five years thereafter until July 28, 2077, the interest rate will be reset to the then current five-year Government of Canada bond yield plus 4.000% per annum.

Concurrently with the issuance of the LRCN Series 3 Notes, we issued Non-Cumulative 5-Year Fixed Rate Reset Class A Preferred Shares Series 55 (NVCC) (Series 55 shares), which are held in a CIBC LRCN Limited Recourse Trust (the Limited Recourse Trust) that is consolidated by CIBC and, as a result, the Series 55 shares are eliminated in CIBC's consolidated financial statements. In the event of non-payment by CIBC of the principal amount of, interest on, or redemption price for, the LRCN Series 3 Notes when due, the sole remedy of each LRCN Series 3 Note holder is limited to that holder's proportionate share of the Series 55 shares held in the Limited Recourse Trust. Subject to regulatory approval, we may redeem the LRCN Series 3 Notes, in whole or in part, every five years during the period from June 28 to and including July 28, commencing on June 28, 2027, at par.

The LRCN Series 3 Notes and the Series 55 shares carry standard NVCC provisions necessary for them to qualify as additional Tier 1 regulatory capital under Basel III. Upon the occurrence of a Trigger Event, each Series 55 share held in the Limited Recourse Trust will automatically and immediately be converted, without the consent of LRCN Series 3 Note holders, into a variable number of common shares that will be delivered to LRCN Series 3 Note holders in satisfaction of the principal amount of, and accrued and unpaid interest on, all of the LRCN Series 3 Notes. All claims of LRCN Series 3 Note holders against CIBC under the LRCN Series 3 Notes will be extinguished upon receipt of such common shares.

The LRCN Series 3 Notes are compound instruments with both equity and liability features as payments of interest and principal in cash are made at our discretion, as the sole recourse of each LRCN Series 3 Note holder in the event of non-payment will be limited to that holder's proportionate share of the Series 55 shares held in the Limited Recourse Trust. The liability component of the LRCN Series 3 Notes has a nominal value and, as a result, the full proceeds received upon the issuance of the LRCN Series 3 Notes have been presented as equity on the consolidated balance sheet and any interest payments paid thereon are accounted for as equity distributions.

Preferred shares

On July 29, 2022, we redeemed all 32 million Non-cumulative Class A Preferred Shares Series 45 (NVCC) (Series 45 shares), at a redemption price of $25.00 per Series 45 share, for a total redemption cost of $800 million.

Non-cumulative Rate Reset Class A Preferred Shares Series 56 (NVCC) (Series 56 shares)

On September 16, 2022, we issued 600,000 Non-cumulative Rate Reset Class A Preferred Shares Series 56 (NVCC) (Series 56 shares) with a par value of $1,000.00 per share, for gross proceeds of $600 million. For the initial five-year period to October 28, 2027, the Series 56 shares pay semi-annual cash dividends on the 28th day of April and October in each year, as declared, at a rate of 7.361%. The first dividend, if declared, will be payable on April 28, 2023. On October 28, 2027, and on October 28 every five years thereafter, the dividend rate will reset to be equal to the then current five-year Government of Canada bond yield plus 4.20%.

Subject to regulatory approval and certain provisions of the shares, we may redeem all or any part of the then outstanding Series 56 shares at par during the period from September 28, 2027 to and including October 28, 2027 and during the period from September 28 to and including October 28 every five years thereafter.

Outstanding share data

The table below provides a summary of our outstanding shares, NVCC capital instruments, and the maximum number of common shares issuable on conversion/exercise:

$ millions, except number of shares and per share amounts, as at November 25, 2022	Shares outstanding		Minimum conversion price per common share [1]	Maximum number of common shares issuable on conversion/exercise
	Number of shares	Amount		
Common shares	**906,218,463**	**$ 14,735**		
Treasury shares – common shares	**(68,633)**	**(3)**		
Preferred shares [2][3]				
Series 39 (NVCC)	**16,000,000**	**$ 400**	**$ 2.50**	**160,000,000**
Series 41 (NVCC)	**12,000,000**	**300**	**2.50**	**120,000,000**
Series 43 (NVCC)	**12,000,000**	**300**	**2.50**	**120,000,000**
Series 47 (NVCC)	**18,000,000**	**450**	**2.50**	**180,000,000**
Series 49 (NVCC)	**13,000,000**	**325**	**2.50**	**130,000,000**
Series 51 (NVCC)	**10,000,000**	**250**	**2.50**	**100,000,000**
Series 56 (NVCC)	**600,000**	**600**	**2.50**	**240,000,000**
Treasury shares – preferred shares [2][3]	**(1,995)**	**(2)**		
Limited recourse capital notes [3][4]				
4.375% Limited recourse capital notes Series 1 (NVCC)	**n/a**	**750**	**2.50**	**300,000,000**
4.000% Limited recourse capital notes Series 2 (NVCC)	**n/a**	**750**	**2.50**	**300,000,000**
7.150% Limited recourse capital notes Series 3 (NVCC)	**n/a**	**800**	**2.50**	**320,000,000**
Subordinated indebtedness [3][5]				
3.45% Debentures due April 4, 2028 (NVCC)	**n/a**	**1,500**	**2.50**	**900,000,000**
2.95% Debentures due June 19, 2029 (NVCC)	**n/a**	**1,500**	**2.50**	**900,000,000**
2.01% Debentures due July 21, 2030 (NVCC)	**n/a**	**1,000**	**2.50**	**600,000,000**
1.96% Debentures due April 21, 2031 (NVCC)	**n/a**	**1,000**	**2.50**	**600,000,000**
4.20% Debentures due April 7, 2032 (NVCC)	**n/a**	**1,000**	**2.50**	**600,000,000**
Stock options outstanding				**11,412,239**

(1) The minimum conversion price per common share for CIBC's outstanding NVCC instruments, including NVCC preferred shares, NVCC subordinated debentures and NVCC LRCN have been adjusted from $5.00 to $2.50 to account for the Share Split in accordance with the terms and conditions of the NVCC instruments.
(2) Upon the occurrence of a Trigger Event, each share is convertible into a number of common shares, determined by dividing the par value of $25.00 ($1,000 in the case of Series 56 shares) plus declared and unpaid dividends by the average common share price (as defined in the relevant prospectus supplement) subject to a minimum price per share (subject to adjustment in certain events as defined in the relevant prospectus supplement, including a share split). Preferred shareholders do not have the right to convert their shares into common shares.
(3) The maximum number of common shares issuable on conversion excludes the impact of declared but unpaid dividends and accrued interest.
(4) Upon the occurrence of a Trigger Event, the Series 53, 54 and 55 Preferred Shares held in the Limited Recourse Trust in support of the LRCN are convertible into a number of common shares, determined by dividing the par value of $1,000 by the average common share price (as defined in the relevant prospectus supplement) subject to a minimum price per common share (subject to adjustment in certain events as defined in the relevant prospectus supplement, including a share split).
(5) Upon the occurrence of a Trigger Event, the Debentures are convertible into a number of common shares, determined by dividing 150% of the par value plus accrued and unpaid interest by the average common share price (as defined in the relevant prospectus supplement) subject to a minimum price per common share (subject to adjustment in certain events as defined in the relevant prospectus supplement, including a share split).
n/a Not applicable.

The occurrence of a "Trigger Event" would result in conversion of all of the outstanding NVCC instruments described above, which would represent a dilution impact of 86% based on the number of CIBC common shares outstanding as at October 31, 2022. As described in the CAR Guideline, a Trigger Event occurs when OSFI determines the bank is or is about to become non-viable and, if after conversion of all contingent instruments and consideration of any other relevant factors or circumstances, it is reasonably likely that its viability will be restored or maintained; or if the bank has accepted or agreed to accept a capital injection or equivalent support from a federal or provincial government, without which OSFI would have determined the bank to be non-viable.

In addition to the potential dilution impacts related to the NVCC instruments discussed above, as at October 31, 2022, $55,111 million (2021: $32,643 million) of our outstanding liabilities were subject to conversion to common shares under the bail-in regime. Under the bail-in regime, there is no fixed and pre-determined contractual conversion ratio for the conversion of the specified eligible shares and liabilities of CIBC that are subject to a bail-in conversion into common shares, nor are there specific requirements regarding whether liabilities subject to a bail-in conversion are converted into common shares of CIBC or any of its affiliates. CDIC determines the timing of the bail-in conversion, the portion of the specified eligible shares and liabilities to be converted and the terms and conditions of the conversion, subject to parameters set out in the bail-in regime. See the "Total loss absorbing capacity requirements" section for further details.

Preferred share and other equity instruments rights and privileges

See Note 15 to the consolidated financial statements for details on our preferred share and other equity instruments rights and privileges.

Off-balance sheet arrangements

We enter into off-balance sheet arrangements in the normal course of our business. We consolidate all of our sponsored trusts that securitize our own assets.

Non-consolidated structured entities (SEs)

We manage and administer a single-seller conduit and several CIBC-sponsored multi-seller conduits in Canada. The multi-seller conduits acquire direct or indirect ownership or security interests in pools of financial assets from our clients and finance the acquisitions by issuing asset-backed commercial paper (ABCP) to investors. The single-seller conduit acquires financial assets and finances these acquisitions through a credit facility provided by a syndicate of financial institutions. The sellers to the conduits may continue to service the assets and may be exposed to credit losses realized on these assets, typically through the provision of over-collateralization or another form of credit enhancement. The conduits may obtain credit enhancement from third-party providers.

We provide the multi-seller conduits with commercial paper backstop liquidity facilities, securities distribution, and provide both the single and multi-seller conduits with accounting, cash management, and operations services. The liquidity facilities for the managed and administered multi-seller

conduits require us to provide funding, subject to the satisfaction of certain conditions with respect to the conduits, for ABCP not placed with external investors. We may also purchase ABCP issued by the multi-seller conduits for market-making purposes.

We are required to maintain certain short-term and/or long-term debt ratings with respect to the liquidity facilities that we provide to the sponsored multi-seller conduits. If we are downgraded below the level specified under the terms of those facilities, we must provide alternative satisfactory liquidity arrangements, such as procuring an alternative liquidity provider that meets the minimum rating requirements.

We may also act as the counterparty to derivative contracts entered into by a multi-seller conduit in order to convert the yield of the underlying assets to match the needs of the multi-seller conduit's investors or to mitigate the interest rate, basis, and currency risk within the conduit.

We earn fees for providing services related to the non-consolidated single-seller and multi-seller conduits, such as backstop liquidity facilities, distribution, transaction structuring, and conduit administration. These fees totalled $70 million in 2022 (2021: $71 million). All fees earned in respect of activities with the conduits are on a market basis.

As at October 31, 2022, the amount funded for the various asset types in the multi-seller conduits amounted to $9.3 billion (2021: $7.5 billion). The estimated weighted-average life of these assets was 1.8 years (2021: 2.0 years). Our holdings of commercial paper issued by the non-consolidated sponsored multi-seller conduits that offer commercial paper to external investors were $642 million (2021: $35 million). Our committed backstop liquidity facilities to these conduits were $11.7 billion (2021: $10.6 billion). We also provided credit facilities of $50 million (2021: $50 million) to these conduits.

We participated in a syndicated facility of $700 million to the single-seller conduit that provides funding to franchisees of a major Canadian retailer, which will mature in April 2025. Our portion of the commitment was $130 million (2021: $130 million), of which $98 million (2021: $106 million) was funded as at October 31, 2022.

We engage one or more of the four major rating agencies, DBRS Limited (DBRS), Fitch Ratings Inc. (Fitch), Moody's Investors Service, Inc. (Moody's), and S&P, to opine on the credit ratings of asset-backed securities (ABS) issued by our sponsored multi-seller conduits. In the event that ratings differ between rating agencies, we use the lower rating.

We also have investments in and provide loans, liquidity and credit facilities to certain other third-party and CIBC-managed SEs. The on-balance sheet exposure related to these SEs is included in the consolidated financial statements.

We provide interim and term senior financing to third-party SEs for the purpose of purchasing loans during the warehousing phase for future securitization. As senior lenders we are repaid by proceeds from the issuance of debt securities to external investors when the securitization closes or by the cash flows from the repayment of the underlying assets held by the SE or alternative financing obtained by the SE from third-party lenders.

Our on- and off-balance sheet amounts related to the SEs that are not consolidated are set out in the table below. For additional details on our SEs, see Note 6 to the consolidated financial statements.

$ millions, as at October 31	2022			2021		
	Investments and loans [1]	**Liquidity, credit facilities and commitments**	**Written credit derivatives** [2]	Investments and loans [1]	Liquidity, credit facilities and commitments	Written credit derivatives [2]
Single-seller and multi-seller conduits	**$ 740**	**$ 8,682** [3]	**$ –**	$ 141	$ 7,539 [3]	$ –
Third-party structured vehicles	**5,005**	**2,638**	**–**	3,838	2,016	–
Loan warehouse financing	**8,898**	**2,700**	**–**	3,245	921	–
Other	**601**	**308**	**80**	394	129	87

(1) Excludes securities issued by, retained interest in, and derivatives with entities established by CMHC, Federal National Mortgage Association, Federal Home Loan Mortgage Corporation, Government National Mortgage Association, Federal Home Loan Banks, Federal Farm Credit Bank, and Student Loan Marketing Association. $3 million (2021: $3 million) of the exposures related to structured vehicles run-off were hedged.

(2) Disclosed amounts reflect the outstanding notional of written credit derivatives. The negative fair value recorded on the consolidated balance sheet was $45 million (2021: $54 million). Notional of $75 million (2021: $82 million) was hedged with credit derivatives protection from third parties. The fair value of these hedges net of CVA was $40 million (2021: $49 million). An additional notional of $5 million (2021: $5 million) was hedged through a limited recourse note.

(3) Excludes an additional $2.4 billion (2021: $3.0 billion) relating to our backstop liquidity facilities provided to the multi-seller conduits as part of their commitment to fund purchases of additional assets. Also excludes $642 million (2021: $35 million) of our direct investments in the multi-seller conduits which we consider investment exposure.

Other financial transactions

We are the sponsor of several mutual and pooled funds, in the form of trusts. We are the administrator of these funds. In addition, we may act in other capacities, including custodian, trustee and broker. We earn fees at market rates from these trusts. We do not guarantee either principal or returns to investors in these funds. We act as a trustee of a number of personal trusts and have a fiduciary responsibility to act in the best interests of the beneficiaries of the trusts. We earn a fee for acting as a trustee. We also participate in transactions to modify the cash flows of trusts managed by third-party asset managers to create investments with specific risk profiles, or to assist clients in the efficient management of other risks. Typically, these involve the use of derivative products, which transfer the risks and returns to or from a trust.

Derivatives

We participate in derivatives transactions, as a market maker facilitating the needs of our clients or as a principal to manage the risks associated with our funding, investing and trading strategies. All derivatives are recorded at fair value on our consolidated balance sheet. See Notes 12 and 23 to the consolidated financial statements for details on derivative contracts and the risks associated with them.

Credit-related arrangements

Credit-related arrangements are generally off-balance sheet instruments and are typically entered into to meet the financing needs of clients. In addition, there are certain exposures for which we could be obligated to extend credit that are not recorded on the consolidated balance sheet. For additional details of these arrangements, see the "Liquidity risk" section and Note 21 to the consolidated financial statements.

Guarantees

A guarantee is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor failed to make payment when due in accordance with the original or modified terms of a debt instrument. Guarantees include credit derivatives protection sold and standby and performance letters of credit, as discussed in Notes 12 and 21 to the consolidated financial statements, respectively.

Management of risk

We have provided certain disclosures required under IFRS 7 "Financial Instruments – Disclosures" (IFRS 7) related to the nature and extent of risks arising from financial instruments in the MD&A, as permitted by that IFRS standard. These disclosures are included in the "Risk overview", "Credit risk", "Market risk", "Liquidity risk", "Operational risk", "Reputation and legal risks", "Conduct risk", and "Regulatory compliance risk" sections.

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65 Credit quality of portfolios
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82 Other risks
82 Strategic risk
82 Operational risk
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85 Regulatory compliance risk
85 Insurance risk
86 Reputation and legal risks
86 Conduct risk

Risk overview

CIBC faces a wide variety of risks across all of its areas of business. Identifying and understanding risks and their impact allows CIBC to frame its risk appetite and risk management practices. Defining acceptable levels of risk, and establishing sound principles, policies and practices for managing risks, is fundamental to achieving consistent and sustainable long-term performance, while remaining within our risk appetite.

Our risk appetite defines tolerance levels for various risks. This is the foundation for our risk management culture and our risk management framework.

Our risk management framework includes:
- CIBC, SBU, functional group-level and regional risk appetite statements;
- Risk frameworks, policies, procedures and limits to align activities with our risk appetite;
- Regular risk reports to identify and communicate risk levels;
- An independent control framework to identify and test the design and operating effectiveness of our key controls;
- Stress testing to consider the potential impact of changes in the business environment on capital, liquidity and earnings;
- Proactive consideration of risk mitigation options in order to optimize results; and
- Oversight through our risk-focused committees and governance structure.

Managing risk is a shared responsibility at CIBC. Business units and risk management professionals work in collaboration to ensure that business strategies and activities are consistent with our risk appetite. CIBC's approach to enterprise-wide risk management aligns with the three lines of defence model:

(i) As the first line of defence, CIBC's Management, in SBUs and functional groups own the risks and are accountable and responsible for identifying and assessing risks inherent in its activities in accordance with the CIBC risk appetite. In addition, Management establishes and maintains controls to mitigate such risks. Management may include governance groups within the business to facilitate the Control Framework and other risk-related processes. A Governance Group refers to a group within Business Unit Management (first line of defence) whose focus is to manage governance, risk and control activities on behalf of that Business Unit Management. A Governance Group is considered first line of defence, in conjunction with Business Unit Management. Control Groups are groups with enterprise-wide accountability for specific risk type and are also considered first line of defence. They provide subject matter expertise to Management and/or implement/maintain enterprise-wide control programs and activities for their domain area (for example Information Security). While Control Groups collaborate with Management in identifying and managing risk, they also challenge risk decisions and risk mitigation strategies.

(ii) The second line of defence is independent from the first line of defence and provides an enterprise-wide view of specific risk types, guidance and effective challenge to risk and control activities. Risk Management is the primary second line of defence. Risk Management may leverage subject matter expertise of other groups (e.g., third parties or Control Groups) to inform their independent assessments, as appropriate.

(iii) As the third line of defence, CIBC's Internal Audit is responsible for providing reasonable assurance to senior management and the Audit Committee of the Board on the effectiveness of CIBC's governance practices, risk management processes, and Internal Control as a part of its risk-based audit plan and in accordance with its mandate as described in the Internal Audit Charter.

A strong risk culture and communication between the three lines of defence are important characteristics of effective risk management.

We continuously monitor our risk profile against our defined risk appetite and related limits, taking action as needed to maintain an appropriate balance of risk and return. Monitoring our risk profile includes forward-looking analysis of sensitivity to local and global market factors, economic conditions, and geopolitical and regulatory environments that influence our overall risk profile.

Regular and transparent risk reporting and discussion at senior management committees facilitates communication of risks and discussion of risk management strategies across the organization.

Risk governance structure

Our risk governance structure is illustrated below:



Board of Directors (the Board): The Board oversees the enterprise-wide risk management program through approval of our risk appetite, Control Framework and supporting risk management policies and limits. The Board accomplishes its mandate through its Audit, Risk Management, Management Resources and Compensation, and Corporate Governance committees, described below.

Audit Committee (AC): The Audit Committee reviews the overall design and operating effectiveness of internal controls and the control environment, including controls over financial reporting. The Audit Committee also has oversight of the underlying processes and controls of the ESG disclosures in our Annual Report and our Sustainability Report.

Risk Management Committee (RMC): This committee assists the Board in fulfilling its responsibilities for defining CIBC's risk appetite and overseeing CIBC's risk profile and performance against the defined risk appetite. This includes oversight of key frameworks, policies and risk limits related to the identification, measurement and monitoring of CIBC's principal business risks.

Management Resources and Compensation Committee (MRCC): This committee is responsible for assisting the Board in its global oversight of CIBC's human capital strategy, including talent and total rewards, and the alignment with CIBC's strategy, risk appetite and controls.

Corporate Governance Committee (CGC): This committee is responsible for assisting the Board in fulfilling its corporate governance oversight responsibilities and oversight of the ESG strategy.

Executive Committee (ExCo): The ExCo, led by the Chief Executive Officer (CEO) and including selected executives reporting directly to the CEO, is responsible for setting business strategy and for monitoring, evaluating and managing risks across CIBC. The ExCo is supported by the following management governance committees:

- *Global Asset Liability Committee (GALCO):* This committee, which comprises members from the ExCo and senior Treasury, Risk Management and lines of business executives, provides oversight regarding capital management, funding and liquidity management, and asset/liability management (ALM). It also provides strategic direction regarding structural interest rate risk (SIRR) and structural foreign exchange risk postures, approval of funds transfer pricing policies/parameters and approval of wholesale funding plans.
- *Global Risk Committee (GRC):* This committee, which comprises selected members of the ExCo and senior leaders from the lines of business, Risk Management and other functional groups, provides a forum for discussion and oversight of risk appetite, risk profile and risk mitigation strategies. Key activities include reviewing and providing input regarding CIBC's risk appetite statements; monitoring risk profile against risk appetite; reviewing and evaluating business activities in the context of risk appetite; and identifying, reviewing, and advising on current and emerging risk issues and associated mitigation plans.

Risk management structure

The Risk Management group, led by our Chief Risk Officer (CRO), is responsible for setting risk strategies and for providing independent oversight of the businesses. Risk Management works to identify, assess, mitigate, monitor and control risks associated with business activities and strategies, and is responsible for providing an effective challenge to the lines of business.

The current structure is illustrated below:



The Risk Management group performs several important activities including:

- Developing our risk appetite and associated management control metrics;
- Setting risk strategy to manage risks in alignment with our risk appetite and business strategy;
- Establishing and communicating risk frameworks, policies, procedures and limits to mitigate risks in alignment with risk strategy;
- Measuring, monitoring and reporting on risk levels;
- Identifying and assessing emerging and potential strategic risks;
- Reviewing transactions that fall outside of risk limits delegated to business lines; and
- Ensuring compliance with applicable regulatory and anti-money laundering (AML) requirements.

The following key groups within Risk Management, independent of the originating businesses, contribute to our management of risk:

- Capital Markets Risk Management – This group provides independent oversight of the measurement, monitoring and control of market risks (both trading and non-trading), and trading credit risk (also called counterparty credit risk) across CIBC's portfolios, and effective challenge and sound risk management oversight to Treasury, including with respect to liquidity and funding risk management and SIRR management.
- Global Credit Risk Management – This group is responsible for the adjudication and oversight of credit risks associated with CIBC's commercial, corporate and wealth management activities, management of the risks in our investment portfolios, as well as management of special loan portfolios.
- Global Operational Risk Management – This group is responsible for designing and implementing effective operational risk management and control programs, and providing effective challenge to and monitoring of all operational risks globally, including (but not limited to) technology risk, information security (including cyber) risk, fraud risk, model risk, and third-party risk. In addition, the team has global accountability for corporate risk insurance programs, reputation risks, risk policy and governance, and risk transformation programs.
- Risk Analytics and Credit Decisioning – This group manages credit risk in personal and business products (such as residential mortgages, credit cards, personal loans/lines of credit, indirect auto lending, small business loans) offered through various distribution channels and performs analytics to optimize retail credit performance, along with collections and AML outcomes.
- Enterprise Risk Management – This group is responsible for enterprise-wide analysis, including the measuring and monitoring of risk appetite, enterprise-wide stress testing and reporting, credit loss reporting, risk models and model quantification, economic and regulatory capital methodologies, as well as risk data management. In addition, this group identifies and manages environmental risk, including transaction-specific environmental and related social risk, and the physical and transition risks associated with climate change.
- Compliance and Global Regulatory Affairs – This group is responsible for designing and implementing an effective enterprise-wide framework to manage and mitigate regulatory compliance risk. In addition, it provides oversight of conduct and culture risk, including sales practice risk and performs effective challenge of compensation plan changes. This group also builds and maintains credible relationships with our prudential, market, conduct and securities regulators and acts as a liaison between the regulators and CIBC.

- Enterprise Anti-Money Laundering – This group is responsible for all aspects of compliance with and oversight of requirements relating to AML, anti-terrorist financing (ATF), and sanctions measures. Enterprise Anti-Money Laundering provides advice to all businesses and functional groups globally and is responsible for providing an enterprise-wide view of money laundering, terrorist financing and sanctions risks, as well as guidance and effective independent challenge to control activities. Furthermore, Enterprise Anti-Money Laundering executes a risk-based approach to deter, detect and report suspected money laundering, terrorist financing and sanctioned activities, in accordance with their policies and supporting standards.
- Europe and Asia-Pacific Risk Management – This group carries out the mandate of CIBC Risk Management at a regional level under the leadership of the Senior Vice-President & Chief Risk Officer, Europe & APAC Region, with oversight from the Management Committees and CIBC Luxembourg Board. The group provides independent oversight for the identification, management, measurement, monitoring and mitigation of risks in Europe and Asia.
- U.S. Risk Management – This group carries out the mandate of CIBC Risk Management at a regional level under the leadership of the U.S. CRO, with oversight from the Risk Management Committee of the CIBC Board and the Risk Committees of the Boards of CIBC Bank USA and CIBC Bancorp USA Inc. The group provides independent oversight for the identification, management, measurement, monitoring and mitigation of risks in the U.S. region.

Risk management process

Our risk management process is illustrated below:



Risk appetite statement

Our risk appetite statement defines the amount of risk we are willing to assume in pursuit of our strategic and financial objectives. Our guiding principle is to practice sound risk management, supported by strong capital and funding positions, as we pursue our client-focused strategy. In defining our risk appetite, we take into consideration our purpose, vision, values, strategy and objectives, along with our risk capacity (defined by regulatory constraints). It defines how we conduct business, which is to be consistent with the following objectives:

- Safeguarding our reputation and brand;
- Doing the right thing for our clients/stakeholders;
- Engaging in client-oriented businesses that we understand;
- Make our client's goals our own in a professional and radically simple manner;
- Maintaining a balance between risk and returns;
- Retaining a prudent attitude towards tail and event risk;
- Meeting regulatory expectations and/or identifying and having plans in place to address any issues in a timely manner;
- Achieving/maintaining an AA rating; and
- Meeting/exceeding stakeholders' expectations with respect to the ESG criteria including achieving net zero greenhouse gas emissions.

Our risk appetite statement contains metrics with limits that define our risk tolerance levels. In addition, we have SBU, functional group and regional risk appetite statements that are integrated with our overall risk appetite statement that further articulate our business level risk tolerances.

Our risk appetite statement is reviewed annually in conjunction with our strategic, financial and capital planning cycle to ensure alignment and is approved annually by the Board. To help ensure CIBC stays within its risk appetite, the Board, RMC and senior management regularly receive and review reporting on our risk profile against the risk appetite limits.

All strategic business decisions, as well as day-to-day business decisions, are governed by our risk appetite framework. Strategic decisions are evaluated to ensure that the risk exposure is within our risk appetite. Day-to-day activities and decisions are governed by our framework of risk tolerance limits, policies, standards and procedures that support our risk appetite statement.

Risk culture

Risk culture refers to desired attitudes and behaviours relative to risk management practices. At CIBC, we strive to achieve a consistent and effective risk culture by:

- Promoting, through both formal and informal channels, a shared accountability of risk identification, management and mitigation;
- Cultivating an environment of transparency, open communication and robust discussion of risk;
- Setting the appropriate "tone at the top" through clear communication and reinforcement; and
- Identifying and reinforcing behaviours that are aligned with risk appetite, and escalating misaligned behaviours.

Every year, all employees are required to complete formal training on risk appetite, reputation risk, operational risk, code of conduct, AML and other key risk topics. By taking this mandatory training, all employees strengthen their basic knowledge of risk management in support of our risk culture. This training is supplemented by our risk appetite statement, risk management priorities and documents on our internal website. In addition, we have policies, procedures and limits in place that govern our day-to-day business activity, with escalation procedures for limit breaches outlined accordingly.

Risk input into performance and compensation

Throughout the year, the Risk Management team manages various compensation risk reviews. These reviews are part of the second line of defence responsibilities to review and challenge new compensation plans, changes to existing compensation plans and compensation plan closure. In addition, periodic risk reviews are completed to ensure all compensation plans are risk assessed on a regular basis. All compensation plans are rated as either high-risk or low-risk with high-risk compensation plans requiring approval from the CRO.

At each year-end, Risk Management provides an assessment of adherence to risk appetite and material risk matters across CIBC. Risk Management also considers a number of risk inputs to identify matters that may directly impact incentive pools and/or individual compensation awards and/or performance ratings. Annually, Risk Management reviews the assessment with both the RMC and the MRCC.

The MRCC oversees the performance management and compensation process and is responsible for assisting the Board in its global oversight of CIBC's human capital strategy, including talent and total rewards, and the alignment with CIBC's strategy, risk appetite and controls. The MRCC's oversight of human capital strategy includes inclusion and diversity, employee health, safety and wellbeing and other ESG practices related to their mandate. The MRCC's key compensation-related responsibilities include:

- Approving CIBC's compensation philosophy and any material changes to CIBC's compensation principles or practices;
- Approving new material compensation policies and material changes to existing material compensation policies;
- Reviewing and recommending for Board approval new material compensation plans or changes to existing material compensation plans;
- Reviewing a report on non-material plans;
- Assessing the appropriateness and alignment of compensation relative to actual business performance and risks;
- Reviewing and recommending for Board approval incentive compensation funding and allocations, based on an assessment of business performance and risk;
- Reviewing and recommending for Board approval individual compensation target and compensation for the ExCo, including the CEO and other key officers; and
- Approving individual compensation for employees with total direct compensation above a certain materiality threshold.

Risk policies and limits

Our risk policies and limits framework is intended to ensure that risks are appropriately identified, measured, monitored and controlled in accordance with our risk appetite. For most risks, we have developed an overarching framework document that sets out the key principles for managing the associated risks and our key risk policies and limits. This framework is supported by standards, guidelines, processes, procedures and controls that govern day-to-day activities in our businesses. Oversight is provided by management committees, as well as the Board/Board committees.

Key risk policies and management committees are illustrated below:

Risk Management Framework

Risk Appetite Statement and Risk Appetite Framework

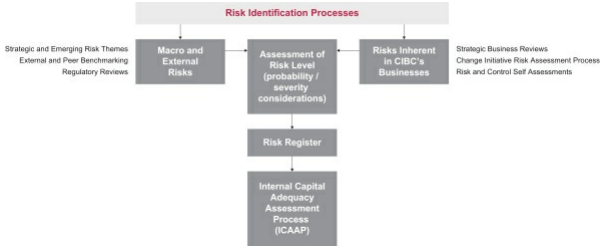
Risk	Overarching Framework / Policy	Risk Limits	Management Oversight
Credit	Credit Risk Management Policy Trading Credit Risk Management Policy	Credit Concentration Limits Delegated Credit Approval Authorities Trading Credit Risk Limits	Credit Committee Personal and Business Banking Credit Risk Committee Global Risk Committee Traded Risk Committee
Market	Market Risk Management Policy Structural Risk Management Policies	Market Risk Limits Delegated Risk Authorities	Global Risk Committee Global Asset Liability Committee Traded Risk Committee
Operational	Operational Risk Management Framework Control Framework Conduct and Culture Risk Framework	Key Risk Indicators	Operational Risk and Control Committee Global Risk Committee Technology Operational Risk Committee Model and Parameter Risk Committee Cyber Security Committee Traded Risk Committee Third Party Risk Council Executive Fraud Risk Council
Reputation	Global Reputation Risk Management Framework and Policy	Key Risk Indicators	Reputation and Legal Risks Committee
Liquidity	Liquidity Risk Management Policy Pledging Policy	Liquidity and Funding Limits Pledging Limits	Global Asset Liability Committee Global Risk Committee
Strategic	Strategic Planning Policy	Risk Appetite Statement	Executive Committee Global Risk Committee
Regulatory	Regulatory Compliance Management Policy Enterprise Anti-Money Laundering Framework and Enterprise Anti-Money Laundering and Anti-Terrorist Financing Policy	Key Risk Indicators Risk Appetite Statement Key AML Metrics	Global Risk Committee AML Executive Steering Committee

Risk identification and measurement

Risk identification and measurement are important elements of CIBC's risk management framework. Risk identification is a continuous process, generally achieved through:

- Regular assessment of risks associated with lending and trading credit exposures;
- Ongoing monitoring of trading and non-trading portfolios;
- Assessment of risks in new business activities and processes;
- Assessment of risks in complex and unusual business transactions;
- Regular monitoring of the overall risk profile considering market developments and trends, and external and internal events; and
- Ongoing monitoring of management operations and processes.

Risk Management maintains a "Risk Register" to list all material risks facing CIBC. The inventory is based on the risks inherent in our businesses and updated through various processes, illustrated in the following chart, to reflect changes in the nature of the risks we are facing. The Risk Register is used to support our ICAAP, either explicitly in the economic and regulatory capital calculations, or implicitly through the buffer of actual capital over economic capital and regulatory capital.



The decision to register a new risk is based on its risk assessment through our risk identification processes and includes criteria such as severity, measurability and probability. Furthermore, the decision on the amount of capital allocated to cover the new risk brought on the books will take into consideration the effectiveness and impact of the risk mitigants available.

We have enterprise-wide methodologies, models and techniques in place to measure both the quantitative and qualitative aspects of risks, appropriate for the various types of risks we face. These methodologies, models and techniques are subject to independent assessment and review to ensure that the underlying logic remains sound, that model risks have been identified and managed, that use of the models continues to be appropriate and outputs are valid.

Risk is usually measured in terms of expected loss, unexpected loss, and economic capital.

Expected loss

Expected loss represents the loss that is statistically expected to occur in the normal course of business, with adjustments for conservatism, in a given period of time.

In respect of credit risk, the parameters used to measure expected loss are PD, LGD and EAD. These parameters are updated regularly and are based on our historical experience through the cycle and benchmarking of credit exposures. Unlike the PD, LGD and EAD parameters used for calculating ECL on our consolidated financial statements, the PD, LGD and EAD parameters used for regulatory capital purposes are not adjusted for forward-looking information.

For trading market risks, VaR is a statistical technique used to measure risk. VaR is an estimate of the loss in market value for a given level of confidence that we would expect to incur in our trading portfolio due to an adverse one-day movement in market rates, implied volatility and prices using the most recent 500 trading days. We also use stressed VaR to estimate an expected loss over a 10 day holding period and using a one year historical window when relevant market factors were in distress.

For trading credit risks associated with market value based products, we use models to estimate exposure relative to the value of the portfolio of trades with each counterparty, giving consideration to market rates and prices.

Unexpected loss and economic capital

Unexpected loss is the statistical estimate of the amount by which actual losses might exceed expected losses over a specified time horizon, computed at a given confidence level. We use economic capital to estimate the level of capital needed to protect us against unexpected losses. Economic capital allows us to assess performance on a risk-adjusted basis.

We also use techniques such as sensitivity analysis and stress testing to help ensure that the risks remain within our risk appetite and that our capital is adequate to cover those risks. Our stress testing program includes evaluation of the potential effects of various economic and market scenarios on our risk profile, earnings and capital. Refer to the "Capital management" section for additional details.

Model risk management

Model risk management encompasses sound development, independent validation, and ongoing monitoring and review of the models as well as governance and controls that are proportionate to the risks. Our model inventory includes, but is not limited to, models that relate to risk measurement (including VaR, economic and regulatory capital), pricing, mark-to-market (MTM), credit risk rating and scoring models, credit models for the calculation of loss severity and stress testing, and models for the calculation of ECL under IFRS 9. CIBC's approach to provide effective governance and oversight for model risk management comprises the following key elements:

- Governance and oversight by management committees, including the Model and Parameter Risk Committee (MPRC), senior management and the Board;
- Policies, procedures and standards to outline applicable roles and responsibilities of the various oversight groups and to provide guidance to identify, measure, control and monitor model risk throughout the model's life cycle; and
- Controls for key operational aspects of model risk management including maintaining a model inventory, model risk ranking, model risk attestation and ongoing monitoring and reporting.

The MPRC is a subcommittee of the Operational Risk and Control Committee (ORCC) and is responsible for reviewing and approving proposals for new and/or modified regulatory, economic capital and IFRS 9 models and provides oversight of CIBC's regulatory, economic capital and IFRS 9 models and parameters for credit, market and operational risks. The MPRC has accountability and responsibility for model and parameter approvals, parameter performance monitoring, validation oversight, and policy oversight.

Model risk mitigation policies

We have policies, procedures, standards and controls to ensure effective model risk management for CIBC. A model review and validation is the independent effective challenge that documents the model risk and ensures models are sound and we can rely on their output. The model review and validation process includes:

- Review of model documentation;
- Comprehensive, systematic testing of key model parameters on implementation to ensure results are as expected;
- Replication of the risk quantification process to determine whether the model implementation is faithful to the model specifications;
- Review of whether the model/parameter concepts and assumptions are appropriate and robust;
- Accuracy testing to assess the calibration and accuracy of the risk components including, for example, the discriminative power of rating systems and the reasonableness of capital parameters;
- Sensitivity testing to analyze the sensitivity of model/parameter outputs to model/parameter assumptions and key inputs;
- Scenario and stress testing of the model outputs to key inputs;
- Back-testing by comparing actual results with model-generated risk measures;
- Benchmarking to other models and comparable internal and external data;
- Review of the internal usage of the model/parameter applications to ensure consistency of application;
- Reporting of model status to the MPRC, supported through an up-to-date inventory of regulatory models and parameters;
- A quarterly attestation process for model owners in order to ensure compliance with the Model Risk and Validation Policy; and
- A comprehensive validation report that identifies the conditions for valid application of the model and summarizes these findings to the model owners, developers and users.

Once a model has been approved for use, ongoing monitoring becomes a joint responsibility of model users, owners and validators.

Stress testing

Stress testing supplements our other risk management tools by providing an estimate of the potential impacts of plausible but stressed economic scenarios and risk factors. Results of stress testing are interpreted in the context of our risk appetite, including metrics for capital adequacy. Enterprise-wide stress testing, capital planning and financial planning processes are integrated for a comprehensive information system. See the "Capital management" section for detailed discussion on our enterprise-wide stress testing.

Risk treatment and mitigation

Risk treatment and mitigation is the implementation of options for modifying risk levels. We pursue risk mitigation options in order to control our risk profile in the context of our risk appetite. Our objective is to proactively consider risk mitigation options in order to optimize results.

Discussions regarding potential risk mitigation strategies are held between Risk Management and the lines of business, and at the GRC or GALCO and at the RMC for governance and oversight, as appropriate. In evaluating possible strategies, considerations include costs and benefits, residual risks (i.e., risks that are retained), secondary risks (i.e., those caused by the risk mitigation actions), and appropriate monitoring and review to track results.

Risk controls

Our risk management framework also includes a comprehensive set of risk controls, designed to ensure that risks are being appropriately identified and managed. Our risk controls are part of CIBC's overall Control Framework, developed based on the Committee of Sponsoring Organizations of the Treadway Commission's (COSO) widely accepted "Internal Control – Integrated Framework". The Control Framework also draws on elements of the OSFI Supervisory Framework and Corporate Governance Guidelines.

The Board, primarily through the RMC, approves certain credit risk limits and delegates specific transactional approval authorities to the CEO or jointly to the CEO and CRO. The RMC must approve transactions that exceed delegated authorities. Delegation of authority to business units is controlled to ensure decision-making authorities are restricted to those individuals with the necessary experience levels. In addition, CIBC has rigorous processes to identify, evaluate and remediate risk control deficiencies in a timely manner. Regular reporting is provided to the RMC to evidence compliance with risk limits. Risk limits and the delegation of authority to the CEO or jointly to the CEO and CRO are reviewed annually by the RMC.

Risk monitoring and reporting

To monitor CIBC's risk profile and facilitate evaluation against the risk appetite statement, a number of measurement metrics have been established, with regular reporting against these metrics provided to the GRC and the RMC. This reporting enables decisions on growth and risk mitigation strategies.

Exposures are also regularly monitored against limits, with escalation protocols for limit excesses, should they occur. Escalation protocols ensure awareness at appropriate levels and facilitate management of excesses that is consistent with our risk appetite.

Regular management reports on each risk type are also prepared to facilitate monitoring and control of risk at a more granular level.

Top and emerging risks

We monitor and review top and emerging risks that may affect our future results, and take action to mitigate potential risks. We perform in-depth analyses, which may include stress testing our exposures relative to the risks, and we provide updates and related developments to the Board on a regular basis. Top and emerging risks are those that we consider to have potential negative implications that are material for CIBC. This section describes those top and emerging risks, as well as regulatory and accounting developments that are material for CIBC.

Inflation, interest rates and economic growth

High inflation exacerbated by global supply chain issues, including from the war in Ukraine, continues to drive tightening in monetary policies globally and GDP growth forecasts have been revised downward, increasing the risk of recession. We are closely monitoring the macroeconomic environment and assessing its potential adverse impact on our clients, counterparties and businesses. Further details on the macroeconomic environment are provided in the "Economic and market environment – Outlook for calendar year 2023" section.

Canadian consumer debt and the housing market

OSFI's Guideline B-20 was introduced in 2012, with a subsequent update effective January 2018, to provide its expectations for strong residential mortgage underwriting for federally regulated lenders. The revised guideline had its intended effect as debt-to-income ratios flattened in 2018–2019. Subsequently, to counter the unfavourable economic impact of COVID-19, the government put in place several support programs, the Bank of Canada cut interest rates and CIBC and other Canadian banks supported clients with relief programs. The housing market rebounded strongly and prices grew, increasing the risk that new borrowers may be unable to repay loan obligations due to higher indebtedness levels. In June 2021, as part of the updated Guideline B-20, we started to qualify uninsured and insured mortgages at the higher of the mortgage contract rate plus 2%, or 5.25%. In March 2022, the Bank of Canada started to increase interest rates with further hikes expected, leading to higher mortgage rates for new and renewing contracts. A downward correction in housing activity and house prices would increase risk-weighted assets and potentially lead to higher credit losses. We regularly run stress tests and perform scenario and sensitivity analyses to assess the potential impact of a number of macroeconomic factors, including interest rates, unemployment and housing prices, on borrowers' ability to repay loan obligations and portfolio performance. See the "Real estate secured personal lending" section for the guidance issued by OSFI in June 2022 on the Clarification on the Treatment of Innovative Real Estate Secured Lending Products under Guideline B-20.

Geopolitical risk

The level of geopolitical risk escalates at certain points in time. While the specific impact on the global economy and on global credit and capital markets would depend on the nature of the event, in general, any major event could result in instability and volatility, leading to widening spreads, declining equity valuations, flight to safe-haven currencies and increased purchases of gold. In the short run, market disruption could hurt the net income of our trading and non-trading market risk positions. Geopolitical risk could reduce economic growth, and in combination with the potential impacts on commodity prices and the recent rise of protectionism, could have serious negative implications for general economic and banking activities. Current areas of concern include:

- The war in Ukraine;
- Ongoing U.S., Canada and China relations and trade issues;
- Global uncertainty and market repercussions pertaining to the COVID-19 pandemic as discussed below;
- Rising civil unrest and activism globally;
- Implications of the U.S. "Buy American" policy;
- Relations between the U.S. and Iran;
- Tensions in the Middle East; and
- Concerns following the agreed-upon Brexit deal.

While it is impossible to predict where new geopolitical disruption will occur, we do pay particular attention to markets and regions with existing or recent historical instability to assess the impact of these environments on the markets and businesses in which we operate.

Pandemic risk

The COVID-19 pandemic disrupted the global economy, financial markets, supply chains and business productivity in unprecedented and unpredictable ways. Future developments, such as the severity and duration of the pandemic, the emergence and progression of new variants, and actions taken by governments, monetary authorities, regulators, financial institutions and other third parties in response to a resurgence of cases, continue to impact our outlook.

If further variants continue to emerge and vaccines are not able to effectively mitigate the impacts in a timely manner and if broader economic closures are reinstated to address future waves of infection, the effect on the economy and financial markets could worsen and result in further volatility. Unexpected developments in financial markets, regulatory environments, or consumer behaviour and confidence may have additional adverse impacts on our business, results of operations, reputation and financial condition.

Climate risk

The physical effects of climate change along with regulations designed to mitigate its negative impacts will have a measurable impact on communities and the economy. The physical risks of climate change resulting from severe weather events and systemic issues such as rising sea levels can impact CIBC's profitability through disruptions in our own operations and damage to critical infrastructure. Transition risks, which arise as society adjusts towards a low-carbon future, can impact the financial health of our clients as changes in policy and technology aimed at limiting global warming can increase their operating costs and reduce profitability, while translating into potentially higher credit losses for the bank. We are also exposed to reputational risks due to changing stakeholder expectations related to action or inaction in addressing climate-related risks. As the world transitions to a low-carbon economy, we are committed to understanding and responsibly managing the relevant impacts of climate change on our operations and our business activities. In support of this commitment, we announced our ambition to achieve net zero greenhouse gas emissions associated with operational and financing activities by 2050, including interim targets to reduce the carbon intensity of our financed emissions in the oil and gas and power generation sectors by 2030. This builds on our environmental leadership and enhances our ability to continue creating long-term shareholder value as the landscape of climate-related risks and opportunities evolves.

Setting net-zero targets across a complex set of financing activities is an emerging practice and our methodology is informed by international standards and current industry best practices. With our first targets in place, we are now working to accelerate our climate aspirations by embedding net-zero considerations through our business practices and financing activities.

There is an increasing demand for disclosure around climate-related risk identification and mitigation. We support the Task Force on Climate-related Financial Disclosure's (TCFD's) recommendations for globally consistent and comparable climate disclosure and recently published our second standalone report, which presents information about CIBC's efforts towards aligning our climate disclosure with the TCFD framework. We are proactively collaborating with our Canadian peer banks to ensure consistency and comparability as we continue to improve our TCFD reporting.

We keep informed of emerging risks by engaging with stakeholders through established partnerships, such as the United Nations Environment Programme – Finance Initiative (UNEP-FI) and we are also a signatory to external sustainability frameworks such as the Partnership for Carbon Accounting Financials (PCAF) and the Global Reporting Initiative (GRI) to ensure comparable sustainability disclosure.

In the past year, a number of regulators and standard-setting organizations announced intentions of preparing disclosure frameworks related to climate change risks. Key among them is the IFRS Foundation's establishment of the International Sustainability Standards Board (ISSB) to develop global sustainability disclosure standards for the financial markets and to increase connectivity with accounting standards. In addition, regulators such as the SEC, OSFI and the Canadian Securities Administrators (CSA) have released proposed requirements for climate risk disclosures including defining guidance and expectations related to climate risk management practices and metrics to measure this risk. In May 2022, OSFI released draft Guideline B-15 on Climate Risk Management. OSFI's principles-based expectations set out in this guideline focus on understanding and mitigating the impact of climate-related risks to business models and strategy, governance and risk management practices used to manage climate-related risks, and remaining financially and operationally resilient through severe climate scenarios. In addition, in October 2021, the CSA released a proposed new National Instrument 51-107 on climate-related disclosures, which builds upon the current TCFD guidance to address the need for consistent and comparable climate information to inform investment decisions.

Potential divergence among the regulators in disclosure expectations, coupled with the pace at which the regulatory landscape changes, pose operational risks to us. We continue to monitor these developments and evolve our approach to support future regulatory requirements.

See the "Environmental and social risk" section for additional information.

Technology, information and cyber security risk

Financial institutions like CIBC are evolving their use of technology and business processes to improve the client experience and streamline operations. At the same time, cyber threats and the associated financial, reputation and business interruption risks have also increased. We continue to actively manage these risks through strategic risk reviews, enterprise-wide technology and information security programs, with the goal of maintaining overall cyber-resilience that prevents, detects, and responds to threats such as data breaches, malware, unauthorized access, and denial-of-service attacks, which can result in damage to CIBC systems and information, theft or disclosure of confidential information, unauthorized or fraudulent activity, and service disruption at CIBC or its service providers, including those that offer cloud services.

Given the importance of electronic financial systems, including secure online and mobile banking provided by CIBC to its clients, CIBC monitors the changing environment globally, including cyber threats, mitigation strategies and evolving regulatory requirements, in order to improve our controls and processes to protect our systems and client information. In addition, we perform cyber security preparedness, testing, and recovery exercises to validate our defences, benchmark against best practices and provide regular updates to the Board. We have well-defined cyber incident response protocols and playbooks in the event that a security incident or breach occurs. We also have cyber insurance coverage to help mitigate against certain potential losses associated with cyber incidents. Our insurance coverage is subject to various terms and provisions, including limits on the types and amounts of coverage relating to losses arising from cyber incidents. We periodically assess our insurance coverage based on our risk tolerance and limits. Despite our commitment to information and cyber security, and given the rapidly evolving threat and regulatory landscape, coupled with a changing business environment, it is not possible for us to identify all cyber risks or implement measures to prevent or eliminate all potential cyber incidents from occurring. However, we monitor our risk profile for changes and continue to refine approaches to security protection and service resilience to minimize the impact of any cyber incidents that may occur.

Commodity prices

Commodity markets continued to exhibit elevated volatility with both oil and gas prices trading in a wide range over recent months, as several factors weigh heavily on supply and demand fundamentals. Supply-side constraints continue to manifest as a result of the ongoing conflict in Ukraine and resulting sanctions on Russia, with European markets being particularly susceptible to an interruption in Russian natural gas supplies. The macroeconomic environment is tempering demand expectations given the outlook for reduced growth, while other factors such as the Organization of the Petroleum Exporting Countries production cuts, winter temperatures, a potential slowdown in China and U.S. releases from strategic reserves are influencing prices and volatility in the near term. We also continue to monitor longer-term developments as geopolitical tensions, and a desire for energy independence, face off against environmental considerations in a manner that will shape energy policies and trade flows in the years to come.

Disintermediation risk

Canadian banking clients are increasingly shifting their service transactions from brick-and-mortar banking centres to digital platforms. Competitive pressure from digital disruptors, both global technology leaders and smaller financial technology entrants, is increasing and the risk of disintermediation continues to grow due to the level of sophistication of these non-traditional competitors, and increased adoption of emerging technologies. The emergence of Decentralized Finance, where fully automated financial applications are programmed into a blockchain network using digital assets, such as cryptocurrencies, is one such technology trend that enables parties to transact without third-party intermediaries such as banks. However, in Canada, the risk of blockchain technology disintermediating banks in the near-term appears low. Currently, Canadians have access to robust financial infrastructure that delivers much of the value promised within a blockchain-based transactional network. For banks, while blockchain technology offers an effective approach to addressing counterparty risk, the value a bank brings to a client relationship extends beyond managing counterparty risk; especially as clients develop more complex financial considerations that require the expertise and empathy of a human-centered approach. Decentralized Finance may evolve in ways that make it more accessible to the general public, but without appropriate regulation to address the elevated levels of volatility, fraud, theft, and associated risks, its appeal may remain limited to Canadians with a higher risk tolerance. Advances in artificial intelligence (AI) and automation also have the potential to transform business models over time, including the delivery of financial services advice through automated processes. CIBC is maturing its AI capabilities with a focus on maintaining customer confidence and trust by building AI practices that apply principles such as fairness, ethics, transparency and security.

We manage disintermediation risk through strategic reviews as well as investment in emerging channels, in data and analytics capabilities, and in technology and innovation in general, to meet our clients' changing expectations, while working to reduce our cost structure and simplify operations. We maintain a central and coordinated approach to innovation to manage these risks while also benefitting from the opportunities they bring.

Third-party risk

The Board and senior management recognize the establishment of third-party relationships as important to CIBC's business model and therefore leverage them to achieve CIBC's business objectives. With the introduction of new technologies, new foreign jurisdictions and increasing reliance on sub-contractors, the third-party landscape continues to evolve. While such relationships may benefit us through reduced costs, increased innovation, improved performance and increased business competitiveness, they can also introduce risks of failure or disruption to CIBC through breakdowns in people, processes or technology or through external events that impact these third parties.

To mitigate third-party risks, prepare for future third-party risks and changing regulatory expectations, and to ensure existing processes and internal controls are operating effectively, we rely on our strong risk culture and established the Third Party Risk Management program, which includes policies, procedures, expertise and resources dedicated to third-party risk management. The program identifies and manages risks that arise from third-party relationships from the point of planning through the life cycle of the business arrangement and supports the maintenance of collaborative relationships that advance our strategic direction and operational needs within our risk appetite.

Anti-money laundering

Money laundering, terrorist financing activities and other related crimes pose a threat to the stability and integrity of a country's financial sector and its broader economy. In recognition of this threat, the international community has made the fight against these illegal activities a priority. We are committed to adhering to all regulatory requirements pertaining to AML/ATF and Sanctions in the jurisdictions where we operate and implementing best practices to minimize the impact of such activities. In Canada, to improve the effectiveness of the AML/ATF regime, amendments to the regulations under the *Proceeds of Crime (Money Laundering) and Terrorist Financing Act* continue to be published (with some provisions coming into force by 2024). In accordance with these amendments, we have implemented procedures, processes and controls with respect to client due diligence, record keeping and reporting as well as mandatory annual AML/ATF and Sanctions training for all employees to ensure that relevant regulatory obligations are met in each jurisdiction where we operate. Since March 2022, Canada, the U.S., U.K. and the European Union have expanded economic sanctions on Russia over the war in Ukraine, which continue to develop. While overall exposure is deemed limited, we continue to monitor and enhance controls, as required to respond to this evolving situation.

U.S. banking regulation

Our U.S. operations are subject to supervision by the Board of Governors of the Federal Reserve System (Federal Reserve), and are also subject to a comprehensive federal and state regulatory framework. Our wholly owned subsidiary, CIBC Bancorp USA Inc. (CIBC Bancorp), is a financial holding company subject to regulation and supervision by the Federal Reserve under the Bank Holding Company Act of 1956, as amended. CIBC Bank USA, our Illinois-chartered bank, is subject to regulation by the U.S. Federal Deposit Insurance Corporation (FDIC), the Federal Reserve and the Illinois Department of Financial and Professional Regulation. CIBC's New York branch is subject to regulation and supervision by the New York Department of Financial Services and the Federal Reserve. Certain market activities of our U.S. operations are subject to regulation by the SEC and the U.S. Commodity Futures Trading Commission, as well as other oversight bodies.

The scope of these regulations impact our business in a number of ways. For example, both CIBC Bancorp and CIBC Bank USA are required to maintain minimum capital ratios in accordance with Basel III rules adopted by the U.S. bank regulatory agencies, which differ in some respects from Canada's Basel III rules. Under the U.S. bank regulatory framework, both CIBC and CIBC Bancorp are expected to provide a source of strength to the subsidiary bank and may be required to commit additional capital and other resources to CIBC Bank USA in the event that its financial condition were to deteriorate, whether due to overall challenging economic conditions in the U.S., or because of business-specific issues. The Federal Reserve (in the case of CIBC Bancorp), and the FDIC and the Illinois Department of Financial and Professional Regulation (in the case of CIBC Bank USA) also have the ability to restrict dividends paid by CIBC Bancorp or CIBC Bank USA, which could limit our ability to receive distributions on our capital investment in our U.S. banking operations.

As our combined U.S. operations grow, we will become subject to additional enhanced prudential standards under the Federal Reserve's regulations applicable to foreign banking organizations. Furthermore, the Federal Reserve and the FDIC may also restrict our U.S. operations, organic or inorganic growth, if, among other things, they have supervisory concerns about risk management, AML or compliance programs and practices, governance and controls, and/or capital and liquidity adequacy at CIBC Bancorp, CIBC Bank USA or our New York branch, as applicable. In some instances, banking regulators may take supervisory actions that may not be publicly disclosed, which may restrict or limit our New York branch and our U.S. subsidiaries from engaging in certain categories of new activities or acquiring shares or control of other companies. Any restrictions imposed by banking regulators could negatively impact us by loss of revenue, limitations on the products or services we offer, and increased operational and compliance costs.

The U.S. regulatory environment continues to evolve and future legislative and regulatory developments may impact CIBC.

Interbank Offered Rate transition

Interest rate benchmarks including the London Interbank Offered Rate (LIBOR) and other similar benchmarks, are being reformed and replaced by alternative benchmark rates (alternative rates) that are largely based on traded markets. The United Kingdom's (U.K.'s) Financial Conduct Authority (FCA) originally announced in July 2017 that it would not compel banks to submit LIBOR rates beyond 2021. Consistent with this announcement, as of December 31, 2021, a formal cessation of GBP, EUR, JPY and CHF LIBORs occurred, with fallback to the alternative rates triggered. In addition, trading of USD LIBOR has been curtailed in advance of its forthcoming cessation in June 2023 as the industry continues its transition away from LIBOR as a reference rate underpinning loans, derivatives and cash products globally. We continue to monitor industry developments in this space and have also implemented controls to ensure new USD LIBOR trades are for permitted purposes only during this transition. Furthermore, in December 2021 the Canadian Alternative Reference Rate working group (CARR) recommended that the Canadian Dollar Offered Rate (CDOR) should cease calculation and publication after June 2024 with CORRA suggested as the replacement benchmark rate. On May 16, 2022, the CDOR administrator announced the cessation of CDOR consistent with the recommendations outlined by CARR. See the "Other regulatory developments" section for further details.

Tax reform

As many governments took on additional debt to support the economy during the pandemic and look to ensure a strong post-pandemic recovery, there are tax reform proposals that could increase taxes affecting CIBC.

The Canadian Federal government published draft legislation in 2022 that if enacted would increase our income taxes as described in the "Financial results review – Taxes" section.

Canada is one of 137 members of The Organisation for Economic Co-Operation and Development (OECD)/G20 Inclusive Framework on Base Erosion and Profit Shifting that joined a Two-Pillar plan for international tax reform agreed to in October 2021. The Two-Pillar framework's stated purpose is to ensure that large Multinational Enterprises (MNEs) pay tax where they operate and earn profit. Pillar One focuses on the taxation of digital

services and Pillar Two establishes rules for the application of the 15% global minimum tax. Pillar One is to be implemented by a multilateral convention to come into effect in 2023, which will require all parties to remove their Digital Services Taxes. If Pillar One implementation is delayed, the Canadian government plans to enact draft Digital Services Tax legislation, which will come into effect no earlier than January 1, 2024. The Canadian government held public consultation on the implementation of Pillar Two model rules, but no legislation has yet been proposed.

Corporate transactions

CIBC seeks out acquisition and divestiture opportunities that align with its strategy, risk appetite and financial goals. The ability to successfully execute on our strategy to integrate acquisitions, and the ability to anticipate and manage risks associated with such corporate transactions are subject to various factors such as receiving regulatory and shareholder approval on a timely basis and on favourable terms, retaining clients and key personnel, realizing synergies and efficiencies, controlling integration and acquisition costs, and changes in general business and economic conditions, among others.

Although many of the factors are beyond our control, their impact is partially mitigated by conducting due diligence before completing the transaction and developing and executing appropriate plans. However, given the inherent uncertainty involved in such corporate transactions, we cannot anticipate all potential events, facts and circumstances that may arise and there could be an adverse impact on our operations and financial performance as a result of such corporate transactions.

Regulatory developments

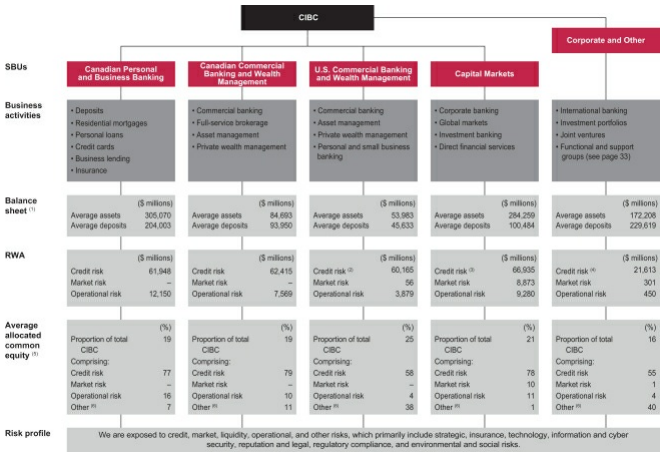
See the "Taxes", "Capital management", "Credit risk", "Liquidity risk" and "Accounting and control matters" sections for additional information on regulatory developments.

Accounting developments

See the "Accounting and control matters" section and Note 31 to the consolidated financial statements for additional information on accounting developments.

Risks arising from business activities

The chart below shows our business activities and related risk measures based upon regulatory RWA and average allocated common equity as at October 31, 2022:



(1) Average balances are calculated as a weighted average of daily closing balances.
(2) Includes CCR of $9 million, which comprises derivatives and repo-style transactions.
(3) Includes CCR of $17,234 million, which comprises derivatives and repo-style transactions.
(4) Includes CCR of $227 million, which comprises derivatives and repo-style transactions.
(5) Average allocated common equity is a non-GAAP measure. For additional information on the composition of thisnon-GAAP measure, see the"Non-GAAP measures" section.
(6) Represents average allocated common equity relating to capital deductions, such as goodwill and intangible assets, in accordance with the rules in OSFI's CAR Guideline.

Credit risk

Credit risk is the risk of financial loss due to a borrower or counterparty failing to meet its obligations in accordance with contractual terms.

Credit risk arises out of the lending businesses in each of our SBUs and in International banking, which is included in Corporate and Other. Other sources of credit risk consist of our trading activities, which include our OTC derivatives, debt securities, and our repo-style transaction activity. In addition to losses on the default of a borrower or counterparty, unrealized gains or losses may occur due to changes in the credit spread of the counterparty, which could impact the carrying or fair value of our assets.

Governance and management

Credit risk is managed through the three lines of defence model. The first line of defence consists of the frontline businesses and control groups that assess and manage the risks associated with their activities. They own the risks and the controls that mitigate the risks – this is the first line of defence.

The second line of defence is Risk Management, which takes a broader, independent view and is responsible for the adjudication and oversight of credit risks associated with CIBC's personal, small business, commercial, corporate and wealth management activities.

Internal audit is the third line of defence, providing reasonable assurance to senior management and the Audit Committee of the Board on the effectiveness of CIBC's governance practices, risk management processes, and internal control as part of its risk-based audit plan and in accordance with its mandate as described in the Internal Audit Charter.

Senior management reports to the GRC and RMC at least quarterly on material credit risk matters, including material credit transactions, compliance with limits, portfolio trends, impaired loans and credit loss provisioning levels. Provision for (reversal of) credit losses is reviewed by the RMC and the Audit Committee quarterly.

Specific to the management of credit risk, Risk Management is mandated to provide enterprise-wide oversight of the management of credit risk in CIBC's credit portfolios, including the measurement, monitoring and control of credit risk and the management of credit risk models. Key groups in Risk Management with credit risk responsibility include:

Capital Markets Risk Management: This group is responsible for independent oversight of the measurement, monitoring and control of traded and non-traded market risk, liquidity risk and trading credit risk, including adjudication of trading credit facilities for banks, non-bank financial entities, prime brokerage clients and central clearing counterparties. In addition, Capital Markets Risk Management is responsible for the risk management of sovereign and country risk, securitizations and the oversight of the Global Collateral Finance framework covering repos and securities lending.

Global Credit Risk Management: This group is responsible for the adjudication and oversight of credit risks associated with our commercial, corporate and wealth management credit portfolios, management of the risks in our investment portfolios, as well as management of special loan portfolios.

Model Validation, Global Operational Risk Management: This group is responsible for the oversight of model validation practices. Model validation constitutes the independent set of processes, activities and ongoing documentary evidence that models and parameters are sound and CIBC can rely on their output.

Enterprise Risk Management: This group is responsible for enterprise-wide analysis, including enterprise-wide stress testing and reporting, risk data systems and models, economic and regulatory capital methodologies as well as transaction-specific environmental and social risk.

Risk Analytics and Credit Decisioning: This group manages credit risk in personal and small business products offered through the various distribution channels (e.g., residential mortgages, credit cards, personal loans/lines of credit, small business loans) and performs analytics to optimize retail credit performance, along with collections and AML outcomes.

U.S. Risk Management: This group carries out the mandate of CIBC Risk Management at a regional level and provides independent oversight of the identification, management, measurement, monitoring and control of credit risks in the U.S. Commercial Banking and Wealth Management SBU.

Adjudication and oversight above delegated levels is provided by the CRO, GRC and RMC.

Policies

To control credit risk, prudent credit risk management principles are used as a base to establish policies, standards and guidelines that govern credit activities as outlined by the credit risk management policy.

The credit risk management policy supplements CIBC's risk management framework and risk appetite framework, and together with CIBC's portfolio concentration limits for credit exposures, CIBC's common risk/concentration risk limits for credit exposures, and other supporting credit risk policies, standards and procedures, assists CIBC in achieving its desired risk profile by providing an effective foundation for the management of credit risk.

Credit risk limits

The RMC approves Board limits, and exposures above Board limits require reporting to, or approval of, the RMC. Management limits are approved by the CRO. Usage is monitored to ensure risks are within allocated management and Board limits. Exposures above management limits require the approval of the CRO. Business lines may also impose lower limits to reflect the nature of their exposures and target markets. This tiering of limits provides for an appropriate hierarchy of decision making and reporting between management and the RMC. Credit approval authority flows from the Board and is further cascaded to officers in writing. The Board's Investment and Lending Authority Resolution sets thresholds above which credit exposures require reporting to, or approval of, the RMC, ensuring an increasing level of oversight for credit exposures of higher risk. CIBC maintains country limits to control exposures within countries outside of Canada and the U.S.

Credit concentration limits

At a bank-wide level, credit exposures are managed to promote alignment to our risk appetite statement, to maintain the target business mix and to ensure that there is no undue concentration of risk. We set limits to control borrower concentrations by risk-rating band for large exposures (i.e., risk-rated credits). Direct loan sales, credit derivative hedges, or structured transactions may also be used to reduce concentrations. We also have a set of portfolio concentration limits in place to control exposures by country, industry, product and activity. Further, our policies require limits to be established as appropriate for new initiatives and implementation of strategies involving material levels of credit risk. Concentration limits represent the maximum exposure levels we wish to hold on our books. In the normal course, it is expected that exposures will be held at levels below the maximums. The credit concentration limits are reviewed and approved by the RMC at least annually.

Credit concentration limits are also applied to our retail lending portfolios to mitigate concentration risk. We not only have concentration limits applied to individual borrowers and geographic regions, but also to different types of credit facilities, such as unsecured credits. In addition, we limit the maximum insured mortgage exposure to private insurers in order to reduce counterparty risk.

Credit risk mitigation

We may mitigate credit risk by obtaining a pledge of collateral, which improves recoveries in the event of a default. Our credit risk management policies include verification of the collateral and its value and ensuring that we have legal certainty with respect to the assets pledged. Valuations are updated periodically depending on the nature of the collateral, legal environment, and the creditworthiness of the counterparty. The main types of collateral include: (i) cash or marketable securities for securities lending and repurchase transactions; (ii) cash or marketable securities taken as collateral in support of our OTC derivatives activity; (iii) charges over operating assets such as inventory, receivables and real estate properties for lending to small business and commercial borrowers; and (iv) mortgages over residential properties for retail lending.

In certain circumstances we may use third-party guarantees to mitigate risk. We also obtain insurance to reduce the risk in our real estate secured lending portfolios, the most material of which relates to the portion of our residential mortgage portfolio that is insured by CMHC, an agency of the Government of Canada.

We mitigate the trading credit risk of OTC derivatives, securities lending and repurchase transactions with counterparties by employing the International Swaps and Derivatives Association (ISDA) Master Agreement, as well as Credit Support Annexes (CSAs) or similar master and collateral agreements. See Note 12 to the consolidated financial statements for additional details on the risks related to the use of derivatives and how we manage these risks.

ISDA Master Agreements and similar master and collateral agreements, such as the Global Master Repurchase Agreement and Global Master Securities Lending Agreement, facilitate cross transaction payments, prescribe close-out netting processes, and define the counterparties' contractual trading relationship. In addition, the agreements formalize non-transaction-specific terms. Master agreements serve to mitigate our credit risk by outlining default and termination events, which enable parties to close out of all outstanding transactions in the case of a negative credit event on either party's side. The mechanism for calculating termination costs in the event of a close-out are outlined in the master agreement; this allows for the efficient calculation of a single net obligation of one party to another.

CSAs and other collateral agreements are often included in ISDA Master Agreements or similar master agreements governing securities lending and repurchase transactions. They mitigate CCR by providing for the exchange of collateral between parties when a party's exposure to the other exceeds agreed upon thresholds, subject to a minimum transfer amount. CSAs and other collateral agreements that operate with master agreements also designate acceptable collateral types, and set out rules for re-hypothecation and interest calculation on collateral. Collateral types permitted under CSAs and other master agreements are set through our trading credit risk management documentation procedures. These procedures include requirements around collateral type concentrations.

Consistent with global initiatives to improve resilience in the financial system, we clear derivatives through central counterparties (CCPs) where feasible. Credit derivatives may be used to reduce industry sector concentrations and single-name exposure.

Forbearance techniques

We employ forbearance techniques to manage client relationships and to minimize credit losses due to default, foreclosure or repossession. In certain circumstances, it may be necessary to modify a loan for reasons related to a borrower's financial difficulties, reducing the potential of default. Total debt restructurings are subject to our normal quarterly impairment review which considers, amongst other factors, covenants and/or payment delinquencies. Loan loss provisions are adjusted as appropriate.

In retail lending, forbearance techniques include interest capitalization, amortization amendments and debt consolidations. We have a set of eligibility criteria that allow our Client Account Management team to determine suitable remediation strategies and propose products based on each borrower's situation.

The solutions available to corporate and commercial clients vary based on the individual nature of the client's situation and are undertaken selectively where it has been determined that the client has or is likely to have repayment difficulties servicing its obligations. Covenants often reveal changes in the client's financial situation before there is a change in payment behaviour and typically allow for a right to reprice or accelerate payments. Solutions may be temporary in nature or may involve other special management options.

Process and control

The credit approval process is centrally controlled, with all significant credit requests submitted to a credit adjudication group within Risk Management that is independent of the originating businesses. Approval authorities are a function of the risk and amount of credit requested. In certain cases, credit requests must be escalated to senior management, the CRO, or to the RMC for approval.

After initial approval, individual credit exposures continue to be monitored. A formal risk assessment is completed at least annually for all risk-rated accounts, including review of assigned ratings. Higher risk-rated accounts are subject to closer monitoring and are reviewed at least quarterly. Collections and specialized loan workout groups handle the day-to-day management of high-risk loans to maximize recoveries.

Risk measurement

Exposures subject to AIRB approach

Under the AIRB approach we are required to categorize exposures to credit risk into broad classes of assets with different underlying risk characteristics. This asset categorization may differ from the presentation in our consolidated financial statements. Under the AIRB approach, credit risk is measured using the following three key risk parameters[1]:

- PD – the probability that the obligor will default within the next 12 months.
- EAD – the estimate of the amount that will be drawn at the time of default.
- LGD – the expected severity of loss as the result of the default, expressed as a percentage of the EAD.

Our credit risk exposures are divided into business and government and retail portfolios. Regulatory models used to measure credit risk exposure under the AIRB approach are subject to CIBC's model risk management process.

(1) These parameters differ from those used in the calculation of ECL under IFRS 9. See the "Accounting and control matters" section for further details.

Business and government portfolios (excluding scored small business) – risk-rating method

The portfolios comprise exposures to corporate, sovereign, and bank obligors. Our adjudication process and criteria includes assigning an obligor rating that reflects our estimate of the financial strength of the borrower, and a facility rating or LGD rating that reflects the collateral amount and quality applicable to secured exposures, the seniority position of the claim, and the capital structure of the borrower for unsecured exposures.

The obligor rating takes into consideration our financial assessment of the obligor, the industry, and the economic environment of the region in which the obligor operates. Where a guarantee from a third-party exists, both the obligor and the guarantor will be assessed. While our obligor rating is determined independently of external ratings for the obligor, our risk-rating methodology includes a review of those external ratings.

CIBC employs a 20-point master internal obligor default rating scale that broadly maps to external agencies' ratings as presented in the table below.

Grade	CIBC rating	S&P equivalent	Moody's equivalent
Investment grade	00–47	AAA to BBB-	Aaa to Baa3
Non-investment grade	51–67	BB+ to B-	Ba1 to B3
Watch list	70–80	CCC+ to C	Caa1 to Ca
Default	90	D	C

We use quantitative modelling techniques to assist in the development of internal risk-rating systems. The risk-rating systems have been developed through analysis of internal and external credit risk data, supplemented with expert judgment. The risk ratings are used for portfolio management, risk limit setting, product pricing, and in the determination of regulatory and economic capital.

Our credit process is designed to ensure that we approve applications and extend credit only where we believe that our client has the ability to repay according to the agreed terms and conditions.

Our credit framework of policies and limits defines our appetite for exposure to any single name or group of related borrowers, which is a function of the internal risk rating. We generally extend new credit only to borrowers in the investment and non-investment grade categories noted above. Our credit policies are also defined to manage our exposure to concentration in borrowers in any particular industry or region.

In accordance with our process, each obligor is assigned an obligor default rating and the assigned rating is mapped to a PD estimate that represents a long-run average one-year default likelihood. For corporate obligors, PD estimates are calculated using joint maximum likelihood techniques based on our internal default rate history by rating category and longer dated external default rates as a proxy for the credit cycle to arrive at long-run average PD estimates. Estimates drawn from third-party statistical default prediction models are used to supplement the internal default data for some rating bands where internal data is sparse. For small and medium corporate enterprises, PD estimates are developed using only internal default history. For bank and sovereign obligors, PD estimates are derived from an analysis based on external default data sets and supplemented with internal data where possible. We examine several different estimation methodologies and compare results across the different techniques. In addition, we apply the same techniques and estimation methodologies to analogous corporate default data and compare the results for banks and sovereigns to the corporate estimates for each technique. A regulatory floor is applied to PD estimates for corporate and bank obligors.

Each facility is assigned an LGD rating and each assigned rating is mapped to an LGD estimate that considers economic downturn conditions. For corporate obligors, LGD estimates are primarily derived from internal historical recovery data. Time to resolution is typically one to two years for most corporate obligors, and one to four years in the real estate sector. LGD values are based on discounted post-default cash flows for resolved accounts and include material direct and indirect costs associated with collections. External data is used in some cases to supplement our analysis. Economic downturn periods are identified for each portfolio by examining the history of actual losses, default rates and LGD. For bank and sovereign exposures, LGD estimates are primarily driven by expert judgment supplemented with external data and benchmarks where available. Appropriate adjustments are made to LGD estimates to account for various uncertainties associated with estimation techniques and data limitations, including adjustments for unresolved accounts.

EAD is estimated based on the current exposure to the obligor together with possible future changes in that exposure driven by factors such as the available undrawn credit commitment amount and the obligor default rating. EAD estimates are primarily based on internal historical loss data supplemented with comparable external data. Economic downturn periods are identified for each portfolio by examining the historical default rates and actual EAD factors.

Appropriate adjustments are made to PD, LGD and EAD estimates to account for various uncertainties associated with estimation techniques and data limitations, including adjustments for unresolved accounts (for LGD).

A simplified risk-rating process (slotting approach) is used for part of our uninsured Canadian commercial mortgage portfolio, which comprises non-residential mortgages and multi-family residential mortgages. These exposures are individually rated on our rating scale using a risk-rating methodology that considers the property's key attributes, which include its loan-to-value (LTV) and debt service ratios, the quality of the property, and the financial strength of the owner/sponsor. All exposures are secured by a lien over the property. In addition, we have insured multi-family residential mortgages, which are not treated under the slotting approach, but are instead treated as sovereign exposures.

Retail portfolios

Retail portfolios are characterized by a large number of relatively small exposures. They comprise: real estate secured personal lending (residential mortgages and personal loans and lines secured by residential property); qualifying revolving retail exposures (credit cards, overdrafts and unsecured lines of credit); and other retail exposures (loans secured by non-residential assets, unsecured loans including student loans, and scored small business loans).

We use scoring models in the adjudication of new retail credit exposures, which are based on statistical methods of analyzing the unique characteristics of the borrower, to estimate future behaviour. In developing our models, we use internal historical information from previous borrowers, as well as information from external sources, such as credit bureaus. The use of credit scoring models allows for consistent assessment across borrowers. There are specific guidelines in place for each product, and our adjudication decision will take into account the characteristics of the borrower, any guarantors, and the quality and sufficiency of the collateral pledged (if any). The lending process will include documentation of, where appropriate, satisfactory identification, proof of income, independent appraisal of the collateral and registration of security.

Retail portfolios are managed as pools of homogeneous risk exposures, using external credit bureau scores and/or other behavioural assessments to group exposures according to similar credit risk profiles. These pools are established through statistical techniques. Characteristics used to group individual exposures vary by asset category; as a result, the number of pools, their size, and the statistical techniques applied to their management differ accordingly.

The following table maps the PD bands to various risk levels:

Risk level	PD bands
Exceptionally low	0.01%–0.20%
Very low	0.21%–0.50%
Low	0.51%–2.00%
Medium	2.01%–10.00%
High	10.01%–99.99%
Default	100%

For the purposes of the AIRB approach for retail portfolios, additional PD, LGD and EAD segmentation into homogeneous risk exposures is established through statistical techniques. The principal statistical estimation technique is decision trees benchmarked against alternative techniques such as regression and random forests.

Within real estate secured lending, we have two key parameter estimation models: mortgages and real estate secured personal lines of credit. Within qualifying revolving retail, we have three key parameter estimation models: credit cards, overdraft, and unsecured personal lines. A small percentage of credit cards, overdraft, and unsecured line accounts that do not satisfy the requirements for qualifying revolving retail are grouped into other retail parameter models. Within other retail, we have three key parameter models: margin lending, personal loans, and scored small business loans. Each parameter model pools accounts according to characteristics such as: delinquency, current credit bureau score, internal behaviour score, estimated current LTV ratio, account type, account age, utilization, outstanding balance, or authorized limit.

PD is estimated as the average default rate over an extended period based on internal historical data, generally for a 5-to-10-year period, which is adjusted using internal historical data on default rates over a longer period or comparable external data that includes a period of stress. A regulatory floor is applied to our PD estimate for all retail exposures with the exception of insured mortgages and government-guaranteed loans.

LGD is estimated based on observed recovery rates over an extended period using internal historical data. In determining our LGD estimate, we exclude any accounts that have not had enough time since default for the substantial majority of expected recovery to occur. This recovery period is product-specific and is typically in the range of 1 to 3 years. Accounts that cure from default and return to good standing are considered to have zero loss. We simulate the loss rate in a significant downturn based on the relationship(s) between LGD and one or more of the following: PD; housing prices, cure rate, and recovery time; or observed LGD in periods with above-average loss rates. We apply appropriate adjustments to address various types of estimation uncertainty including sampling error and trending. A regulatory floor is applied to all real estate secured exposures with the exception of insured mortgages.

EAD for revolving products is estimated as a percentage of the authorized credit limit based on the observed EAD rates over an extended period using historical data. We simulate the EAD rate in a significant downturn based on the relationship(s) between the EAD rate and PD and/or the observed EAD rate in periods with above-average EAD rates. For term loan products, EAD is set equal to the outstanding balance.

We apply appropriate adjustments to PD, LGD and EAD to address various types of estimation uncertainty including sampling error and trending.

Back-testing

We monitor the three key risk parameters – PD, EAD and LGD – on a quarterly basis for our business and government portfolios and on a monthly basis for our retail portfolios. Every quarter, the back-testing results are reported to OSFI and are presented to the business and Risk Management senior management for review and challenge. For each parameter, we identify any portfolios whose realized values are significantly above or significantly below expectations and then test to see if this deviation is explainable by changes in the economy. If the results indicate that a parameter model may be losing its predictive power, we prioritize that model for review and update.

Stress testing

As part of our regular credit portfolio management process, we conduct stress testing and scenario analyses on our portfolio to quantitatively assess the impact of various historical, as well as hypothetical, stressed conditions, versus limits determined in accordance with our risk appetite. Scenarios are selected to test our exposures to specific industries (e.g., oil and gas and real estate), products (e.g., mortgages and cards), or geographic regions (e.g., Europe and the Caribbean). Results from stress testing are a key input into management decision making, including the determination of limits and strategies for managing our credit exposure. See the "Real estate secured personal lending" section for further discussion on our residential mortgage portfolio stress testing.

Exposure to credit risk

The portfolios are categorized based upon how we manage the business and the associated risks. Gross credit exposure amounts presented in the table below represent our estimate of EAD, which is net of derivative master netting agreements and CVA but is before allowance for credit losses or credit risk mitigation. Gross credit exposure amounts relating to our business and government portfolios are reduced for collateral held for repo-style transactions, which reflects the EAD value of such collateral. Non-trading equity exposures are not included in the table below as they have been deemed immaterial under the OSFI guidelines, and hence are subject to 100% risk-weighting.

$ millions, as at October 31	2022			2021		
	AIRB approach	**Standardized approach**	**Total**	AIRB approach[1]	Standardized approach	Total
Business and government portfolios						
Corporate						
Drawn	**$ 151,361**	**$ 45,924**	**$ 197,285**	$ 120,417	$ 36,321	$ 156,738
Undrawn commitments	**64,470**	**10,142**	**74,612**	61,417	7,583	69,000
Repo-style transactions	**185,680**	**–**	**185,680**	172,827	–	172,827
Other off-balance sheet	**14,181**	**831**	**15,012**	13,644	981	14,625
OTC derivatives	**13,094**	**98**	**13,192**	12,914	415	13,329
	428,786	**56,995**	**485,781**	381,219	45,300	426,519
Sovereign						
Drawn	**149,200**	**28,680**	**177,880**	125,001	26,272	151,273
Undrawn commitments	**8,560**	**–**	**8,560**	8,525	–	8,525
Repo-style transactions	**24,228**	**–**	**24,228**	26,746	–	26,746
Other off-balance sheet	**2,421**	**–**	**2,421**	1,613	–	1,613
OTC derivatives	**2,475**	**–**	**2,475**	2,011	1	2,012
	186,884	**28,680**	**215,564**	163,896	26,273	190,169
Banks						
Drawn	**14,151**	**1,548**	**15,699**	12,291	1,565	13,856
Undrawn commitments	**1,297**	**18**	**1,315**	1,554	3	1,557
Repo-style transactions	**46,155**	**–**	**46,155**	42,529	–	42,529
Other off-balance sheet	**74,748**	**–**	**74,748**	64,728	–	64,728
OTC derivatives	**6,287**	**12**	**6,299**	5,765	12	5,777
	142,638	**1,578**	**144,216**	126,867	1,580	128,447
Gross business and government portfolios	**758,308**	**87,253**	**845,561**	671,982	73,153	745,135
Less: collateral held for repo-style transactions	**237,484**	**–**	**237,484**	225,399	–	225,399
Net business and government portfolios	**520,824**	**87,253**	**608,077**	446,583	73,153	519,736
Retail portfolios						
Real estate secured personal lending						
Drawn	**281,518**	**5,491**	**287,009**	261,531	4,835	266,366
Undrawn commitments	**38,038**	**–**	**38,038**	36,631	–	36,631
	319,556	**5,491**	**325,047**	298,162	4,835	302,997
Qualifying revolving retail						
Drawn	**18,034**	**n/a**	**18,034**	18,181	n/a	18,181
Undrawn commitments	**58,471**	**n/a**	**58,471**	54,509	n/a	54,509
Other off-balance sheet	**375**	**n/a**	**375**	327	n/a	327
	76,880	**n/a**	**76,880**	73,017	n/a	73,017
Other retail						
Drawn	**17,519**	**5,099**	**22,618**	15,578	1,419	16,997
Undrawn commitments	**3,308**	**28**	**3,336**	2,937	26	2,963
Other off-balance sheet	**45**	**121**	**166**	40	–	40
	20,872	**5,248**	**26,120**	18,555	1,445	20,000
Total retail portfolios	**417,308**	**10,739**	**428,047**	389,734	6,280	396,014
Securitization exposures	**15,333**	**3,257**	**18,590**	10,823	4,556	15,379
Gross credit exposure	**1,190,949**	**101,249**	**1,292,198**	1,072,539	83,989	1,156,528
Less: collateral held for repo-style transactions	**237,484**	**–**	**237,484**	225,399	–	225,399
Net credit exposure [2]	**$ 953,465**	**$ 101,249**	**$ 1,054,714**	$ 847,140	$ 83,989	$ 931,129

(1) Includes exposures subject to the supervisory slotting approach.

(2) Excludes exposures arising from derivative and repo-style transactions that are cleared through QCCPs as well as credit risk exposures arising from other assets that are subject to the credit risk framework but are not included in the standardized or IRB frameworks, including other balance sheet assets that are risk-weighted at 100%, significant investments in the capital of non-financial institutions that are risk-weighted at 1,250%, settlement risk, and amounts below the thresholds for deduction that are risk-weighted at 250%.

n/a Not applicable.

Net credit exposure increased by $123.6 billion in 2022, due to business growth in our North American lending portfolios.

Exposures subject to the standardized approach[1]

Exposures within CIBC Bank USA, CIBC FirstCaribbean and certain exposures to individuals for non-business purposes do not have sufficient historical data to support the AIRB approach for credit risk, and are subject to the standardized approach. The standardized approach utilizes a set of risk weightings defined by the regulators, as opposed to the more data intensive AIRB approach. A detailed breakdown of our standardized credit risk exposures by risk-weight category, before considering the effect of credit risk mitigation strategies and before allowance for credit losses, is provided below.

$ millions, as at October 31	Risk-weight category							2022	2021
	0%	20%	35%	50%	75%	100%	150%	Total	Total
Corporate	$ –	$ –	$ –	$ –	$ –	$ 56,863	$ 132	$ 56,995	$ 45,300
Sovereign	24,809	2,971	–	102	–	794	4	28,680	26,273
Banks	–	1,359	–	85	–	134	–	1,578	1,580
Real estate secured personal lending	–	–	3,980	–	1,269	233	9	5,491	4,835
Other retail	–	–	–	–	5,130	80	38	5,248	1,445
	$ 24,809	$ 4,330	$ 3,980	$ 187	$ 6,399	$ 58,104	$ 183	$ 97,992	$ 79,433

(1) See "Securitization exposures" section for securitization exposures that are subject to the standardized approach.

We use credit ratings from S&P and Moody's to calculate credit risk RWA for certain exposures under the standardized approach, including securities issued by sovereigns and their central banks (sovereigns), banks and corporates, and deposits with sovereigns and banks. This includes S&P and Moody's issuer-specific credit ratings for securities issued by sovereigns and corporates, the S&P country credit rating for the country of incorporation for securities issued by banks, and deposits with banks, and the S&P country credit rating for deposits with central banks. The RWA calculated using credit ratings from these agencies represents 0.8% of credit risk RWA under the standardized approach.

Trading credit exposures

We have trading credit exposure (also called counterparty credit exposure) that arises from our OTC derivatives and our repo-style transactions. The nature of our derivatives exposure and how it is mitigated is further explained in Note 12 to the consolidated financial statements. Our repo-style transactions consist of our securities bought or sold under repurchase agreements, and our securities borrowing and lending activity.

The PD of our counterparties is estimated using models consistent with the models used for our direct lending activity. Due to the fluctuations in the market values of interest rates, exchange rates, and equity and commodity prices, counterparty credit exposure cannot be quantified with certainty at the inception of the trade. Counterparty credit exposure is estimated using the current fair value of the exposure, plus an estimate of the maximum potential future exposure due to changes in the fair value. Credit risk associated with these counterparties is managed within the same process as our lending business, and for the purposes of credit adjudication, the exposure is aggregated with any exposure arising from our lending business. The majority of our counterparty credit exposure benefits from the credit risk mitigation techniques discussed above, including daily re-margining, and posting of collateral.

We are also exposed to wrong-way risk. Specific wrong-way risk arises when CIBC receives financial collateral issued (or an underlying reference obligation of a transaction is issued) by the counterparty itself, or by a related entity that would be considered to be part of the same common risk group. General wrong-way risk arises when the exposure and/or collateral pledged to CIBC is highly correlated to that of the counterparty. Exposure to wrong-way risk with derivative counterparties is monitored by Capital Markets Risk Management. Where we may be exposed to wrong-way risk, our adjudication procedures subject those transactions to a more rigorous approval process. The exposure may be hedged with other derivatives to further mitigate the risk that can arise from these transactions.

We establish a CVA for expected future credit losses from each of our derivative counterparties. The expected future credit loss is a function of our estimates of the PD, the estimated loss in the event of default, and other factors such as risk mitigants.

Rating profile of OTC derivative mark-to-market (MTM) receivables

$ billions, as at October 31	2022		2021	
	Exposure[1]			
Investment grade	$ 11.18	79.1 %	$ 9.87	68.9 %
Non-investment grade	2.87	20.3	4.39	30.6
Watch list	0.09	0.6	0.07	0.5
Default	–	–	–	–
Unrated	–	–	–	–
	$ 14.14	100.0 %	$ 14.33	100.0 %

(1) MTM of the OTC derivative contracts is after the impact of master netting agreements, but before any collateral.

Concentration of exposures

Concentration of credit risk exists when a number of obligors are engaged in similar activities, or operate in the same geographic areas or industry sectors, and have similar economic characteristics so that their ability to meet contractual obligations is similarly affected by changes in economic, political, or other conditions.

Geographic distribution[1]

The following table provides a geographic distribution of our business and government exposures under the AIRB approach, net of collateral held for repo-style transactions.

$ millions, as at October 31, 2022	Canada	U.S.	Europe	Other	Total
Drawn	**$ 195,500**	**$ 89,657**	**$ 13,330**	**$ 16,225**	**$ 314,712**
Undrawn commitments	**51,733**	**16,322**	**3,693**	**2,579**	**74,327**
Repo-style transactions	**8,629**	**5,430**	**1,857**	**2,663**	**18,579**
Other off-balance sheet	**74,955**	**7,646**	**8,190**	**559**	**91,350**
OTC derivatives	**11,100**	**6,547**	**2,157**	**2,052**	**21,856**
	$ 341,917	**$ 125,602**	**$ 29,227**	**$ 24,078**	**$ 520,824**
October 31, 2021	$ 301,992	$ 95,561	$ 28,504	$ 20,526	$ 446,583

(1) Classification by country is primarily based on domicile of debtor or customer.

Business and government exposure by industry groups

The following table provides an industry-wide breakdown of our business and government exposures under the AIRB approach, net of collateral held for repo-style transactions.

$ millions, as at October 31	Drawn	Undrawn commitments	Repo-style transactions	Other off-balance sheet	OTC derivatives	2022 Total	2021 Total
Commercial mortgages	**$ 9,098**	**$ 10**	**$ –**	**$ –**	**$ –**	**$ 9,108**	$ 9,665
Financial institutions	**93,137**	**13,940**	**17,504**	**79,477**	**10,991**	**215,049**	187,163
Retail and wholesale	**9,966**	**4,191**	**–**	**391**	**308**	**14,856**	12,120
Business services	**9,675**	**3,054**	**8**	**634**	**330**	**13,701**	11,253
Manufacturing – capital goods	**3,961**	**2,357**	**–**	**275**	**313**	**6,906**	5,577
Manufacturing – consumer goods	**5,131**	**2,163**	**–**	**254**	**134**	**7,682**	6,270
Real estate and construction	**39,584**	**10,477**	**–**	**1,661**	**178**	**51,900**	45,470
Agriculture	**7,860**	**2,268**	**–**	**34**	**90**	**10,252**	9,306
Oil and gas	**3,642**	**5,491**	**–**	**646**	**5,429**	**15,208**	15,931
Mining	**1,956**	**3,700**	**–**	**755**	**211**	**6,622**	4,903
Forest products	**464**	**612**	**–**	**217**	**60**	**1,353**	1,220
Hardware and software	**3,348**	**1,544**	**–**	**56**	**48**	**4,996**	3,422
Telecommunications and cable	**1,508**	**1,935**	**–**	**365**	**308**	**4,116**	3,440
Broadcasting, publishing and printing	**460**	**118**	**–**	**7**	**8**	**593**	614
Transportation	**5,873**	**3,647**	**–**	**269**	**604**	**10,393**	10,889
Utilities	**15,567**	**11,365**	**–**	**4,559**	**557**	**32,048**	28,209
Education, health, and social services	**3,691**	**1,621**	**2**	**191**	**104**	**5,609**	5,530
Governments	**99,791**	**5,834**	**1,065**	**1,559**	**2,183**	**110,432**	85,601
	$ 314,712	**$ 74,327**	**$ 18,579**	**$ 91,350**	**$ 21,856**	**$ 520,824**	$ 446,583

As part of our risk mitigation strategy, we may use credit protection purchases as a hedge against customer or industry sector concentration. At October 31, 2022, we had no credit protection purchased (2021: $124 million) related to our business and government loans.

Credit quality of portfolios

Credit quality of the retail portfolios

The following table presents the credit quality of our retail portfolios under the AIRB approach.

$ millions, as at October 31	EAD			2022	2021
Risk level	Real estate secured personal lending	Qualifying revolving retail	Other retail	Total	Total
Exceptionally low	**$ 243,056**	**$ 47,835**	**$ 3,183**	**$ 294,074**	$ 282,648
Very low	**40,396**	**9,035**	**6,282**	**55,713**	48,481
Low	**31,437**	**13,122**	**7,503**	**52,062**	44,718
Medium	**3,804**	**5,839**	**2,600**	**12,243**	11,551
High	**587**	**1,002**	**1,203**	**2,792**	1,953
Default	**276**	**47**	**101**	**424**	383
	$ 319,556	**$ 76,880**	**$ 20,872**	**$ 417,308**	$ 389,734

Securitization exposures

The following table provides details on securitization exposures in our banking book, by credit rating.

$ millions, as at October 31	2022	2021
	EAD	
Exposures under the AIRB approach		
S&P rating equivalent		
AAA to BBB-	**$ 15,333**	$ 10,823
BB+ to BB-	**–**	–
Below BB-	**–**	–
Unrated	**–**	–
	15,333	10,823
Exposures under the standardized approach	**3,257**	4,556
Total securitization exposures	**$ 18,590**	$ 15,379

Government lending programs in response to COVID-19

In 2020, the Government of Canada launched a number of lending programs to provide credit and financing to businesses during the COVID-19 pandemic. CIBC participated in a number of those programs, including the Canada Emergency Business Account (CEBA) program with the Export Development Canada (EDC). Loans advanced under the CEBA program are not recognized on our consolidated balance sheet because they are funded by EDC and all of the resulting cash flows and associated risks and rewards, including any exposure to payment defaults and principal forgiveness, are assumed by EDC. As at October 31, 2022, loans of $4.1 billion (2021: $4.5 billion), net of repayments, have been provided to our clients under the CEBA. Funded loans outstanding on our consolidated balance sheet under other Canadian lending programs for businesses that commenced during the pandemic were $0.4 billion (2021: $0.3 billion).

The Paycheck Protection Program (PPP), introduced by the U.S. Small Business Administration (SBA), was a forgivable loan program that ended on May 31, 2021. PPP loans are guaranteed by the U.S. SBA. Loans advanced under the PPP are recognized on our consolidated balance sheet as business and government loans with the SBA's guarantee reflected in our estimate of the ECL associated with these loans. Loans outstanding under the PPP in the U.S. were US$54 million (2021: US$0.5 billion).

Real estate secured personal lending

Real estate secured personal lending comprises residential mortgages, and personal loans and lines secured by residential property (HELOC). This portfolio is lower risk compared with other retail portfolios, as we have a first charge on the majority of the properties and a second lien on only a small portion of the portfolio. We use the same lending criteria in the adjudication of both first lien and second lien loans.

Under the *Bank Act* (Canada), banks are limited to providing residential real estate loans of no more than 80% of the collateral value. An exception is made for mortgage loans with a higher LTV ratio if they are insured by either CMHC or a private mortgage insurer. Mortgage insurance protects banks from the risk of default by the borrower, over the term of the coverage. Mortgage insurers are subject to regulatory capital requirements, which aim to ensure that they are well capitalized. If a private mortgage insurer becomes insolvent, the Government of Canada has, provided certain conditions are met, obligations in respect of policies underwritten by certain insolvent private mortgage insurers as more fully described in the *Protection of Residential Mortgage or Hypothecary Insurance Act* (PRMHIA). There is a possibility that losses could be incurred in respect of insured mortgages if, among other things, CMHC or the applicable private mortgage insurer denies a claim, or further, if a private mortgage insurer becomes insolvent and either the conditions under the PRMHIA are not met or the Government of Canada denies the claim.

The following disclosures are required by OSFI pursuant to the Guideline B-20 "Residential Mortgage Underwriting Practices and Procedures" (Guideline B-20).

The following table provides details on our residential mortgage and HELOC portfolios:

	Residential mortgages[1]				HELOC[2]		Total			
	Insured		Uninsured		Uninsured		Insured		Uninsured	
$ billions, as at October 31, 2022										
Ontario[3]	**$ 21.8**	**15 %**	**$ 123.4**	**85 %**	**$ 10.9**	**100 %**	**$ 21.8**	**14 %**	**$ 134.3**	**86 %**
British Columbia and territories[4]	**7.3**	**14**	**44.8**	**86**	**4.0**	**100**	**7.3**	**13**	**48.8**	**87**
Alberta	**12.0**	**45**	**14.9**	**55**	**2.0**	**100**	**12.0**	**42**	**16.9**	**58**
Quebec	**5.2**	**25**	**15.9**	**75**	**1.2**	**100**	**5.2**	**23**	**17.1**	**77**
Central prairie provinces	**3.1**	**42**	**4.3**	**58**	**0.6**	**100**	**3.1**	**39**	**4.9**	**61**
Atlantic provinces	**3.2**	**36**	**5.8**	**64**	**0.7**	**100**	**3.2**	**33**	**6.5**	**67**
Canadian portfolio[5][6]	**52.6**	**20**	**209.1**	**80**	**19.4**	**100**	**52.6**	**19**	**228.5**	**81**
U.S. portfolio[5]	**–**	**–**	**2.4**	**100**	**–**	**–**	**–**	**–**	**2.4**	**100**
Other international portfolio[5]	**–**	**–**	**2.7**	**100**	**–**	**–**	**–**	**–**	**2.7**	**100**
Total portfolio	**$ 52.6**	**20 %**	**$ 214.2**	**80 %**	**$ 19.4**	**100 %**	**$ 52.6**	**18 %**	**$ 233.6**	**82 %**
October 31, 2021	$ 59.6	24 %	$ 187.9	76 %	$ 18.8	100 %	$ 59.6	22 %	$ 206.7	78 %

(1) Balances reflect principal values.
(2) We did not have any insured HELOCs as at October 31, 2022 and 2021.
(3) Includes $9.9 billion (2021: $11.7 billion) of insured residential mortgages, $77.0 billion (2021: $67.7 billion) of uninsured residential mortgages, and $6.3 billion (2021: $6.0 billion) of HELOCs in the Greater Toronto Area (GTA).
(4) Includes $3.2 billion (2021: $3.8 billion) of insured residential mortgages, $30.6 billion (2021: $27.9 billion) of uninsured residential mortgages, and $2.5 billion (2021: $2.4 billion) of HELOCs in the Greater Vancouver Area (GVA).
(5) Geographic location is based on the address of the property.
(6) 61% (2021: 64%) of insurance on Canadian residential mortgages is provided by CMHC and the remaining by two private Canadian insurers, both rated at least AA (low) by DBRS.

The average LTV ratios[1] for our uninsured residential mortgages and HELOCs originated and acquired during the year are provided in the following table:

For the year ended October 31	2022		2021	
	Residential mortgages	**HELOC**	Residential mortgages	HELOC
Ontario[2]	**65 %**	**65 %**	64 %	68 %
British Columbia and territories[3]	**62**	**64**	61	65
Alberta	**72**	**72**	69	73
Quebec	**69**	**71**	68	73
Central prairie provinces	**71**	**73**	69	74
Atlantic provinces	**70**	**70**	69	73
Canadian portfolio[4]	**65**	**66**	64	68
U.S. portfolio[4]	**64**	**61**	63	65
Other international portfolio[4]	**73 %**	**n/m**	75 %	n/m

(1) LTV ratios for newly originated and acquired residential mortgages and HELOCs are calculated based on weighted average.
(2) Average LTV ratios for our uninsured GTA residential mortgages originated during the year were 65% (2021: 64%).
(3) Average LTV ratios for our uninsured GVA residential mortgages originated during the year were 62% (2021: 61%).
(4) Geographic location is based on the address of the property.
n/m Not meaningful.

The following table provides the average LTV ratios on our total Canadian residential mortgage portfolio:

	Insured	Uninsured
October 31, 2022 [1][2]	**50 %**	**48 %**
October 31, 2021 [1][2]	51 %	49 %

(1) LTV ratios for residential mortgages are calculated based on weighted average. The house price estimates for October 31, 2022 and 2021 are based on the Forward Sortation Area (FSA) level indices from the Teranet – National Bank National Composite House Price Index (Teranet) as of September 30, 2022 and 2021, respectively. Teranet is an independent estimate of the rate of change in Canadian home prices.
(2) Average LTV ratio on our uninsured GTA residential mortgage portfolio was 48% (2021: 47%). Average LTV ratio on our uninsured GVA residential mortgage portfolio was 44% (2021: 45%).

The tables below summarize the remaining amortization profile of our total Canadian, U.S. and other international residential mortgages. The first table provides the remaining amortization periods based on the minimum contractual payment amounts with the assumption that variable rate mortgages renew at payment amounts that maintain the original amortization schedule. The second table summarizes the remaining amortization profile of our total Canadian, U.S. and other international residential mortgages based upon current customer payment amounts.

Contractual payment basis

	0–5 years	>5–10 years	>10–15 years	>15–20 years	>20–25 years	>25–30 years	>30–35 years	>35 years
Canadian portfolio								
October 31, 2022	**– %**	**1 %**	**1 %**	**10 %**	**54 %**	**34 %**	**– %**	**– %**
October 31, 2021	– %	1 %	1 %	8 %	57 %	33 %	– %	– %
U.S. portfolio								
October 31, 2022	**– %**	**1 %**	**– %**	**2 %**	**9 %**	**88 %**	**– %**	**– %**
October 31, 2021	– %	1 %	– %	1 %	10 %	88 %	– %	– %
Other international portfolio								
October 31, 2022	**7 %**	**12 %**	**21 %**	**23 %**	**20 %**	**15 %**	**1 %**	**1 %**
October 31, 2021	8 %	15 %	21 %	23 %	19 %	13 %	1 %	– %

Current customer payment basis

	0–5 years	>5–10 years	>10–15 years	>15–20 years	>20–25 years	>25–30 years	>30–35 years	>35 years [1]
Canadian portfolio								
October 31, 2022	**1 %**	**3 %**	**5 %**	**13 %**	**31 %**	**17 %**	**4 %**	**26 %**
October 31, 2021	1 %	3 %	7 %	17 %	45 %	27 %	– %	– %
U.S. portfolio								
October 31, 2022	**1 %**	**2 %**	**6 %**	**9 %**	**10 %**	**72 %**	**– %**	**– %**
October 31, 2021	1 %	3 %	6 %	9 %	10 %	71 %	– %	– %
Other international portfolio								
October 31, 2022	**7 %**	**12 %**	**21 %**	**23 %**	**20 %**	**15 %**	**1 %**	**1 %**
October 31, 2021	7 %	12 %	21 %	24 %	19 %	15 %	1 %	– %

(1) Includes variable rate mortgages of $68 billion, of which $39 billion relates to mortgages in which all of the fixed contractual payments are currently being applied to interest based on the rates in effect at October 31, 2022 and the terms of the mortgages, with the portion of the contractual interest requirement not met by the payments being added to the principal. Since the amortization profile reflected in this table is based on the current amount of existing contractual payments, it does not reflect that the contractual payment amount is required to be increased at the time of renewal by the amount necessary to reduce the amortization period down to the period in effect at the time the mortgage was originally provided.

The increase in the duration of the amortization profile is driven by the prime rate increases that commenced earlier in 2022, impacting clients with a variable rate mortgage. The increase in interest rates had no impact on the remaining amortization period for fixed rate mortgages which in the current interest rate environment are assumed to be renewed at the same or a shorter amortization period.

We have two types of condominium exposures in Canada: mortgages and developer loans. Both are primarily concentrated in the Toronto and Vancouver areas. As at October 31, 2022, our Canadian condominium mortgages were $38.7 billion (2021: $34.7 billion), of which 20% (2021: 24%) were insured. Our drawn developer loans were $1.7 billion (2021: $1.1 billion), or 0.8% (2021: 0.7%) of our business and government portfolio, and our related undrawn exposure was $5.9 billion (2021: $4.9 billion). The condominium developer exposure is diversified across 112 projects.

We stress test our mortgage and HELOC portfolios to determine the potential impact of different economic events. Our stress tests can use variables such as unemployment rates, debt service ratios and housing price changes, to model potential outcomes for a given set of circumstances. The stress testing involves variables that could behave differently in certain situations. Our main tests use economic variables in a similar range or more conservative to historical events when Canada experienced economic downturns, and also incorporate the impact of the COVID-19 pandemic. Our results show that in an economic downturn, our capital position should be sufficient to absorb mortgage and HELOC losses.

On December 17, 2021, OSFI and the Department of Finance confirmed that the minimum qualifying rate for uninsured and insured mortgages will remain the higher of: (i) the mortgage contract rate plus 2%; or (ii) 5.25% as a minimum floor.

OSFI Clarification on the Treatment of Innovative Real Estate Secured Lending Products under Guideline B-20

On June 28, 2022, OSFI released a new Advisory (Clarification on the Treatment of Innovative Real Estate Secured Lending Products under Guideline B-20), which complements existing expectations under Guideline B-20. The Advisory articulates OSFI's expectations regarding underwriting practices and procedures for reverse residential mortgages, residential mortgages with shared equity features and Combined Loan Plans (CLPs), which are applicable to all FRFIs that are engaged in residential mortgage underwriting and/or the acquisition of residential mortgage loan assets in Canada. The changes will affect CIBC's Home Power Plan (HPP) product, which is considered a CLP, with LTVs above 65% when combined with related mortgage products. OSFI expects that HPPs with balances above the 65% LTV limit after considering the associated mortgage to be both amortizing and non-readvanceable until the combined LTV reduces to 65%. For previously originated HPPs, principal payments on both the mortgage and HPP are required to be matched by a reduction in the aggregate authorized limit until it reduces to a 65% LTV. This change will take place for existing borrowers upon the first renewal date of their HPP after October 2023. We expect to discontinue the origination of HPPs that do not meet these requirements by October 2023.

Credit quality performance

As at October 31, 2022, total loans and acceptances after allowance for credit losses were $ 528.7 billion (2021: $462.9 billion). Consumer loans (comprising residential mortgages, credit cards, and personal loans, including student loans) constitute 62% (2021: 65%) of the portfolio, and business and government loans (including acceptances) constitute the remainder of the portfolio.

Consumer loans were up $26.8 billion or 9% from the prior year, primarily due to an increase in residential mortgages and credit cards. Business and government loans (including acceptances) were up $39.0 billion or 24% from the prior year, mainly attributable to financial institutions, real estate and construction, business services, and retail and wholesale.

Impaired loans

The following table provides details of our impaired loans and allowance for credit losses:

$ millions, as at or for the year ended October 31	2022			2021		
	Business and government loans	**Consumer loans**	**Total**	Business and government loans	Consumer loans	Total
Gross impaired loans						
Balance at beginning of year	**$ 1,033**	**$ 800**	**$ 1,833**	$ 1,359	$ 990	$ 2,349
Classified as impaired during the year	**491**	**1,456**	**1,947**	750	1,686	2,436
Transferred to performing during the year	**(100)**	**(294)**	**(394)**	(235)	(574)	(809)
Net repayments [1]	**(243)**	**(448)**	**(691)**	(511)	(579)	(1,090)
Amounts written off	**(312)**	**(718)**	**(1,030)**	(279)	(707)	(986)
Foreign exchange and other	**51**	**27**	**78**	(51)	(16)	(67)
Balance at end of year	**$ 920**	**$ 823**	**$ 1,743**	$ 1,033	$ 800	$ 1,833
Allowance for credit losses – impaired loans	**$ 351**	**$ 313**	**$ 664**	$ 508	$ 264	$ 772
Net impaired loans [2]						
Balance at beginning of year	**$ 525**	**$ 536**	**$ 1,061**	$ 709	$ 726	$ 1,435
Net change in gross impaired	**(113)**	**23**	**(90)**	(326)	(190)	(516)
Net change in allowance	**157**	**(49)**	**108**	142	–	142
Balance at end of year	**$ 569**	**$ 510**	**$ 1,079**	$ 525	$ 536	$ 1,061
Net impaired loans as a percentage of net loans and acceptances			**0.20 %**			0.23 %

(1) Includes disposal of loans.

(2) Net impaired loans are gross impaired loans net of stage 3 allowance for credit losses.

Gross impaired loans

As at October 31, 2022, gross impaired loans were $1,743 million, down $90 million from the prior year, primarily due to decreases in the Canadian residential mortgages portfolio, and the real estate and construction, and utilities sectors, partially offset by the impact of U.S. dollar appreciation on our existing portfolio, and an increase in the education, health and social services sector.

57% of gross impaired loans related to Canada, of which the residential mortgages and personal lending portfolios, as well as the retail and wholesale, and education, health and social services sectors accounted for the majority.

21% of gross impaired loans related to the U.S., of which the real estate and construction, capital goods manufacturing, and business services sectors accounted for the majority.

The remaining gross impaired loans related to CIBC FirstCaribbean, of which the residential mortgages and personal lending portfolios, as well as the real estate and construction, and business services sectors accounted for the majority.

See the "Supplementary annual financial information" section for additional details on the geographic distribution and industry classification of impaired loans.

Allowance for credit losses – impaired loans

Allowance for credit losses on impaired loans was $664 million, down $108 million from the prior year, primarily due to decreases in the utilities, real estate and construction, and business services sectors, partially offset by the impact of the U.S. dollar appreciation on our existing portfolio.

Loans contractually past due but not impaired

The following table provides an aging analysis of loans that are not impaired, where repayment of principal or payment of interest is contractually in arrears. Loans less than 30 days past due are excluded as such loans are not generally indicative of the borrowers' ability to meet their payment obligations.

$ millions, as at October 31	**31 to 90 days**	**Over 90 days**	**2022 Total**	2021 Total
Residential mortgages	**$ 874**	**$ –**	**$ 874**	$ 703
Personal	**247**	**–**	**247**	146
Credit card [1]	**206**	**125**	**331**	203
Business and government	**256**	**–**	**256**	162
	$ 1,583	**$ 125**	**$ 1,708**	$ 1,214

(1) For the acquired Canadian Costco credit card portfolio, the credit cards were transferred in the aging category that applied at the time of acquisition and have continued to age to the extent a payment has not been made.

During the year, gross interest income that would have been recorded if impaired loans were treated as current was $ 87 million (2021: $96 million), of which $45 million (2021: $55 million) was in Canada and $42 million (2021: $41 million) was outside Canada. During the year, interest recognized on impaired loans was $ 35 million (2021: $41 million), and interest recognized on loans before being classified as impaired was $31 million (2021: $30 million), of which $23 million (2021: $21 million) was in Canada and $ 8 million (2021: $9 million) was outside Canada.

Exposure to certain countries and regions

The following table provides our exposure to certain countries and regions outside of Canada and the U.S.

Our direct exposures presented in the table below comprise (A) funded – on-balance sheet loans (stated at amortized cost net of stage 3 allowance for credit losses, if any), deposits with banks (stated at amortized cost net of stage 3 allowance for credit losses, if any) and securities (stated at carrying value); (B) unfunded – unutilized credit commitments, letters of credit, and guarantees (stated at notional amount net of stage 3 allowance for credit losses, if any); and (C) derivative MTM receivables (stated at fair value) and repo-style transactions (stated at fair value).

The following table provides a summary of our positions in these regions:

	Direct exposures											
	Funded				Unfunded			Derivative MTM receivables and repo-style transactions [1]				
$ millions, as at October 31, 2022	Corporate	Sovereign	Banks	Total funded (A)	Corporate	Banks	Total unfunded (B)	Corporate	Sovereign	Banks	Net exposure (C)	Total direct exposure (A)+(B)+(C)
U.K.	**$ 6,439**	**$ 1,537**	**$ 2,562**	**$ 10,538**	**$ 6,251**	**$ 541**	**$ 6,792**	**$ 809**	**$ –**	**$ 439**	**$ 1,248**	**$ 18,578**
Europe excluding U.K. [2]	**6,366**	**772**	**5,987**	**13,125**	**5,557**	**1,157**	**6,714**	**146**	**96**	**455**	**697**	**20,536**
Caribbean	**5,167**	**2,343**	**3,151**	**10,661**	**1,810**	**2,299**	**4,109**	**30**	**–**	**275**	**305**	**15,075**
Latin America [3]	**180**	**84**	**15**	**279**	**213**	**–**	**213**	**–**	**43**	**1**	**44**	**536**
Asia	**455**	**4,716**	**3,185**	**8,356**	**127**	**385**	**512**	**–**	**226**	**679**	**905**	**9,773**
Oceania [4]	**7,609**	**1,641**	**1,440**	**10,690**	**3,561**	**204**	**3,765**	**38**	**–**	**87**	**125**	**14,580**
Other	**508**	**–**	**100**	**608**	**498**	**5**	**503**	**–**	**–**	**–**	**–**	**1,111**
Total [5]	**$ 26,724**	**$ 11,093**	**$ 16,440**	**$ 54,257**	**$ 18,017**	**$ 4,591**	**$ 22,608**	**$ 1,023**	**$ 365**	**$ 1,936**	**$ 3,324**	**$ 80,189**
October 31, 2021	$ 13,496	$ 12,483	$ 9,153	$ 35,132	$ 9,366	$ 5,422	$ 14,788	$ 912	$ 339	$ 1,630	$ 2,881	$ 52,801

(1) The amounts shown are net of CVA and collateral. Collateral on derivative MTM receivables was $6.5 billion (2021: $4.6 billion), collateral on repo-style transactions was $62.4 billion (2021: $60.5 billion), and both comprise cash and investment grade debt securities.
(2) Exposures to Russia and Ukraine are de minimis.
(3) Includes Mexico, Central America and South America.
(4) Includes Australia and New Zealand.
(5) Excludes exposure of $4,355 million (2021: $4,947 million) to supranationals (a multinational organization or a political union comprising member nation-states).

Settlement risk

Settlement risk is the risk that during an agreed concurrent exchange of currency or principal payments, the counterparty will fail to make its payment to CIBC. This risk can arise in general trading activities and from payment and settlement system participation.

Many global settlement systems offer significant risk reduction benefits through complex risk mitigation frameworks. Bilateral payment netting agreements may be put in place to mitigate risk by reducing the aggregate settlement amount between counterparties. Further, we participate in several North American payment and settlement systems, including a global foreign exchange multilateral netting system. We also use financial intermediaries to access some payment and settlement systems, and for certain trades, we may utilize an established clearing house to minimize settlement risk.

Transactions settled outside of payment and settlement systems or clearing houses require approval of credit facilities for counterparties, either as pre-approved settlement risk limits or payment-versus-payment arrangements.

Securitization activities

We engage in three types of securitization activities: we securitize assets that we originate, we securitize assets originated by third parties and we engage in trading activities related to securitized products.

We securitize assets that we originate principally as a funding mechanism. The credit risk on the underlying assets in these transactions is transferred to the SE, with CIBC retaining first loss exposure and other investors exposed to the remaining credit risk.

Securitization activities relating to assets originated by third parties can include the securitization of those assets through ABCP conduits (or similar programs) that we sponsor (including both consolidated and non-consolidated SEs; see the "Off-balance sheet arrangements" section and Note 6 to our consolidated financial statements for additional details), or through direct exposure to a client-sponsored structured entity. Risks associated with securitization exposures to client-originated assets are mitigated through the transaction structure, which includes credit enhancements. For the transactions where we retain credit risk on the exposures that we hold, we earn interest income on these holdings. For the transactions in the non-consolidated ABCP conduits, we are also exposed to liquidity risk associated with the potential inability to roll over maturing ABCP in the market. We earn fee income for the services that we provide to these ABCP conduits.

We are also involved in the trading of ABS and ABCP to earn income in our role as underwriter and market maker. We are exposed to credit and market risk on the securities that we hold in inventory on a temporary basis until such securities are sold to an investor.

Capital requirements for exposures arising from securitization activities are determined using one of the following approaches: SEC-IRBA, SEC-ERBA, SEC-IAA, or SEC-SA.

The SEC-IAA process relies on internal risk ratings and is utilized for securitization exposures relating to ABCP conduits when external ratings are not available for the securitization exposures but the ABCP itself is externally rated. The internal assessment process involves an evaluation of a number of factors, including, but not limited to, pool characteristics, including asset eligibility criteria and concentration limits, transaction triggers, the asset seller's risk profile, servicing capabilities, and cash flow stress testing. Cash flows are stress-tested based on historical asset performance using our internal cash flow stress testing models by asset type. These models are subject to our model risk mitigation policies and are independently reviewed by the Model Validation team in Risk Management. The stress test factors used to determine the transaction risk profile and required credit enhancement levels are tailored for each asset type and transaction based on the assessment of the factors described above and are done in accordance with our internal risk rating methodologies and guidelines. Internal risk ratings are mapped to equivalent external ratings of external credit assessment institutions (DBRS, Fitch, Moody's and S&P) and are used to determine the appropriate risk weights for capital purposes. Securitization exposures and underlying asset performance are monitored on an ongoing basis. Risk Management serves as a second line of defence providing independent oversight regarding risk rating assumptions and adjudicating on the assignment of the internal risk ratings. SEC-IAA applies to various asset types in our ABCP conduits including, but not limited to, auto loans and leases, consumer loans, credit cards, equipment loans and leases, fleet lease receivables, franchise loans, residential mortgages and residential rental equipment.

Internal risk ratings determined for securitization exposures are also used in the estimation of ECL as required under IFRS 9, determining economic capital, and for setting risk limits.

Market risk

Market risk is the risk of economic and/or financial loss in our trading and non-trading portfolios from adverse changes in underlying market factors, including interest rates, foreign exchange rates, equity market prices, commodity prices, credit spreads, and customer behaviour for retail products. Market risk arises in CIBC's trading and treasury activities, and encompasses all market-related positioning and market-making activity.

The trading portfolio consists of positions in financial instruments and commodities held to meet the near-term needs of our clients.

The non-trading portfolio consists of positions in various currencies that are related to ALM and investment activities.

Governance and management

Market risk is managed through the three lines of defence model. The first line of defence comprises frontline businesses and governance groups that are responsible for managing the market risk associated with their activities.

The second line of defence is Risk Management, which has a dedicated market risk manager for each trading business, supplemented by regional risk managers located in all of our major trading centres, facilitating comprehensive risk coverage, including the measurement, monitoring and control of market risk.

Internal audit is the third line of defence providing reasonable assurance to senior management and the Audit Committee of the Board on the effectiveness of CIBC's governance practices, risk management processes, and internal control as part of its risk-based audit plan and in accordance with its mandate as described in the Internal Audit Charter.

Senior management reports material risk matters to the GRC and RMC at least quarterly, including material transactions, limit compliance, and portfolio trends.

Policies

We have comprehensive policies for the management of market risk. These policies are related to the identification and measurement of various types of market risk, their inclusion in the trading portfolio, and the establishment of limits within which we monitor, manage and report our overall exposures. Our policies also outline the requirements for the construction of valuation models, model review and validation, independent checking of the valuation of positions, the establishment of valuation adjustments, and alignment with accounting policies including MTM and mark-to-model methodologies.

Market risk limits

We have risk tolerance levels, expressed in terms of statistically based VaR measures, potential stress losses, and notional or other limits as appropriate. We use a multi-tiered approach to set limits on the amounts of risk that we can assume in our trading and non-trading activities, as follows:

- Board limits control consolidated market risk;
- Management limits control market risk for CIBC overall and are lower than the Board limits to allow for a buffer in the event of extreme market moves and/or extraordinary client needs;
- Tier 2 limits control market risk at the business unit level; and
- Tier 3 limits control market risk at the sub-business unit or desk level.

Management limits are established by the CRO, consistent with the risk appetite statement approved by the Board. Tier 2 and Tier 3 limits are approved at levels of management commensurate with the risk assumed.

Process and control

Market risk exposures are monitored daily against approved risk limits, and processes are in place to monitor that only authorized activities are undertaken. We generate daily risk and limit-monitoring reports, based on the previous day's positions. Summary market risk and limit compliance reports are produced and reviewed periodically with the GRC and RMC.

Risk measurement

We use the following measures for market risk:

- VaR enables the meaningful comparison of the risks in different businesses and asset classes. VaR is determined by the combined modelling of VaR for each of interest rate, credit spread, equity, foreign exchange, commodity, and debt specific risks, along with the portfolio effect arising from the interrelationship of the different risks (diversification effect):
  - Interest rate risk measures the impact of changes in interest rates and volatilities on cash instruments and derivatives.
  - Credit spread risk measures the impact of changes in credit spreads of provincial, municipal and agency bonds, sovereign bonds, corporate bonds, securitized products, and credit derivatives such as credit default swaps.
  - Equity risk measures the impact of changes in equity prices and volatilities.
  - Foreign exchange risk measures the impact of changes in foreign exchange rates and volatilities.
  - Commodity risk measures the impact of changes in commodity prices and volatilities, including the basis between related commodities.
  - Debt specific risk measures the impact of changes in the volatility of the yield of a debt instrument as compared with the volatility of the yield of a representative bond index.
  - Diversification effect reflects the risk reduction achieved across various financial instrument types, counterparties, currencies and regions. The extent of the diversification benefit depends on the correlation between the assets and risk factors in the portfolio at a particular time.
- Price sensitivity measures the change in value of a portfolio to a small change in a given underlying parameter, so that component risks may be examined in isolation, and the portfolio rebalanced accordingly to achieve a desired exposure.
- Stressed VaR enables the meaningful comparison of the risks in different businesses and asset classes under stressful conditions. Changes to rates, prices, volatilities, and spreads over a 10-day horizon from a stressful historical period are applied to current positions to determine stressed VaR.
- IRC measures the required capital due to credit migration and default risk for debt securities held in the trading portfolios.
- Back-testing validates the effectiveness of risk measurement through analysis of observed and theoretical profit and loss outcomes.
- Stress testing and scenario analysis provide insight into portfolio behaviour under extreme circumstances.

The following table provides balances on the consolidated balance sheet that are subject to market risk. Certain differences between accounting and risk classifications are detailed in the footnotes below:

$ millions, as at October 31	2022				2021				
		Subject to market risk [1]				Subject to market risk [1]			
	Consolidated balance sheet	Trading	Non-trading	Not subject to market risk	Consolidated balance sheet	Trading	Non-trading	Not subject to market risk	Non-traded risk primary risk sensitivity
Cash and non-interest-bearing deposits with banks	**$ 31,535**	**$ –**	**$ 3,009**	**$ 28,526**	$ 34,573	$ –	$ 2,661	$ 31,912	Foreign exchange
Interest-bearing deposits with banks	**32,326**	**9**	**32,317**	**–**	22,424	19	22,405	–	Interest rate
Securities	**175,879**	**50,295**	**125,584**	**–**	161,401	56,028	105,373	–	Interest rate, equity
Cash collateral on securities borrowed	**15,326**	**–**	**15,326**	**–**	12,968	–	12,968	–	Interest rate
Securities purchased under resale agreements	**69,213**	**–**	**69,213**	**–**	67,572	–	67,572	–	Interest rate
Loans									
Residential mortgages	**269,706**	**–**	**269,706**	**–**	251,526	–	251,526	–	Interest rate
Personal	**45,429**	**–**	**45,429**	**–**	41,897	–	41,897	–	Interest rate
Credit card	**16,479**	**–**	**16,479**	**–**	11,134	–	11,134	–	Interest rate
Business and government	**188,542**	**209** [2]	**188,333**	**–**	150,213	24,780 [2]	125,433	–	Interest rate
Allowance for credit losses	**(3,073)**	**–**	**(3,073)**	**–**	(2,849)	–	(2,849)	–	Interest rate
Derivative instruments	**43,035**	**40,048**	**2,987**	**–**	35,912	34,589	1,323	–	Interest rate, foreign exchange
Customers' liability under acceptances	**11,574**	**–**	**11,574**	**–**	10,958	–	10,958	–	Interest rate
Other assets	**47,626**	**2,025**	**34,294**	**11,307**	40,554	2,977	26,743	10,834	Interest rate, equity, foreign exchange
	$ 943,597	**$ 92,586**	**$ 811,178**	**$ 39,833**	$ 837,683	$ 118,393	$ 676,544	$ 42,746	
Deposits	**$ 697,572**	**$ 714** [3]	**$ 626,562**	**$ 70,296**	$ 621,158	$ 609 [3]	$ 548,419	$ 72,130	Interest rate
Obligations related to securities sold short	**15,284**	**14,216**	**1,068**	**–**	22,790	19,472	3,318	–	Interest rate
Cash collateral on securities lent	**4,853**	**–**	**4,853**	**–**	2,463	–	2,463	–	Interest rate
Obligations related to securities sold under repurchase agreements	**77,171**	**–**	**77,171**	**–**	71,880	–	71,880	–	Interest rate
Derivative instruments	**52,340**	**46,393**	**5,947**	**–**	32,101	30,882	1,219	–	Interest rate, foreign exchange
Acceptances	**11,586**	**–**	**11,586**	**–**	10,961	–	10,961	–	Interest rate
Other liabilities	**28,117**	**2,836**	**14,347**	**10,934**	24,961	2,705	11,344	10,912	Interest rate
Subordinated indebtedness	**6,292**	**–**	**6,292**	**–**	5,539	–	5,539	–	Interest rate
	$ 893,215	**$ 64,159**	**$ 747,826**	**$ 81,230**	$ 791,853	$ 53,668	$ 655,143	$ 83,042	

(1) Funding valuation adjustment (FVA) exposures are excluded from trading activities for regulatory capital purposes, with related derivative hedges to these FVA exposures also excluded.
(2) Excludes nil (2021: $48 million) of loans that are warehoused for future securitization purposes. These are considered non-trading for market risk purposes.
(3) Comprises FVO deposits which are considered trading for market risk purposes.

Trading activities

We hold positions in traded financial contracts to meet client investment and risk management needs. Trading revenue (net interest income and non-interest income) is generated from these transactions. Trading instruments are recorded at fair value and include debt and equity securities, as well as interest rate, foreign exchange, equity, commodity, and credit derivative products.

Value-at-risk

Our VaR methodology is a statistical technique that measures the potential overnight loss at a 99% confidence level. We use a full revaluation historical simulation methodology to compute VaR, stressed VaR and other risk measures.

Although a valuable guide to risk, VaR should always be viewed in the context of its limitations. For example:

- The use of historical data for estimating future events will not encompass all potential events, particularly those that are extreme in nature.
- The use of a one-day holding period assumes that all positions can be liquidated, or the risks offset in one day. This may not fully reflect the market risk arising at times of severe illiquidity, when a one-day period may be insufficient to liquidate or hedge all positions fully.
- The use of a 99% confidence level does not take into account losses that might occur beyond this level of confidence.
- VaR is calculated on the basis of exposures outstanding at the close of business and assumes no management action to mitigate losses.

The VaR table below presents market risks by type of risk and in aggregate. The risks are interrelated and the diversification effect reflects the reduction of risk due to portfolio effects among the trading positions. Our trading risk exposures to interest rates and credit spreads arise from activities in the global debt and derivative markets, particularly from transactions in the Canadian, U.S. and European markets. The primary instruments are government and corporate debt, and interest rate derivatives. The majority of the trading exposure to foreign exchange risk arises from transactions involving the Canadian dollar, U.S. dollar, Euro, Pound sterling, Australian dollar, Chinese yuan and Japanese yen, whereas the primary risks of losses in equities are in the U.S., Canadian and European markets. Trading exposure to commodities arises primarily from transactions involving North American natural gas, crude oil products, and precious metals.

Stressed VaR

The stressed VaR measure is intended to replicate the VaR calculation that would be generated for our current portfolio if the values of the relevant market risk factors were sourced from a period of stressed market conditions. The model inputs are calibrated to historical data from a continuous 12-month period of significant financial stress relevant to our current portfolio since December 2006. In 2022, our stressed VaR window has been the 2008–2009 Global Financial Crisis period. This historical period exhibited not only increased volatility in interest rates but also increased volatility in equity prices, combined with a reduction in the level of interest rates, and an increase in credit spreads.

Incremental risk charge

IRC is a measure of default and migration risk for debt securities held in the trading portfolios. Our IRC methodology measures the risk of issuer migration and default, at a 99.9% confidence level, over a period of one year.

$ millions, as at or for the year ended October 31	2022				2021			
	High	**Low**	**As at**	**Average**	High	Low	As at	Average
Interest rate risk	**$ 16.3**	**$ 4.7**	**$ 6.0**	**$ 7.3**	$ 15.0	$ 4.1	$ 5.7	$ 8.7
Credit spread risk	**11.0**	**0.9**	**1.1**	**3.4**	11.8	5.8	8.4	8.5
Equity risk	**10.5**	**2.6**	**4.1**	**4.9**	7.8	2.3	6.5	4.1
Foreign exchange risk	**4.8**	**0.5**	**1.2**	**1.8**	3.8	0.4	1.6	1.4
Commodity risk	**6.0**	**1.1**	**1.4**	**2.3**	6.1	1.0	1.3	3.0
Debt specific risk	**3.3**	**1.2**	**1.9**	**2.2**	5.7	2.1	2.9	3.1
Diversification effect [1]	**n/m**	**n/m**	**(8.1)**	**(13.2)**	n/m	n/m	(18.5)	(21.2)
Total VaR (one-day measure)	**$ 14.6**	**$ 5.5**	**$ 7.6**	**$ 8.7**	$ 13.9	$ 4.6	$ 7.9	$ 7.6
Stressed total VaR (one-day measure)	**$ 49.9**	**$ 16.1**	**$ 31.2**	**$ 30.0**	$ 40.8	$ 15.3	$ 33.2	$ 28.0
IRC (one-year measure) [2]	**$ 178.9**	**$ 95.7**	**$ 114.0**	**$ 130.7**	$ 266.4	$ 144.6	$ 182.3	$ 203.5

(1) Total VaR is less than the sum of the VaR of the different market risk types due to risk offsets resulting from a portfolio diversification effect.
(2) High and low IRC are not equal to the sum of the constituent parts, because the highs and lows of the constituent parts may occur on different days.
n/m Not meaningful. It is not meaningful to compute a diversification effect because the high and low may occur on different days for different risk types.

Average total VaR for the year ended October 31, 2022 was up $1.1 million from the prior year, driven primarily by a decrease in the diversification benefit, partially offset by decreases in credit spread and interest rate risks.

Average stressed total VaR for the year ended October 31, 2022 was up $2.0 million from the prior year. The increase was primarily due to increased equity risk.

Average IRC for the year ended October 31, 2022 was down $72.8 million from the prior year due to decreases in trading book bond inventory and improved credit quality within our fixed income portfolio.

Back-testing

To determine the reliability of the trading VaR model, outcomes are monitored regularly through a back-testing process to test the validity of the assumptions and the parameters used in the trading VaR calculation. The back-testing process includes calculating a hypothetical or static profit and loss and comparing that result with calculated VaR. Static profit and loss represents the change in value of the prior day's closing portfolio due to each day's price movements, on the assumption that the portfolio remained unchanged. The back-testing process is conducted on a daily basis at the consolidated CIBC level as well as business lines and individual portfolios.

Static profit and loss in excess of the one-day VaR are investigated. The back-testing process, including the investigation of results, is performed by risk professionals who are independent of those responsible for development of the model.

Based on our back-testing results, we are able to ensure that our VaR model continues to appropriately measure risk.

During the year, there were two negative back-testing breaches of the total VaR measure at the consolidated CIBC level, driven by the volatility in CAD and, to a lesser extent, USD interest rates.

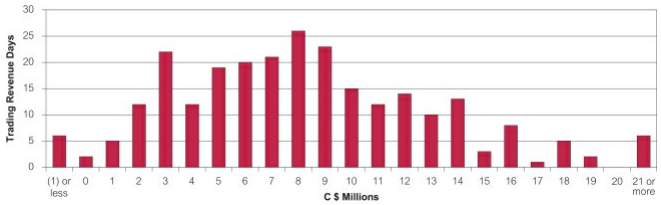
Trading revenue

Trading revenue (TEB) comprises both trading net interest income and non-interest income and excludes underwriting fees and commissions. See the "Financial performance overview" section for details. Trading revenue (TEB) in the charts below excludes certain exited portfolios.

During the year, trading revenue (TEB) was positive for 96.9% of the days, with the largest loss of $8.8 million occurring on September 26, 2022. Average daily trading revenue (TEB) was $7.8 million during the year, compared to $6.7 million during the previous year. Average daily trading revenue (TEB) is calculated as the total trading revenue (TEB) divided by the number of business days in the year.

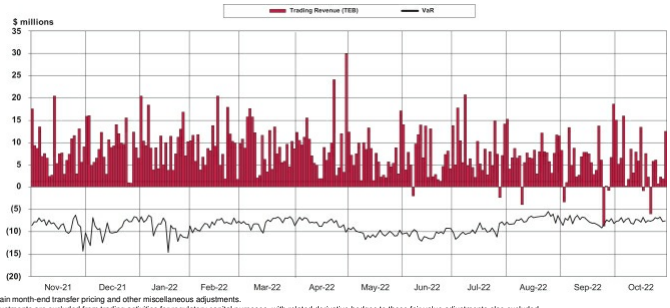
Frequency distribution of daily 2022 trading revenue (TEB) [1]

The histogram below presents the frequency distribution of daily trading revenue (TEB) for 2022.



Trading revenue (TEB) [1] *versus VaR* [2]

The trading revenue (TEB) versus VaR graph below shows the current year's daily trading revenue (TEB) against the close of business day VaR measures.



(1) Excludes certain month-end transfer pricing and other miscellaneous adjustments.
(2) Fair value adjustments are excluded from trading activities for regulatory capital purposes, with related derivative hedges to these fair value adjustments also excluded.

Stress testing and scenario analysis

Stress testing and scenario analysis is designed to add insight into possible outcomes of abnormal market conditions, and to highlight possible concentration of risk.

We measure the effect on portfolio valuations under a wide range of extreme moves in market risk factors. Our approach simulates the impact on earnings of extreme market events over a one-month time horizon, and in most cases assume that no risk-mitigating actions are taken during this period to reflect the reduced market liquidity that typically accompanies such events.

Scenarios are developed using historical market data during periods of market disruption, or are based on hypothetical impacts of economic events, political events, and natural disasters as predicted by economists, business leaders, and risk managers.

Among the historical scenarios are the 1994 period of U.S. Federal Reserve tightening, and the market events following the 2008 market crisis. The hypothetical scenarios include potential market crises originating in North America, Europe and Asia.

The hypothetical scenarios are informed from current themes in geopolitics, central bank action and various macro themes originating in North America, Europe and Asia. These include considering the impact of further escalation in the war in Ukraine, possible conflict between Taiwan and China and further impact of rising energy prices. Furthermore, during the past year, we amended our Pandemic hypothetical scenario to reflect the shocks observed during the initial month following the declaration of the pandemic.

Below are examples of the core stress test scenarios which are currently run on a daily basis to add insight into potential exposures under stress:

- Subprime crisis traded
- U.S. Federal Reserve tightening – 1994
- U.S. sovereign debt default and downgrade
- Chinese hard landing
- Canadian market crisis
- U.S. protectionism
- Eurozone bank crisis
- Pandemic
- Quantitative easing tapering and asset price correction
- Oil crisis

Stress testing scenarios are periodically reviewed and amended as necessary to ensure they remain relevant. Under stress limit monitoring, limits are placed on the maximum acceptable loss based on risk appetite in aggregate, at the detailed portfolio level, and for specific asset classes.

Non-trading activities

Structural interest rate risk (SIRR)

SIRR primarily consists of the risk arising due to mismatches in assets and liabilities, which do not arise from trading and trading-related businesses. The objective of SIRR management is to lock in product spreads and deliver stable and predictable net interest income over time, while managing the risk to the economic value of our assets arising from changes in interest rates.

SIRR results from differences in the maturities or repricing dates of assets and liabilities, both on- and off-balance sheet, as well as from embedded optionality in retail products, and other product features that could affect the expected timing of cash flows, such as options to pre-pay loans or redeem term deposits prior to contractual maturity. A number of assumptions affecting cash flows, product re-pricing and the administration of rates underlie the models used to measure SIRR. The key assumptions pertain to the expected funding profile of mortgage rate commitments, fixed rate loan prepayment behaviour, term deposit redemption behaviour, the treatment of non-maturity deposits and equity. All assumptions are derived empirically based on historical client behaviour, balance sheet composition and product pricing with the consideration of possible forward-looking changes. All models and assumptions used to measure SIRR are subject to independent oversight by Risk Management. A variety of cash instruments and derivatives, primarily interest rate swaps, are used to manage these risks.

The Board has oversight of the management of SIRR, approves the risk appetite and the associated SIRR risk limits. GALCO and its subcommittee, the Asset Liability Management Committee, regularly review structural market risk positions and provide senior management oversight.

In addition to Board-approved limits on earnings and economic value exposure, more granular management limits are in place to guide day-to-day management of this risk. The ALM group within Treasury is responsible for the ongoing management of structural market risk across the enterprise, with independent oversight and compliance with SIRR policy provided by Risk Management.

ALM activities are designed to manage the effects of potential interest rate movements while balancing the cost of any hedging activities on the current net revenue. To monitor and control SIRR, two primary metrics, net interest income risk and economic value of equity (EVE) risk, are assessed, in addition to stress testing, gap analysis and other market risk metrics. The net interest income sensitivity is a measure of the impact of potential changes in interest rates on the projected 12-month pre-tax net interest income of the bank's portfolio of assets, liabilities and off-balance sheet positions in response to prescribed parallel interest rate movements with interest rates floored at zero. The EVE sensitivity is a measure of the impact of potential changes in interest rates on the market value of the bank's assets, liabilities and off-balance sheet positions in response to prescribed parallel interest rate movements with interest rates floored at zero.

The following table shows the potential before-tax impact of an immediate and sustained 100 basis points increase and 100 basis points decrease in interest rates on projected 12-month net interest income and the EVE for our structural balance sheet, assuming no subsequent hedging. Due to the recent increase in interest rates in Canada and the U.S., and the market expectation that a higher interest rate environment will persist, an immediate downward shock of 100 basis points was applied in the current year, while maintaining a floor on market and client interest rates at zero at the end of the year. We have continued to provide the impact of a 25 basis point decrease and have not revised prior period amounts as we believe the impact of a 25 basis points decrease was appropriate due to the low interest rate environment in both Canada and the U.S. for those periods.

Structural interest rate sensitivity – measures

$ millions (pre-tax), as at October 31	2022			2021		
	CAD[1]	**USD**	**Total**	CAD[1]	USD	Total
100 basis point increase in interest rates						
Increase (decrease) in net interest income	**$ 278**	**$ (7)**	**$ 271**	$ 270	$ 134	$ 404
Increase (decrease) in EVE	**(679)**	**(336)**	**(1,015)**	(684)	(161)	(845)
25 basis point decrease in interest rates						
Increase (decrease) in net interest income	**(71)**	**2**	**(69)**	(117)	(70)	(187)
Increase (decrease) in EVE	**151**	**86**	**237**	161	29	190
100 basis point decrease in interest rates						
Increase (decrease) in net interest incom e	**(301)**	**4**	**(297)**	n/a	n/a	n/a
Increase (decrease) in EVE	**604**	**350**	**954**	n/a	n/a	n/a

(1) Includes CAD and other currency exposures.
n/a Not applicable.

Foreign exchange risk

Structural foreign exchange risk primarily consists of the risk inherent in: (a) net investments in foreign operations (NIFO) due to changes in foreign exchange rates; and (b) foreign currency denominated RWA and foreign currency denominated capital deductions. This risk, predominantly in U.S. dollars, is managed using derivative hedges and by funding the investments in matching currencies. We actively manage this position to ensure that the potential impact on our capital ratios is within an acceptable tolerance in accordance with the policy approved by the CRO, while giving consideration to the impact on earnings and shareholders' equity. Structural foreign exchange risk is managed by Treasury under the guidance of GALCO with monitoring and oversight by Capital Markets Risk Management.

A 1% appreciation of the Canadian dollar would reduce our shareholders' equity as at October 31, 2022 by approximately $200 million (2021: $160 million) on an after-tax basis.

Our non-functional currency denominated earnings are converted into the functional currencies through spot or forward foreign exchange transactions. Typically, there is no significant impact of exchange rate fluctuations on our consolidated statement of income.

Derivatives held for ALM purposes

Where derivatives are held for ALM purposes, and when transactions meet the criteria specified under IFRS, we apply hedge accounting for the risks being hedged, as discussed in Notes 12 and 13 to the consolidated financial statements. Derivative hedges that do not qualify for hedge accounting treatment are referred to as economic hedges and are recorded at fair value on the consolidated balance sheet with changes in fair value recognized in the consolidated statement of income.

Economic hedges for other than FVO financial instruments may lead to income volatility because the hedged items are recorded either on a cost or amortized cost basis or recorded at fair value on the consolidated balance sheet with changes in fair value recognized through OCI. This income volatility may not be representative of the overall risk.

Equity risk

Non-trading equity risk arises primarily in our strategy and corporate development activities and strategic investments portfolio. The investments comprise public and private equities, investments in limited partnerships, and equity-accounted investments.

The following table provides the amortized cost and fair values of our non-trading equities:

$ millions, as at October 31		Cost	Fair value
2022	**Equity securities designated at FVOCI**	**$ 525**	**$ 522**
	Equity-accounted investments in associates [1]	**206**	**230**
		$ 731	**$ 752**
2021	Equity securities designated at FVOCI	$ 730	$ 836
	Equity-accounted investments in associates [1]	66	89
		$ 796	$ 925

(1) Excludes our equity-accounted joint ventures. See Note 25 to the consolidated financial statements for further details.

Pension risk

We sponsor defined benefit pension plans in a number of jurisdictions. As at October 31, 2022, our consolidated defined benefit pension plans were in a net asset position of $1,379 million, compared with $1,323 million as at October 31, 2021. The change in the net asset position of our pension plans is disclosed in Note 18 to the consolidated financial statements.

Our Canadian pension plans represent approximately 91% of our pension plans, the most significant of which is our principal Canadian pension plan (the CIBC Pension Plan). The estimated impact on our Canadian defined benefit obligations of a 100 basis point change in the discount rate is disclosed in Note 18 to the consolidated financial statements.

The MRCC is responsible for sound governance and oversight, and delegates management authority to the Pension Benefits Management Committee (PBMC). An appropriate investment strategy for the CIBC Pension Plan is set through a statement of investment objectives, policies and procedures.

Within Treasury, the Pension Investment Management department is responsible for developing and implementing custom investment strategies to sustainably deliver pension benefits within manageable risk tolerances and capital impacts. Key risks include actuarial risks (such as longevity risk), interest rate risk, currency risk, and market (investment) risk.

A principal risk for the CIBC Pension Plan is interest rate risk, which it manages through its liability-driven investment strategy which includes a combination of physical bonds and a bond overlay program funded through the use of repurchase agreements. The plan also operates a currency overlay strategy, which may use forwards or similar instruments, to manage and mitigate its currency risk. Investment risk is mitigated through a multi-asset portfolio construction process that diversifies across a variety of market risk drivers.

The use of derivatives within the CIBC Pension Plan are permitted for risk management and rebalancing purposes, as well as the ability to enhance returns and are governed by the plan's derivatives policy that was approved by the PBMC. The fair value of derivatives held in the CIBC Pension Plan is disclosed in Note 18 to the consolidated financial statements.

Liquidity risk

Liquidity risk is the risk of having insufficient cash or its equivalent in a timely and cost-effective manner to meet financial obligations as they come due. Common sources of liquidity risk inherent in banking services include unanticipated withdrawals of deposits, the inability to replace maturing debt, credit and liquidity commitments, and additional pledging or other collateral requirements.

Our approach to liquidity risk management supports our business strategy, aligns with our risk appetite and adheres to regulatory expectations.

Our management strategies, objectives and practices are regularly reviewed to align with changes to the liquidity environment, including regulatory, business and/or market developments. Liquidity risk remains within CIBC's risk appetite.

Governance and management

We manage liquidity risk in a manner that enables us to withstand a liquidity stress event without an adverse impact on the viability of our operations. Actual and anticipated cash flows generated from on- and off-balance sheet exposures are routinely measured and monitored to ensure compliance with established limits. We incorporate stress testing into the management and measurement of liquidity risk. Stress test results assist with the development of our liquidity assumptions, identification of potential constraints to funding planning, and contribute to the design of our contingency funding plan.

Liquidity risk is managed using the three lines of defence model, and the ongoing management of liquidity risk is the responsibility of the Treasurer, supported by guidance from GALCO.

The Treasurer is responsible for managing the activities and processes required for measurement and the reporting and monitoring of CIBC's liquidity risk position as the first line of defence.

The Liquidity and Non-Trading Market Risk group provides independent oversight of the measurement, monitoring and control of liquidity risk, as the second line of defence.

Internal audit is the third line of defence providing reasonable assurance to senior management and the Audit Committee of the Board on the effectiveness of CIBC's governance practices, risk management processes, and internal control as part of its risk-based audit plan and in accordance with its mandate as described in the Internal Audit Charter.

The GALCO governs CIBC's liquidity risk management, ensuring the liquidity risk management methodologies, assumptions, and key metrics are regularly reviewed and aligned with CIBC's requirements. The Liquidity Risk Management Committee, a subcommittee of GALCO, monitors global liquidity risk and is responsible for ensuring that CIBC's liquidity risk profile is comprehensively measured and managed in alignment with CIBC's strategic direction, risk appetite and regulatory requirements.

The RMC provides governance through bi-annual review of CIBC's liquidity risk management policy, and recommends liquidity risk tolerance to the Board through the risk appetite statement which is reviewed annually.

Policies

Our liquidity risk management policy establishes requirements that enable us to meet anticipated liquidity needs in both normal and stressed conditions by maintaining a sufficient amount of available unencumbered liquid assets and diversified funding sources. Branches and subsidiaries possessing unique liquidity characteristics, due to distinct businesses or jurisdictional requirements, maintain local liquidity practices in alignment with CIBC's liquidity risk management policy.

Our pledging policy sets out consolidated limits for the pledging of CIBC's assets across a broad range of financial activities. These limits ensure unencumbered liquid assets are available for liquidity purposes.

We maintain a detailed global contingency funding plan that sets out the strategies for addressing liquidity shortfalls in emergency and unexpected situations, and delineates the requirements necessary to manage a range of stress conditions, establishes lines of responsibility, articulates implementation, defines escalation procedures, and is aligned to CIBC's risk appetite. In order to reflect CIBC's organizational complexity, regional and subsidiary contingency funding plans are maintained to respond to liquidity stresses unique to the jurisdictions within which CIBC operates, and support CIBC as an enterprise.

Risk measurement

Our liquidity risk tolerance is defined by our risk appetite statement, which is approved annually by the Board, and forms the basis for the delegation of liquidity risk authority to senior management. We use both regulatory-driven and internally developed liquidity risk metrics to measure our liquidity risk exposure. Internally, our liquidity position is measured using the Liquidity Horizon, which combines contractual and behavioural cash flows to measure the future point in time when projected cumulative cash outflows exceed cash inflows under a combined CIBC-specific and market-wide stress scenario. Expected and potential anticipated inflows and outflows of funds generated from on- and off-balance sheet exposures are measured and monitored on a regular basis to ensure compliance with established limits. These cash flows incorporate both contractual and behavioural on- and off-balance sheet cash flows.

Our liquidity measurement system provides liquidity risk exposure reports that include the calculation of the internal liquidity stress tests and regulatory reporting such as the LCR, NSFR and NCCF. Our liquidity management also incorporates the monitoring of our unsecured wholesale funding position and funding capacity.

Risk appetite

CIBC's risk appetite statement ensures prudent management of liquidity risk by outlining qualitative considerations and quantitative metrics including the LCR and Liquidity Horizon. Quantitative metrics are measured and managed to a set of limits approved by Risk Management.

Stress testing

A key component of our liquidity risk management, and complementing our assessments of liquidity risk exposure, is liquidity risk stress testing. Liquidity stress testing involves the application of name-specific and market-wide stress scenarios at varying levels of severity to assess the amount of available liquidity required to satisfy anticipated obligations as they come due. The scenarios model potential liquidity and funding requirements in the event of changes to unsecured wholesale funding and deposit run-off, contingent liquidity utilization, and liquid asset marketability.

Liquid assets

Available liquid assets include unencumbered cash and marketable securities from on- and off-balance sheet sources, that can be used to access funding in a timely fashion. Encumbered liquid assets, composed of assets pledged as collateral and those assets that are deemed restricted due to legal, operational, or other purposes, are not considered as sources of available liquidity when measuring liquidity risk.

Encumbered and unencumbered liquid assets from on- and off-balance sheet sources are summarized as follows:

$ millions, as at October 31		Bank owned liquid assets	Securities received as collateral	Total liquid assets	Encumbered liquid assets	Unencumbered liquid assets [1]
2022	**Cash and deposits with banks**	**$ 63,861**	**$ –**	**$ 63,861**	**$ 286**	**$ 63,575**
	Securities issued or guaranteed by sovereigns, central banks, and multilateral development banks	**133,923**	**85,602**	**219,525**	**122,283**	**97,242**
	Other debt securities	**6,764**	**8,957**	**15,721**	**2,262**	**13,459**
	Equities	**30,825**	**29,521**	**60,346**	**30,408**	**29,938**
	Canadian government guaranteed National Housing Act mortgage-backed securities	**33,148**	**3,321**	**36,469**	**16,711**	**19,758**
	Other liquid assets [2]	**19,159**	**2,326**	**21,485**	**16,040**	**5,445**
		$ 287,680	**$ 129,727**	**$ 417,407**	**$ 187,990**	**$ 229,417**
2021	Cash and deposits with banks	$ 56,997	$ –	$ 56,997	$ 252	$ 56,745
	Securities issued or guaranteed by sovereigns, central banks, and multilateral development banks	113,515	100,944	214,459	134,370	80,089
	Other debt securities	5,681	5,510	11,191	1,827	9,364
	Equities	37,855	22,996	60,851	25,133	35,718
	Canadian government guaranteed National Housing Act mortgage-backed securities	36,116	948	37,064	14,677	22,387
	Other liquid assets [2]	12,772	3,927	16,699	7,203	9,496
		$ 262,936	$ 134,325	$ 397,261	$ 183,462	$ 213,799

(1) Unencumbered liquid assets are defined as on-balance sheet assets, assets borrowed or purchased under resale agreements, and other off-balance sheet collateral received less encumbered liquid assets.
(2) Includes cash pledged as collateral for derivatives transactions, select ABS and precious metals.

The following table summarizes unencumbered liquid assets held by CIBC (parent) and its domestic and foreign subsidiaries:

$ millions, as at October 31	**2022**	2021
CIBC (parent)	**$ 166,968**	$ 153,971
Domestic subsidiaries	**11,535**	12,271
Foreign subsidiaries	**50,914**	47,557
	$ 229,417	$ 213,799

Asset haircuts and monetization depth assumptions under a liquidity stress scenario are applied to determine asset liquidity value. Haircuts take into consideration those margins applicable at central banks – such as the Bank of Canada and the U.S. Federal Reserve Bank – historical observations, and securities characteristics including asset type, issuer, credit ratings, currency and remaining term to maturity, as well as available regulatory guidance.

Our unencumbered liquid assets increased by $15.6 billion since October 31, 2021, primarily due to an increase in unencumbered liquid government securities holdings and cash balances. This increase is a result of higher deposit and funding levels to fund asset growth.

Furthermore, we maintain access eligibility to the Bank of Canada's Emergency Lending Assistance program and the U.S. Federal Reserve Bank's Discount Window.

Asset encumbrance

In the course of our day-to-day operations, securities and other assets are pledged to secure obligations, participate in clearing and settlement systems and for other collateral management purposes.

The following table provides a summary of our total on- and off-balance sheet encumbered and unencumbered assets:

		Encumbered		Unencumbered		Total assets
$ millions, as at October 31		Pledged as collateral	Other [1]	Available as collateral	Other [2]	
2022	**Cash and deposits with banks**	**$ –**	**$ 286**	**$ 63,575**	**$ –**	**$ 63,861**
	Securities [3]	**157,357**	**5,263**	**141,964**	**–**	**304,584**
	Loans, net of allowance for credit losses [4]	**–**	**46,720**	**29,645**	**440,720**	**517,085**
	Other assets	**13,637**	**–**	**2,304**	**86,294**	**102,235**
		$ 170,994	**$ 52,269**	**$ 237,488**	**$ 527,014**	**$ 987,765**
2021	Cash and deposits with banks	$ –	$ 252	$ 56,745	$ –	$ 56,997
	Securities [3]	154,382	1,817	134,018	–	290,217
	Loans, net of allowance for credit losses [4]	1,488	44,615	29,331	376,487	451,921
	Other assets	6,599	–	3,005	77,820	87,424
		$ 162,469	$ 46,684	$ 223,099	$ 454,307	$ 886,559

(1) Includes assets supporting CIBC's long-term funding activities and assets restricted for legal or other reasons, such as restricted cash.
(2) Other unencumbered assets are not subject to any restrictions on their use to secure funding or as collateral, however, they are not considered immediately available to existing borrowing programs.
(3) Total securities comprise certain on-balance sheet securities, as well as off-balance sheet securities received under resale agreements, secured borrowings transactions, and collateral-for-collateral transactions.
(4) Loans included as available as collateral represent the loans underlying National Housing Act mortgage-backed securities and Federal Home Loan Banks eligible loans.

Restrictions on the flow of funds

Our subsidiaries are not subject to significant restrictions that would prevent transfers of funds, dividends or capital distributions. However, certain subsidiaries have different capital and liquidity requirements, established by applicable banking and securities regulators.

We monitor and manage our capital and liquidity requirements across these entities to ensure that resources are used efficiently and entities are in compliance with local regulatory and policy requirements.

Liquidity coverage ratio

The objective of the LCR is to promote short-term resilience of a bank's liquidity risk profile, ensuring that it has adequate unencumbered high-quality liquid resources to meet its liquidity needs in a 30-day acute stress scenario. Canadian banks are required by OSFI to achieve a minimum LCR value of 100%. We are in compliance with this requirement.

In accordance with the calibration methodology contained in OSFI's LAR Guideline, we report the LCR to OSFI on a monthly basis. The ratio is calculated as the total of unencumbered HQLA over the total net cash outflows in the next 30 calendar days.

The LCR's numerator consists of unencumbered HQLA, which follow an OSFI-defined set of eligibility criteria that considers fundamental and market-related characteristics, and the relative ability to operationally monetize assets on a timely basis during a period of stress. Our centrally-managed liquid asset portfolio includes those liquid assets reported in the HQLA, such as central government treasury bills and bonds, central bank deposits and high-rated sovereign, agency, provincial, and corporate securities. Asset eligibility limitations inherent in the LCR metric do not necessarily reflect our internal assessment of our ability to monetize our marketable assets under stress.

The ratio's denominator reflects net cash outflows expected in the LCR's stress scenario over the 30-calendar-day period. Expected cash outflows represent LCR-defined withdrawal or draw-down rates applied against outstanding liabilities and off-balance sheet commitments, respectively. Significant contributors to our LCR outflows include business and financial institution deposit run-off, draws on undrawn lines of credit and unsecured debt maturities. Cash outflows are partially offset by cash inflows, which are calculated at OSFI-prescribed LCR inflow rates, and include performing loan repayments and maturing non-HQLA marketable assets.

During a period of financial stress, institutions may use their stock of HQLA, thereby falling below 100%, as maintaining the LCR at 100% under such circumstances could produce undue negative effects on the institution and other market participants.

The LCR is calculated and disclosed using a standard OSFI-prescribed template.

$ millions, average of the three months ended October 31, 2022		Total unweighted value (1)	Total weighted value (2)
HQLA			
1	HQLA	**n/a**	**$ 181,522**
Cash outflows			
2	Retail deposits and deposits from small business customers, of which:	**$ 228,368**	**17,128**
3	Stable deposits	**98,720**	**2,962**
4	Less stable deposits	**129,648**	**14,166**
5	Unsecured wholesale funding, of which:	**224,197**	**98,230**
6	Operational deposits (all counterparties) and deposits in networks of cooperative banks	**115,716**	**28,374**
7	Non-operational deposits (all counterparties)	**86,173**	**47,548**
8	Unsecured debt	**22,308**	**22,308**
9	Secured wholesale funding	**n/a**	**13,987**
10	Additional requirements, of which:	**159,193**	**41,293**
11	Outflows related to derivative exposures and other collateral requirements	**26,510**	**13,946**
12	Outflows related to loss of funding on debt products	**6,910**	**6,910**
13	Credit and liquidity facilities	**125,773**	**20,437**
14	Other contractual funding obligations	**5,141**	**5,141**
15	Other contingent funding obligations	**388,116**	**7,394**
16	Total cash outflows	**n/a**	**183,173**
Cash inflows			
17	Secured lending (e.g. reverse repos)	**101,934**	**22,659**
18	Inflows from fully performing exposures	**23,311**	**11,669**
19	Other cash inflows	**8,196**	**8,196**
20	Total cash inflows	**$ 133,441**	**$ 42,524**
			Total adjusted value
21	Total HQLA	**n/a**	**$ 181,522**
22	Total net cash outflows	**n/a**	**$ 140,649**
23	LCR	**n/a**	**129 %**
$ millions, average of the three months ended July 31, 2022			Total adjusted value
24	Total HQLA	n/a	$ 167,702
25	Total net cash outflows	n/a	$ 136,859
26	LCR	n/a	123 %

(1) Unweighted inflow and outflow values are calculated as outstanding balances maturing or callable within 30 days of various categories or types of liabilities/off-balance sheet items or contractual receivables.
(2) Weighted values are calculated after the application of haircuts (for HQLA) and inflow and outflow rates prescribed by OSFI.
n/a Not applicable as per the LCR common disclosure template.

Our average LCR as at October 31, 2022, increased to 129% from 123% in the prior quarter, due to higher HQLA, partially offset by an increase in net cash outflows.

Furthermore, we report the LCR to OSFI in multiple currencies, thus measuring the extent of potential currency mismatch under the ratio. CIBC predominantly operates in major currencies with deep and fungible foreign exchange markets.

Net stable funding ratio (NSFR)

Derived from the BCBS's Basel III framework and incorporated into OSFI's LAR Guideline, the NSFR standard aims to promote long-term resilience of the financial sector by requiring banks to maintain a sustainable funding profile in relation to the composition of their assets and off-balance sheet activities. Canadian D-SIBs are required to maintain a minimum NSFR value of 100% on a consolidated bank basis. CIBC is in compliance with this requirement.

In accordance with the calibration methodology contained in OSFI's LAR Guideline, we report the NSFR to OSFI on a quarterly basis. The ratio is calculated as total available stable funding (ASF) over the total required stable funding (RSF).

The numerator consists of the portion of capital and liabilities considered reliable over a one-year time horizon. The NSFR considers longer-term sources of funding to be more stable than short-term funding and deposits from retail and commercial customers to be behaviourally more

stable than wholesale funding of the same maturity. In accordance with our funding strategy, key drivers of our ASF include client deposits supplemented by secured and unsecured wholesale funding, and capital instruments.

The denominator represents the amount of stable funding required based on the OSFI-defined liquidity characteristics and residual maturities of assets and off-balance sheet exposures. The NSFR ascribes varying degrees of RSF such that HQLA and short-term exposures are assumed to have a lower funding requirement than less liquid and longer-term exposures. Our RSF is largely driven by retail, commercial and corporate lending, investments in liquid assets, derivative exposures, and undrawn lines of credit and liquidity.

The ASF and RSF may be adjusted to zero for certain liabilities and assets that are determined to be interdependent if they meet the NSFR-defined criteria, which take into account the purpose, amount, cash flows, tenor and counterparties among other aspects to ensure the institution is acting solely as a pass-through unit for the underlying transactions. We report, where applicable, interdependent assets and liabilities arising from transactions OSFI has designated as eligible for such treatment in the LAR Guideline.

The NSFR is calculated and disclosed using an OSFI-prescribed template, which captures the key quantitative information based on liquidity characteristics unique to the NSFR as defined in the LAR Guideline. As a result, amounts presented in the table below may not allow for direct comparison with the annual consolidated financial statements.

		a	b	c	d	e
		Unweighted value by residual maturity				
$ millions, as at October 31, 2022		No maturity	<6 months	6 months to <1 year	>1 year	Weighted value
ASF item						
1	**Capital**	$ 51,229	$ –	$ –	$ 5,716	$ 56,945
2	Regulatory capital	51,229	–	–	5,716	56,945
3	Other capital instruments	–	–	–	–	–
4	**Retail deposits and deposits from small business customers**	196,289	42,442	16,514	15,162	249,648
5	Stable deposits	90,973	14,797	8,203	8,515	116,788
6	Less stable deposits	105,316	27,645	8,311	6,647	132,860
7	**Wholesale funding**	167,997	178,412	55,348	85,742	220,115
8	Operational deposits	117,115	4,181	–	–	60,648
9	Other wholesale funding	50,882	174,231	55,348	85,742	159,467
10	**Liabilities with matching interdependent assets**	–	1,636	2,387	12,262	–
11	**Other liabilities**	–		99,015 (1)		7,550
12	NSFR derivative liabilities			13,149 (1)		
13	All other liabilities and equity not included in the above categories	–	51,615	129	34,122	7,550
14	**Total ASF**					534,258
RSF item						
15	**Total NSFR HQLA**					11,313
16	**Deposits held at other financial institutions for operational purposes**	–	3,825	–	395	2,308
17	**Performing loans and securities**	65,278	105,413	52,671	355,651	382,621
18	Performing loans to financial institutions secured by Level 1 HQLA	–	19,359	2,854	–	2,405
19	Performing loans to financial institutions secured by non-Level 1 HQLA and unsecured performing loans to financial institutions	594	34,378	6,605	20,353	28,127
20	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:	34,211	37,248	27,215	118,133	162,214
21	With a risk weight of less than or equal to 35% under the Basel II standardized approach for credit risk	–	–	–	–	–
22	Performing residential mortgages, of which:	18,669	11,468	15,761	209,618	171,829
23	With a risk weight of less than or equal to 35% under the Basel II standardized approach for credit risk	18,669	11,392	15,677	204,508	167,406
24	Securities that are not in default and do not qualify as HQLA, including exchange-traded equities	11,804	2,960	236	7,547	18,046
25	**Assets with matching interdependent liabilities**	–	1,636	2,387	12,262	–
26	**Other assets**	12,762		99,299 (1)		44,800
27	Physical traded commodities, including gold	2,304				1,959
28	Assets posted as initial margin for derivative contracts and contributions to default funds of central counterparties			10,581 (1)		8,994
29	NSFR derivative assets			10,897 (1)		–
30	NSFR derivative liabilities before deduction of variation margin posted			28,942 (1)		1,447
31	All other assets not included in the above categories	10,458	43,546	142	5,191	32,400
32	**Off-balance sheet items**			378,863 (1)		13,071
33	**Total RSF**					$ 454,113
34	**NSFR**					118 %

$ millions, as at July 31, 2022		Weighted value
35	Total ASF	$ 519,356
36	Total RSF	$ 443,626
37	NSFR	117 %

$ millions, as at October 31, 2021		Weighted value
38	Total ASF	$ 472,518
39	Total RSF	$ 401,362
40	NSFR	118 %

(1) No assigned time period per disclosure template design.

Our NSFR as at October 31, 2022, increased to 118% from 117% in the prior quarter and was comparable with 2021, due to an increase in long-term funding, offset by an increase in lending in line with strategic business growth.

CIBC considers the impact of its business decisions on the LCR, NSFR and other liquidity risk metrics that it regularly monitors as part of a robust liquidity risk management function. Variables that can impact the metrics month-over-month include, but are not limited to, items such as wholesale funding activities and maturities, strategic balance sheet initiatives, and transactions and market conditions affecting collateral.

Reporting of the LCR and NSFR is calibrated centrally by Treasury, in conjunction with the SBUs and other functional groups.

Funding

We fund our operations with client-sourced deposits, supplemented with a wide range of wholesale funding.

Our principal approach aims to fund our consolidated balance sheet with deposits primarily raised from personal and commercial banking channels. We maintain a foundation of relationship-based core deposits, whose stability is regularly evaluated through internally developed statistical assessments.

We routinely access a range of short-term and long-term secured and unsecured funding sources diversified by geography, depositor type, instrument, currency and maturity. We raise long-term funding from existing programs including covered bonds, asset securitizations and unsecured debt.

We continuously evaluate opportunities to diversify into new funding products and investor segments in an effort to maximize funding flexibility and minimize concentration and financing costs. We regularly monitor wholesale funding levels and concentrations to internal limits consistent with our desired liquidity risk profile.

GALCO and RMC review and approve CIBC's funding plan, which incorporates projected asset and liability growth, funding maturities, and output from our liquidity position forecasting.

The following table provides the contractual maturity profile of our wholesale funding sources at their carrying values:

$ millions, as at October 31, 2022	Less than 1 month	1–3 months	3–6 months	6–12 months	Less than 1 year total	1–2 years	Over 2 years	Total
Deposits from banks [1]	**$ 1,580**	**$ 1,730**	**$ 2,459**	**$ 3,465**	**$ 9,234**	**$ –**	**$ –**	**$ 9,234**
Certificates of deposit and commercial paper	**10,472**	**12,942**	**20,911**	**21,019**	**65,344**	**477**	**–**	**65,821**
Bearer deposit notes and bankers' acceptances	**398**	**586**	**394**	**336**	**1,714**	**–**	**–**	**1,714**
Senior unsecured medium-term notes [2]	**–**	**4,291**	**4,504**	**15,249**	**24,044**	**13,146**	**30,389**	**67,579**
Senior unsecured structured notes	**206**	**–**	**–**	**–**	**206**	**–**	**68**	**274**
Covered bonds/asset-backed securities								
Mortgage securitization	**–**	**1,230**	**403**	**2,355**	**3,988**	**2,318**	**10,172**	**16,478**
Covered bonds	**–**	**1,674**	**697**	**2,080**	**4,451**	**–**	**21,807**	**26,258**
Cards securitization	**–**	**–**	**–**	**–**	**–**	**1,028**	**2,002**	**3,030**
Subordinated liabilities	**–**	**–**	**–**	**–**	**–**	**36**	**6,256**	**6,292**
Other	**–**	**–**	**–**	**–**	**–**	**–**	**8**	**8**
	$ 12,656	**$ 22,453**	**$ 29,368**	**$ 44,504**	**$ 108,981**	**$ 17,005**	**$ 70,702**	**$ 196,688**
Of which:								
Secured	**$ –**	**$ 2,904**	**$ 1,100**	**$ 4,435**	**$ 8,439**	**$ 3,346**	**$ 33,981**	**$ 45,766**
Unsecured	**12,656**	**19,549**	**28,268**	**40,069**	**100,542**	**13,659**	**36,721**	**150,922**
	$ 12,656	**$ 22,453**	**$ 29,368**	**$ 44,504**	**$ 108,981**	**$ 17,005**	**$ 70,702**	**$ 196,688**
October 31, 2021	$ 16,671	$ 23,696	$ 16,387	$ 36,144	$ 92,898	$ 25,488	$ 52,514	$ 170,900

(1) Includes non-negotiable term deposits from banks.
(2) Includes wholesale funding liabilities which are subject to conversion underbail-in regulations. See the "Capital management" section for additional details.

The following table provides the diversification of CIBC's wholesale funding by currency:

$ billions, as at October 31	2022		2021	
CAD	**$ 51.2**	**26 %**	$ 48.0	28 %
USD	**103.0**	**52**	91.5	54
Other	**42.5**	**22**	31.4	18
	$ 196.7	**100 %**	$ 170.9	100 %

We manage liquidity risk in a manner that enables us to withstand severe liquidity stress events. Wholesale funding may present a higher risk of run-off in stress situations, and we maintain significant portfolios of unencumbered liquid assets to mitigate this risk. See the "Liquid assets" section for additional details.

Funding plan

Our funding plan is updated at least quarterly, or in response to material changes in underlying assumptions and business developments. The plan incorporates projected asset and liability growth from our ongoing operations, and the output from our liquidity position forecasting.

Credit ratings

Our access to and cost of wholesale funding are dependent on multiple factors, among them credit ratings provided by rating agencies. Rating agencies' opinions are based upon internal methodologies, and are subject to change based on factors including, but not limited to, financial strength, competitive position, macroeconomic backdrop and liquidity positioning.

On February 22, 2022, S&P announced the following updates to our credit ratings: senior debt to A- from BBB+; subordinated indebtedness to A- from BBB+; subordinated indebtedness – NVCC to BBB+ from BBB; LRCN – NVCC to BBB- from BB+; preferred shares – NVCC to P-2(L) from P-3(H). These rating revisions reflect S&P's views on improvements in our risk position.

Our credit ratings are summarized in the following table:

As at October 31, 2022	DBRS	Fitch	Moody's	S&P
Deposit/Counterparty [1]	AA	AA	Aa2	A+
Legacy senior debt [2]	AA	AA	Aa2	A+
Senior debt [3]	AA(L)	AA-	A2	A-
Subordinated indebtedness	A(H)	A	Baa1	A-
Subordinated indebtedness – NVCC [4]	A(L)	A	Baa1	BBB+
Limited recourse capital notes – NVCC [4]	BBB(H)	n/a	Baa3	BBB-
Preferred shares – NVCC [4]	Pfd-2	n/a	Baa3	P-2(L)
Short-term debt	R-1(H)	F1+	P-1	A-1
Outlook	Stable	Stable	Stable	Stable

(1) DBRS Long-Term Issuer Rating; Fitch Long-Term Deposit Rating and Derivative Counterparty Rating; Moody's Long-Term Deposit and Counterparty Risk Assessment Rating; S&P's Issuer Credit Rating.
(2) Includes senior debt issued prior to September 23, 2018 as well as senior debt issued on or after September 23, 2018 which is not subject to bail-in regulations.
(3) Comprises liabilities which are subject to conversion under bail-in regulations. See the "Capital management" section for additional details.
(4) Comprises instruments which are treated as NVCC in accordance with OSFI's CAR Guideline.
n/a Not applicable.

Additional collateral requirements for rating downgrades

We are required to deliver collateral to certain derivative counterparties in the event of a downgrade to our current credit risk rating. The collateral requirement is based on MTM exposure, collateral valuations, and collateral arrangement thresholds, as applicable. The following table presents the additional cumulative collateral requirements for rating downgrades:

$ billions, as at October 31	2022	2021
One-notch downgrade	$ –	$ 0.1
Two-notch downgrade	0.1	0.2
Three-notch downgrade	0.3	0.3

Contractual obligations

Contractual obligations give rise to commitments of future payments affecting our short- and long-term liquidity and capital resource needs. These obligations include financial liabilities, credit and liquidity commitments, and other contractual obligations.

Assets and liabilities

The following table provides the contractual maturity profile of our on-balance sheet assets, liabilities and equity at their carrying values. Contractual analysis is not representative of our liquidity risk exposure, however this information serves to inform our management of liquidity risk, and provide input when modelling a behavioural balance sheet.

$ millions, as at October 31, 2022	Less than 1 month	1–3 months	3–6 months	6–9 months	9–12 months	1–2 years	2–5 years	Over 5 years	No specified maturity	Total
Assets										
Cash and non-interest-bearing deposits with banks [1]	$ 31,535	$ –	$ –	$ –	$ –	$ –	$ –	$ –	$ –	$ 31,535
Interest-bearing deposits with banks	32,326	–	–	–	–	–	–	–	–	32,326
Securities	7,423	6,244	5,472	4,302	5,933	13,893	64,060	36,358	32,194	175,879
Cash collateral on securities borrowed	15,326	–	–	–	–	–	–	–	–	15,326
Securities purchased under resale agreements	44,040	11,997	6,180	4,175	1,481	1,340	–	–	–	69,213
Loans										
Residential mortgages	1,943	4,077	8,099	6,528	14,214	45,804	180,672	8,369	–	269,706
Personal	1,228	552	1,047	785	790	662	3,687	5,536	31,142	45,429
Credit card	346	692	1,038	1,038	1,038	4,153	8,174	–	–	16,479
Business and government	10,464	7,518	8,867	11,235	12,521	32,717	74,126	20,181	10,913	188,542
Allowance for credit losses	–	–	–	–	–	–	–	–	(3,073)	(3,073)
Derivative instruments	7,088	5,847	2,803	2,354	1,778	7,586	8,912	6,667	–	43,035
Customers' liability under acceptances	10,419	1,109	2	44	–	–	–	–	–	11,574
Other assets	–	–	–	–	–	–	–	–	47,626	47,626
	$ 162,138	$ 38,036	$ 33,508	$ 30,461	$ 37,755	$ 106,155	$ 339,631	$ 77,111	$ 118,802	$ 943,597
October 31, 2021	$ 133,285	$ 39,067	$ 39,932	$ 35,900	$ 31,154	$ 95,910	$ 276,311	$ 70,812	$ 115,312	$ 837,683
Liabilities										
Deposits [2]	$ 14,627	$ 33,409	$ 45,187	$ 60,217	$ 54,474	$ 31,954	$ 72,009	$ 16,238	$ 369,457	$ 697,572
Obligations related to securities sold short	15,284	–	–	–	–	–	–	–	–	15,284
Cash collateral on securities lent	4,853	–	–	–	–	–	–	–	–	4,853
Obligations related to securities sold under repurchase agreements	70,976	5,332	752	–	111	–	–	–	–	77,171
Derivative instruments	7,192	4,725	2,751	2,624	2,574	6,919	12,219	13,336	–	52,340
Acceptances	10,431	1,109	2	44	–	–	–	–	–	11,586
Other liabilities	25	57	58	77	65	311	629	949	25,946	28,117
Subordinated indebtedness	–	–	–	–	–	36	–	6,256	–	6,292
Equity	–	–	–	–	–	–	–	–	50,382	50,382
	$ 123,388	$ 44,632	$ 48,750	$ 62,962	$ 57,224	$ 39,220	$ 84,857	$ 36,779	$ 445,785	$ 943,597
October 31, 2021	$ 114,437	$ 58,465	$ 42,381	$ 43,224	$ 28,107	$ 40,038	$ 54,440	$ 27,969	$ 428,622	$ 837,683

(1) Cash includes interest-bearing demand deposits with the Bank of Canada.
(2) Comprises $232.1 billion (2021: $213.9 billion) of personal deposits; $443.0 billion (2021: $387.1 billion) of business and government deposits and secured borrowings; and $2.5 billion (2021: $20.2 billion) of bank deposits.

The changes in the contractual maturity profile were primarily due to the natural migration of maturities and also reflect the impact of our regular business activities.

Credit-related commitments

The following table provides the contractual maturity of notional amounts of credit-related commitments. Since a significant portion of commitments are expected to expire without being drawn upon, the total of the contractual amounts is not representative of future liquidity requirements.

$ millions, as at October 31, 2022	Less than 1 month	1–3 months	3–6 months	6–9 months	9–12 months	1–2 years	2–5 years	Over 5 years	No specified maturity [1]	Total
Unutilized credit commitments	$ 1,621	$ 10,058	$ 5,190	$ 5,867	$ 5,300	$ 21,483	$ 67,286	$ 2,583	$ 216,873	$ 336,261
Securities lending [2]	44,328	4,352	4,328	–	–	–	–	–	–	53,008
Standby and performance letters of credit	3,968	3,330	2,927	3,783	2,942	618	739	152	–	18,459
Backstop liquidity facilities	–	11,003	1,076	604	172	–	–	–	–	12,855
Documentary and commercial letters of credit	59	98	21	2	1	4	24	–	–	209
Other	718	–	–	–	–	–	–	–	–	718
	$ 50,694	$ 28,841	$ 13,542	$10,256	$ 8,415	$ 22,105	$ 68,049	$ 2,735	$ 216,873	$ 421,510
October 31, 2021	$ 49,440	$ 28,564	$ 10,516	$ 9,343	$ 7,902	$ 25,284	$ 57,866	$ 3,678	$ 188,449	$ 381,042

(1) Includes $167.3 billion (2021: $141.5 billion) of personal, home equity and credit card lines, which are unconditionally cancellable at our discretion.
(2) Excludes securities lending of $4.9 billion (2021: $2.5 billion) for cash because it is reported on the consolidated balance sheet.

Other off-balance sheet contractual obligations

The following table provides the contractual maturities of other off-balance sheet contractual obligations affecting our funding needs:

$ millions, as at October 31, 2022 [1]	Less than 1 month	1–3 months	3–6 months	6–9 months	9–12 months	1–2 years	2–5 years	Over 5 years	Total
Purchase obligations [2]	$ 111	$ 155	$ 275	$ 192	$ 162	$ 596	$ 757	$ 145	$ 2,393
Underwriting commitments	936	–	–	–	–	–	–	–	936
Future lease commitments [1]	–	–	–	–	–	–	72	497	569
Investment commitments	–	–	9	1	1	1	18	432	462
Pension contributions [3]	19	38	57	57	57	–	–	–	228
	$ 1,066	$ 193	$ 341	$ 250	$ 220	$ 597	$ 847	$ 1,074	$ 4,588
October 31, 2021	$ 414	$ 176	$ 221	$ 320	$ 185	$ 483	$ 735	$ 1,187	$ 3,721

(1) Excludes operating lease obligations that are accounted for under IFRS 16, which are typically recognized on the consolidated balance sheet, and operating and tax expenses relating to lease commitments. The table includes lease obligations that are not accounted for under IFRS 16, including those related to future starting lease commitments for which we have not yet recognized a lease liability and right-of-use asset.
(2) Obligations that are legally binding agreements whereby we agree to purchase products or services with specific minimum or baseline quantities defined at fixed, minimum or variable prices over a specified period of time are defined as purchase obligations. Purchase obligations are included through to the termination date specified in the respective agreements, even if the contract is renewable. Many of the purchase agreements for goods and services include clauses that would allow us to cancel the agreement prior to expiration of the contract within a specific notice period. However, the amount above includes our obligations without regard to such termination clauses (unless actual notice of our intention to terminate the agreement has been communicated to the counterparty). The table excludes purchases of debt and equity instruments that settle within standard market time frames.
(3) Includes estimated minimum funding contributions for our funded defined benefit pension plans in Canada, the U.S., the U.K., and the Caribbean. Estimated minimum funding contributions are included only for the next annual period as the minimum contributions are affected by various factors, such as market performance and regulatory requirements, and are therefore subject to significant variability.

Other risks

Strategic risk

Strategic risk is the risk of ineffective or improper implementation of business strategies, including mergers, acquisitions and divestitures. It includes the potential financial loss due to the failure of organic growth initiatives or failure to respond appropriately to changes in the business environment. For additional details on corporate transactions, see the "Top and emerging risks" section.

Oversight of strategic risk is the responsibility of the ExCo and the Board. At least annually, the CEO outlines the process and presents the strategic business plan to the Board for review and approval. As part of the annual planning process, Risk Management assesses the overall and business unit strategic plans to ensure alignment with our risk appetite. The Board reviews the plan in light of management's assessment of emerging market trends, the competitive environment, potential risks and other key issues.

One of the tools for measuring, monitoring and controlling strategic risk is attribution of regulatory capital against this risk. Our regulatory capital models include a strategic risk component for those businesses utilizing capital to fund an acquisition or a significant organic growth strategy.

Operational risk

Operational risk is the risk of loss resulting from people, inadequate or failed internal processes and systems, or from external events. Operational risk is inherent in all CIBC activities and transactions. Failure to manage operational risk can result in direct or indirect financial loss, reputational impact, or regulatory review and penalties. The Operational Risk Management Framework (the Framework) sets out the requirements and roles and responsibilities in managing operational risk at CIBC.

Governance and Management

Operational risk is managed through the three lines of defence model and articulated in the Operational Risk Management Framework. A strong risk culture and communication between the three lines of defence are important characteristics of effective risk management. All three lines of defence, including all team members are accountable for identifying, managing and mitigating operational risk within the approved Operational Risk Appetite. For further details, refer to the "Management of risk – Risk overview" section.

Global Operational Risk Management (GORM) is responsible for oversight of the enterprise-wide operational risk and control environment globally. To effectively discharge its mandate, GORM establishes frameworks, policies, related procedures and guidelines, and develops tools, systems and processes to enable effective identification, measurement, mitigation, monitoring and reporting of operational risks. GORM is also responsible for determining the level of operational risk capital in compliance with OSFI's guidelines. From a governance perspective, the ORCC, chaired by the Senior Vice-President, GORM, is a forum for senior management, with representation from each of the three lines of defence, to monitor and discuss significant operational risk and control matters. ORCC is a sub-committee of the GRC. GRC, chaired by the CRO, is a senior management forum for discussion and oversight of risk appetite, risk profile and risk mitigation strategies.

Operational risk management approach
Information transparency, timely escalation, clear accountability and a robust internal control environment are the principles forming the basis of the Operational Risk Management Framework, which supports and governs the processes of identifying, measuring, mitigating, monitoring, and reporting operational risks. We mitigate operational losses by consistently applying risk-based approaches and employing risk-specific assessment tools. Regular review of our risk governance structure ensures clarity of, and ownership in, key risk areas.

Risk identification
Risk identification includes the process of assessing, understanding and confirming risks, on Business Unit operations, transactions, change initiatives and emerging risks to ensure operational risks are proactively identified and managed. CIBC's business lines regularly conduct reviews of operational risks inherent in their products, services or processes and assess ways to mitigate and manage them in alignment with CIBC's risk appetite. These reviews include using risk and control self-assessments, audit findings, operational risk scenarios, past internal and external loss events, key risk indicators (KRIs) trends, change initiative risk assessments and in-depth risk reviews to form a holistic operational risk profile for the business lines. Under the three lines of defence model, GORM and relevant Control Groups challenge business lines' risk assessments and mitigation actions.

Risk measurement
Risk measurement is the quantification of operational risks through operational risk capital calculations, internal loss data collection and analysis, and stress testing to understand potential operational risk exposures.

Operational loss is one of the key operational risk metrics informing us of areas of heightened risk. We collect and analyze internal operational loss event data for themes and trends. The occurrence of a material or potential material loss triggers an investigation to determine the root causes of the incident and the effectiveness of existing mitigating controls, as well as the identification of any additional mitigating actions. Additionally, we monitor the external environment for emerging or potential risks to CIBC. The analysis of material operational risk events is performed by the first line of defence and the outputs of the analysis are subject to formal independent challenge by our second line of defence. The analysis of material operational risk events forms one component of our ongoing operational risk reporting to senior management and the Board.

A robust risk measurement practice is in place to quantify operational risk and ensure adequate capital. We use the standardized method to quantify our operational risk exposure in the form of operational risk regulatory capital, as agreed with local regulators.

Risk mitigation
Risk mitigation is the determination of appropriate strategies and development of action plans to address operational risks to ensure residual risks are within the CIBC risk appetite. Our primary tool for mitigating operational risk exposure is a robust internal control environment. Our Control Framework outlines key principles, structure and processes underpinning our approach to managing risks through effective controls. Under our framework, all key controls are subject to ongoing testing and review to ensure they effectively mitigate our operational risk exposures. In addition, our corporate insurance program may afford additional protection from loss while our global business continuity and broader operational resilience programs enable us to deliver critical services to our clients through disruption.

Risk monitoring and reporting
Risk monitoring and reporting ensures that operational risk issues, including emerging risks, are monitored and communicated to the relevant stakeholders in a timely and transparent manner.

Both forward-looking KRIs as well as backward-looking key performance indicators provide insight into our risk exposure and are used to monitor the main drivers of exposure associated with key operational risks and their adherence to the operational risk appetite. KRIs assist in early detection of potential operational risk events by identifying unfavourable trends and highlighting controls that may not be designed or operating effectively. Business lines are required to identify and implement KRIs for material risk exposures on an ongoing basis. Escalation triggers are used to highlight risk exposures requiring additional attention from senior management and/or the Board. The second line of defence challenges the selection of KRIs and the appropriateness of thresholds.

Our risk monitoring processes support a transparent risk-reporting program, informing both senior management and the Board of our control environment, operational risk exposures, and mitigation strategies. Operational risk practices are continuously enhanced to increase robustness of the operational risk management program for effective and efficient identification, measurement, mitigation, monitoring and reporting of operational risks in CIBC.

Operational risks which may adversely impact CIBC include the following:

Anti-money laundering/anti-terrorist financing
The risk of CIBC's potential non-conformance with global AML and ATF regulatory requirements and sanctions regulations leading to enhanced regulatory scrutiny, regulatory censure (i.e., cease and desist orders) and/or financial loss (i.e., regulatory, criminal or civil penalties and/or forfeiture of assets). See "Anti-money laundering" in the "Top and emerging risks" section for further details.

Fraud risk
The risk relating to the intentions to defraud, misappropriate property/assets or circumvent regulations, the law or CIBC policy and can be committed by either employees or by outsiders such as clients or third parties.

Information security risk (including cyber security)
The risk to the confidentiality, integrity and availability of CIBC-owned information, and the information entrusted to CIBC by clients, employees, shareholders, business partners, and third parties that if leaked, accessed without authorization or lost, could cause damage to CIBC's business and its customers. See "Technology, information and cyber security risk" in the "Top and emerging risks" section for further details.

Technology risk
The risk of compromised availability, degradation, recovery, capacity, performance, integrity of new or existing systems. See "Technology, information and cyber security risk" in the "Top and emerging risks" section for further details.

Third party risk

The potential risk that may arise from relying on a third party business arrangement between CIBC and another entity, by contract or otherwise. This includes activities that involve outsourced products and services, use of outside consultants, networking arrangements, managed services, services provided by affiliates and subsidiaries, joint ventures, sponsorships, no-fee contracts, and any other arrangement that involves the delivery of business activities, functions or processes to CIBC and/or its clients. See "Third-party risk" in the "Top and emerging risks" section for further details.

Other operational risks include business interruption risk, data risk, conduct risk (see the "Conduct risk" section), financial reporting risk, legal risk (see the "Reputation and legal risks" section), model risk, people risk, privacy risk, project risk, physical security and safety risk, regulatory compliance risk (see the "Regulatory compliance risk" section) and transaction processing and execution risk.

Environmental and social risk

Environmental and social risk is the risk of financial loss or damage to reputation associated with environmental and social issues, whether arising from our credit and investment activities or related to our own operations. These risks can include but are not limited to topics such as climate change, biodiversity, racial inequality, and modern slavery.

Governance

As environmental and social risk management requires a multi-disciplinary approach, these risk factors are considered in our ESG Governance Framework, which defines responsibility for ESG from the Board down to those with day-to-day accountability for execution.

CIBC's Board and its committees provide ongoing oversight of our bank-wide ESG framework, each playing a distinct, but integrated role. The Corporate Governance Committee leads oversight of our ESG strategy, and in this capacity considers external challenges, trends and developments that should be incorporated in our strategic plans. Other Board committees lead the oversight of specific elements of our ESG strategy based on mandate, and as it pertains to environmental and social risks; in particular, the Risk Committee supervises key frameworks related to CIBC's principal business risks, which include climate-related risks, and the Audit Committee has oversight of the underlying processes and controls of the ESG disclosures in our Annual Report and our Sustainability Report.

At the senior management level, our Executive Committee is accountable for the progress on CIBC's ESG agenda, and the Executive Vice-President and Chief Legal Officer (CLO) is the executive horizontal owner of ESG across the enterprise, which includes leading our ESG strategy and ESG Governance Framework. In this capacity, the CLO also works closely with our CRO, who has overall responsibility for enterprise risk management. Executive management of ESG is also facilitated through CIBC's Senior Executive ESG Council, which is chaired by the Executive Vice-President and Chief Legal Officer, and has representation from all SBUs and functional groups, enabling bank-wide input and coordination on strategic ESG initiatives in response to CIBC's environmental and social responsibilities. Our Enterprise ESG team, which reports to the CLO, works alongside the SBUs, functional groups and ESG subject matter experts across the bank, such as the Environmental Risk team within Enterprise Risk Management, to advance CIBC's ESG agenda.

Understanding that environmental and social topics and related risks are evolving, we have regular, two-way engagement with our stakeholders and continuously assess and engage on other environmental and social issues through partnerships and industry initiatives. This helps to ensure that we have a common understanding of this risk area and are prepared to respond. Beyond the risks listed below, we are learning and contributing to emerging topics such as biodiversity and the circular economy, through participation in the Taskforce on Nature-related Financial Disclosures Forum and Circular Economy Leadership Canada, respectively, and helping to transform financial decision making to better integrate risks posed by environmental and social issues through participation in A4S (Accounting for Sustainability).

Risk management

Within CIBC's Risk Management function, the Enterprise Risk Management group provides independent oversight of the measurement, monitoring and control of environmental risks. This group is led by the Senior Vice-President, Enterprise Risk Management, who has direct accountability to the CRO for environmental risk oversight. This team works closely with the Enterprise ESG team, to ensure that climate and related social risks are integrated into our ESG strategy, as well as with the SBUs and functional groups to ensure that best practices of environmental responsibility are applied to the banking services that we provide to our clients, the relationships we have with our stakeholders, and to the way we manage our facilities.

Our corporate environmental policy describes our approach to prudent environmental management, including climate-related issues, and assigns responsibilities for managing our environmental impacts and is under the overall management of the Environmental Risk team. Our policy states that CIBC will develop, implement and maintain standards and procedures to review, assess and manage the environmental risks inherent in lending and investment activities and seek through such activities to promote sound environmental management practices among those with whom business is conducted. For example, environmental and related social evaluations are integrated into our credit risk assessment processes, with standards and procedures in place for all sectors. In addition, environmental and related social risk assessments in project finance, project-related corporate loans and bridge loans are required, in accordance with our commitment to the Equator Principles (adopted in 2003), which are a voluntary set of guidelines for financial institutions based on the screening criteria from the International Finance Corporation. An escalation process is in place for transactions with the potential to have significant environmental and related social risk, with escalation up to the Reputation and Legal Risks Committee for senior executive review, if required.

Social risks, which may not be related to environmental risks, such as child labour or human rights violations, are a component of reputation and legal risks. Social risk is therefore assessed and mitigated according to the policies and related procedures followed for managing reputation and legal risks, including through the Reputation Risk Management Framework, Global Reputation and Legal Risks Policy and business-specific procedures. See the "Reputation and legal risks" section for additional information.

Climate change

Climate risk is integrated into our risk management processes, beginning with our climate-related risk appetite, which is defined based on qualitative considerations and reflects our guiding principle of practicing sound risk management, as well as enabling us to address stakeholders' expectations with respect to climate risk management. We are currently focused on defining quantitative climate-related risk appetite statement measures, and to achieve this, we are developing different options to incorporate relevant risk appetite metrics and tolerance levels.

We are actively identifying and assessing climate-related risks and how they might impact business operations, cause physical damage, disrupt supply chains and affect global economies, and ultimately impact credit and market risk. To do this, we are continuing to develop a suite of tools including carbon risk scoring, heat maps, scenario analysis and measuring financed emissions to give us insights into the risks at a client, sector and portfolio level, as there is not one individual tool that can adequately measure the risks that our clients face due to climate change.

Our carbon risk scoring considers the short, medium and long-term impacts that a corporate or commercial client might face due to climate change such as policy, technology and market shifts. It allows us to score each client on a scale of advanced to poor, referring those clients that score poorly to our High Carbon Score Committee to develop appropriate action plans to mitigate the risk.

Our heat map approach also provides a visual representation of the business and government sectors that are vulnerable to climate-related risks. Based on this heat map assessment, we assign a score to each industry and sector within our portfolio based on general exposure to physical and transition risks. The combined weighted average score is used to infer potential credit migrations which is used as an input into scenario analysis to estimate potential changes in PD, expected loss and RWA. The latter is based on the Bank of Canada and OSFI pilot scenario and provides a useful "what-if" framework to explore how climate-related risks may manifest in the future.

These risk management tools provide us with a higher level of granularity to understand how our individual portfolios behave with regard to climate-related risks and where to focus mitigation efforts, as well as informing business decisions towards potential opportunities and areas where we can support our clients. We will continue expanding our knowledge and exploring and assessing climate-related risk impacts as industry standards, the regulatory environment, data quality, tools and our approach mature.

Human rights and codes of conduct

CIBC is committed to respecting human rights and stands against slavery and human trafficking throughout our business and supply chains.

We uphold human rights by incorporating global best practices enterprise-wide, including those embodied by the United Nations Guiding Principles on Business and Human Rights, and promoting a fair, diverse and inclusive work environment. We comply with all applicable human rights laws and standards in the jurisdictions in which we operate, including laws addressing issues such as pay equity, employment equity, health and safety, discrimination and harassment. We expect our team members, clients, suppliers and other third parties with whom we have a business relationship to share our commitment to respect human rights. More information can be found in the CIBC on Human Rights: Modern Slavery and Human Trafficking Statement, which is available on our website.

CIBC's Code of Conduct is an important reference point in our culture and also lays out the standards we have in place for how team members should behave and treat our clients, communities and fellow team members. The Code of Conduct sets out underlying policies that guide our actions that are foundational to our purpose-led and inclusive culture as we grow in a sustainable way. This includes acting with honesty, integrity and respect. To maintain appropriate conduct and address inappropriate conduct, we use an integrated framework of programs, standards, policies, guidelines and procedures that all align with the high-level principles and ethical standards set out in our Code of Conduct. See the "Conduct risk" section for additional information.

Our Supplier Code of Conduct sets out the principles, standards and behaviours that our suppliers must follow, as we expect that they act ethically and adhere to all applicable laws, rules and regulations, such as maintaining responsible labour practices and human rights, in the jurisdictions in which they operate. We have procedures in place to assess supplier risk and to govern our contracted supplier relationships. Due diligence reviews of new, existing and prospective suppliers require consideration of applicable ESG factors in order to mitigate these potential risks within our supply chain.

More information on our ESG governance, policy, management and performance can be found in our Sustainability Report, which is available on our website.

Regulatory compliance risk

Regulatory compliance risk is the risk of CIBC's potential non-conformance with applicable regulatory requirements.

Our regulatory compliance philosophy is to manage and mitigate regulatory compliance risk through the promotion of a strong risk culture within the parameters established by CIBC's Risk Appetite Statement. The foundation of this approach is a comprehensive Regulatory Compliance Management (RCM) framework. The RCM framework, owned by the Senior Vice-President, Chief Compliance Officer and Global Regulatory Affairs, and approved by the RMC, maps regulatory requirements to internal policies, procedures and/or controls that govern regulatory compliance.

Our Compliance department is responsible for the development and maintenance of a comprehensive regulatory compliance program, including oversight of the RCM framework. This department is independent of business management and regularly reports to the RMC.

Primary responsibility for compliance with all applicable regulatory requirements rests with senior management of the business and functional groups, and extends to all employees. The Compliance department's activities support those groups, with particular emphasis on regulatory requirements that govern the relationship between CIBC and its clients.

See the "Regulatory developments" section for further details.

Insurance risk

Insurance risk is the risk of loss arising from the obligation to pay out benefits and expenses on insurance policies in excess of expected amounts. Unfavourable actual experience could emerge due to adverse fluctuations in timing, size and frequency of actual claims (e.g., mortality, morbidity), policyholder behaviour (e.g., cancellation of coverage), or associated expenses.

Insurance contracts provide financial compensation to the beneficiary in the event of an insured risk occurring in exchange for premiums. We are exposed to insurance risk in our life insurance business and in our reinsurance business within the respective subsidiaries.

Senior management of the insurance and reinsurance subsidiaries have primary responsibility for managing insurance risk with oversight by Risk Management. The insurance and reinsurance subsidiaries also have their own boards of directors, and an independent Appointed Actuary who provide additional input to risk management oversight. Processes and oversight are in place to manage the risk to our insurance business. Underwriting risk on business assumed is managed through risk policies that limit exposure to an individual life, to certain types of business and to regions.

Our risk governance practices ensure strong independent oversight and control of risk within the insurance businesses. The subsidiaries' boards outline the internal risk and control structure to manage insurance risk, which includes risk, capital and control policies, processes as well as limits and governance. Senior management of the insurance and reinsurance subsidiaries and Risk Management attend the subsidiaries' board meetings.

Reputation and legal risks

Our reputation and financial soundness are of fundamental importance to us and to our clients, shareholders, third parties, regulators, team members and communities.

Reputation risk is the risk of negative publicity regarding our business conduct or practices which, whether true or not, could significantly harm our reputation as a leading financial institution, or could materially and adversely affect our business, operations or financial condition.

Legal risk is the risk of financial loss arising from one or more of the following factors: (a) civil, criminal or regulatory enforcement proceedings against us; (b) our failure to correctly document, enforce or comply with contractual obligations; (c) failure to comply with our legal obligations to clients, investors, team members, counterparties or other stakeholders; (d) failure to take appropriate legal measures to protect our assets or security interests; or (e) misconduct by our team members or agents.

All team members at CIBC play an important role in protecting our reputation by ensuring that the highest ethical standards are followed in how we act and what we do. Not only must we act with integrity at all times, we must also ensure that activities being conducted do not pose undue risks to CIBC's reputation for ethical, sound and responsible business practices. As a result, requirements for the management and oversight of potential reputation risk are integrated throughout our framework of policies and related procedures. These processes include the management of various risks as set out in CIBC's Risk Appetite Statement, Risk Management Framework and Code of Conduct. Our Reputation Risk Management Framework, Global Reputation and Legal Risks Policy and business-specific procedures outline how we safeguard our reputation through identification, assessment, escalation and mitigation of potential reputation and legal risks. Proactive management of potential reputation and legal risks is a key responsibility of CIBC and all our team members.

Overall governance and oversight of reputation risk is provided by the Board, primarily through the RMC of the Board. Senior management oversight of reputation and legal risks is provided by the Reputation and Legal Risks Committee, which is a sub-committee of GRC and reports its activities regularly to the GRC. Additionally, there are specific senior management committees across the enterprise that provide further oversight to ensure required practices are followed and any material reputation and legal risks are identified, managed, and if required, escalated, effectively.

Conduct risk

Conduct risk is the risk that the actions or omissions (i.e., behaviour) of CIBC, team members or third parties: do not align with our desired culture and values; deliver poor or unfair outcomes for clients, team members or shareholders; result in adverse market practices and outcomes; impact CIBC's reputation as a leading financial institution; or materially and adversely affect our business, operations or financial condition.

Our Conduct and Culture Risk Framework applies enterprise-wide and outlines how we manage conduct risk through the proactive identification, measurement and management of potential conduct risk. Every team member is accountable for the identification and management of conduct risk. The overarching principles and requirements for maintaining appropriate conduct and addressing inappropriate conduct are covered in the CIBC Code of Conduct (the Code) and other global, regional and business specific policies, frameworks, processes and procedures. All team members must abide by the Code, and CIBC policies, frameworks, processes and procedures in carrying out the accountabilities of their role. Overall governance of conduct risk is provided by the Board and its committees, including the CGC, as well as senior management committees.

Accounting and control matters

Critical accounting policies and estimates

The consolidated financial statements of CIBC have been prepared in accordance with IFRS as issued by the International Accounting Standards Board (IASB). These consolidated financial statements also comply with Section 308(4) of the *Bank Act* (Canada) and the requirements of OSFI. A summary of significant accounting policies is presented in Note 1 to the consolidated financial statements.

Certain accounting policies require us to make judgments and estimates, some of which relate to matters that are uncertain. As discussed in the "Economic and market environment" section, there are elevated levels of uncertainty related to the impact that rising interest rates, inflation and supply chain disruptions exacerbated by geopolitical events and the measures imposed in some countries to combat the spread of COVID-19, will have on the macroeconomic environment. These challenges continue to give rise to heightened uncertainty as it relates to our critical accounting estimates and increases the need to apply judgment in evaluating the economic and market environment and its impact on significant estimates. Changes in the judgments and estimates required in the critical accounting policies discussed below could have a material impact on our financial results. We have established control procedures to ensure accounting policies are applied consistently and processes for changing methodologies are well controlled.

Use and classification of financial instruments

As a financial institution, our assets and liabilities primarily comprise financial instruments, which include deposits, securities, loans, derivatives, acceptances, repurchase agreements, and subordinated indebtedness.

We use these financial instruments for both trading and non-trading activities. Trading activities primarily include the purchase and sale of securities and metals, transacting in foreign exchange and derivative instruments in the course of facilitating client trades and taking proprietary trading positions with the objective of income generation. Non-trading activities generally include the business of lending, investing, funding, and ALM.

The use of financial instruments may either introduce or mitigate exposures to market, credit and/or liquidity risks. See the "Management of risk" section for details on how these risks are managed.

Financial instruments are accounted for according to their classification. Judgment is applied in determining the appropriate classification of financial instruments under IFRS 9, in particular as it relates to the assessment of whether debt financial assets meet the solely payment of principal and interest (SPPI) test, and the assessment of the business model used to manage financial assets. For details on the accounting for these instruments under IFRS 9, see Note 1 to the consolidated financial statements.

Determination of fair value of financial instruments

Under IFRS 9, debt and equity securities mandatorily measured and designated at FVTPL, business and government loans mandatorily measured and designated at FVTPL, obligations related to securities sold short, derivative contracts, FVOCI securities and FVO financial instruments are carried at fair value. FVO financial instruments include certain debt securities, certain secured borrowings, obligations related to securities sold under repurchase agreements, structured deposits and business and government deposits. Retail mortgage interest rate commitments are also designated as FVO financial instruments.

IFRS 13 defines fair value to be the price that would be received to sell an asset or paid to transfer a liability at the measurement date in an orderly arm's-length transaction between market participants in the principal market under current market conditions (i.e., the exit price). Fair value measurements are categorized into levels within a fair value hierarchy based on the nature of the valuation inputs (Level 1, 2 or 3). We have an established and documented process for determining fair value. Fair value is based on unadjusted quoted prices in an active market for the same instrument, where available (Level 1). If active market prices or quotes are not available for an instrument, fair value is then based on valuation models in which the significant inputs are observable (Level 2) or in which one or more of the significant inputs are non-observable (Level 3). Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available.

For instruments valued using internally developed models that use significant non-observable market inputs and are therefore classified within Level 3 of the hierarchy, the judgment used to estimate fair value is more significant than when estimating the fair value of instruments classified within Levels 1 and 2. To ensure that valuations are appropriate, a number of policies and controls are in place, including independent validation of valuation inputs to external sources such as exchange quotes, broker quotes or other management-approved independent pricing sources.

The following table presents amounts, in each category of financial instruments, which are valued using valuation techniques based on Level 3 inputs. For further details of the valuation of and sensitivity associated with Level 3 financial assets and liabilities, see Note 2 to the consolidated financial statements.

$ millions, as at October 31	2022		2021	
	Level 3	**Total** [1]	Level 3	Total [1]
Assets				
Securities mandatorily measured and designated at FVTPL and loans mandatorily measured at FVTPL	**$ 1,194**	**1.7 %**	$ 1,099	1.1 %
Debt securities measured at FVOCI and equity securities designated at FVOCI	**161**	**0.3**	392	0.7
Derivative instruments	**67**	**0.2**	97	0.3
	$ 1,422	**0.8 %**	$ 1,588	0.8 %
Liabilities				
Deposits and other liabilities [2]	**$ 409**	**1.5 %**	$ 742	3.8 %
Derivative instruments	**1,586**	**3.0**	267	0.8
	$ 1,995	**2.0 %**	$ 1,009	1.3 %

(1) Represents the percentage of Level 3 assets and liabilities over total assets and liabilities for each reported category that are carried on the consolidated balance sheet at fair value.
(2) Includes FVO deposits and bifurcated embedded derivatives.

Note 2 to the consolidated financial statements presents the valuation methods used to determine fair value showing separately those financial instruments that are carried at fair value on the consolidated balance sheet and those that are not.

In order to reflect the observed market practice of pricing collateralized and uncollateralized derivatives, our valuation approach uses overnight indexed swap curves as the discount rate in the valuation of collateralized derivatives and market cost of funding in the valuation of

uncollateralized derivatives. The use of a market cost of funds curve reduces the fair value of uncollateralized derivative assets incremental to the reduction in fair value for credit risk already reflected through the CVA. In contrast, the use of a market cost of funds curve reduces the fair value of uncollateralized derivative liabilities in a manner that generally includes adjustments for our own credit. As market practices continue to evolve in regard to derivative valuation, further adjustments may be required in the future.

Fair value adjustments

We apply judgment in establishing valuation adjustments that take into account various factors that may have an impact on the valuation of financial instruments that are carried at fair value on the consolidated balance sheet. Such factors include, but are not limited to, the bid-offer spread, illiquidity due to lack of market depth and other market risks, parameter uncertainty, model risk, and credit risk.

The establishment of fair value adjustments involves estimates that are based on accounting processes and judgments by management. We evaluate the adequacy of the fair value adjustments on an ongoing basis. The level of fair value adjustments could change as events warrant and may not reflect ultimate realizable amounts.

As at October 31, 2022, the total valuation adjustments related to financial instruments carried at fair value on the consolidated balance sheet was $326 million (2021: $270 million), primarily related to credit risk, bid-offer spreads, and parameter uncertainty of our derivative assets and liabilities, as well as adjustments recognized for valuing our uncollateralized derivative assets and liabilities based on an estimated market cost of funds curve.

Impairment of financial assets

Under IFRS 9, we establish and maintain ECL allowances for all debt instrument financial assets classified as amortized cost or FVOCI. In addition, the ECL allowances apply to loan commitments and financial guarantees that are not measured at FVTPL.

ECL allowances represent credit losses that reflect an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes, the time value of money and reasonable and supportable information about past events, current conditions and forecasts of future economic conditions. One of the objectives of IFRS 9 is to record lifetime losses on all financial instruments that have experienced a significant increase in credit risk since their initial recognition. As a result, ECL allowances are measured at amounts equal to either: (i) 12-month ECL; or (ii) lifetime ECL for those financial instruments that have experienced a significant increase in credit risk since initial recognition or when there is objective evidence of impairment.

Key drivers of expected credit loss

The ECL impairment requirements of IFRS 9 require that we make judgments and estimates related to matters that are uncertain. In particular, the ECL requirements of IFRS 9 incorporate the following elements that are subject to a high level of judgment:

- Determining when a significant increase in credit risk of a loan has occurred;
- Measuring both 12-month and lifetime credit losses; and
- Forecasting forward-looking information for multiple scenarios and determining the probability weighting of each scenario.

In addition, the interrelationship between these elements is also subject to a high degree of judgment. Changes in the judgments and estimates related to IFRS 9 can have a significant impact on the level of ECL allowance recognized and the period-over-period volatility of the provision for credit losses. Changes in a particular period could have a material impact on our financial results.

We continue to operate in an uncertain macroeconomic environment. While improvements in our economic outlook resulted in a moderate reduction in our stage 1 and stage 2 performing ECLs during the three months ended January 31, 2022, a worsening of our economic outlook during the nine months ended October 31, 2022 resulted in a moderate increase in our stage 1 and stage 2 performing ECLs. There is inherent uncertainty in estimating the impact that rising interest rates, inflation and supply chain disruptions exacerbated by the measures imposed in some countries to combat the spread of COVID-19 and geopolitical events, will have on the macroeconomic environment. As a result, a heightened level of judgment in estimating ECLs in respect of all these elements as discussed above, continued to be required. Actual results could differ from these estimates and assumptions. See Note 5 to our consolidated financial statements for more information concerning the high level of judgment inherent in the estimation of ECL allowance under IFRS 9.

Use of the regulatory framework

Our ECL model leverages the data, systems and processes that are used to calculate Basel expected losses regulatory adjustments for the portion of our portfolios under the AIRB approach. Significant judgment is applied in making appropriate adjustments to the Basel parameters to meet IFRS 9 requirements, including the conversion of through-the-cycle and downturn parameters used in the Basel regulatory calculations to point-in-time parameters used under IFRS 9 that consider forward-looking information. In addition, credit losses under IFRS 9 are 12 months for stage 1 financial instruments and lifetime for stage 2 and stage 3 financial instruments, compared to 12 months for AIRB portfolios under Basel. The main adjustments necessary to Basel risk parameters are explained in the table below:

	Regulatory Capital	*IFRS 9*
PD	Through-the-cycle PD represents long-run average PD throughout a full economic cycle	Point-in-time 12-month or lifetime PD based on current conditions and relevant forward-looking assumptions
LGD	Downturn LGD based on losses that would be expected in an economic downturn and subject to certain regulatory floors Discounted using the cost of capital	Unbiased probability-weighted LGD based on estimated LGD including impact of relevant forward-looking assumptions such as changes in collateral value Discounted using the original effective interest rate
EAD	Based on the drawn balance plus expected utilization of any undrawn portion prior to default, and cannot be lower than the drawn balance	Amortization and repayment of principal and interest from the balance sheet date to the default date is also captured
Other		ECL is discounted from the default date to the reporting date

Attribution of provision for credit losses

We recognize provision for credit losses on both impaired (stage 3) and performing (stages 1 and 2) loans in the respective SBUs. Provision for credit losses recognized directly on our consolidated statement of income is in respect to financial instruments classified as loans and bankers'

acceptances. Provision for credit losses for FVOCI debt securities and amortized cost securities are recognized in Gains (losses) from debt securities measured at FVOCI and amortized cost, net in the consolidated statement of income.

Hedge accounting

The IFRS 9 hedge accounting guidance is intended to better align the accounting with risk management activities. However, IFRS 9 allows the existing hedge accounting requirements under IAS 39 to continue in place of the hedge accounting requirements under IFRS 9. As permitted, we previously elected to not adopt the IFRS 9 hedge accounting requirements and instead retained the IAS 39 hedge accounting requirements. As required, we have adopted the hedge accounting disclosure requirements under amendments to IFRS 7 that were effective in 2018. As a result of interest rate benchmark reform, we have adopted "Interest Rate Benchmark Reform: Amendments to IFRS 9, IAS 39 and IFRS 7" (Phase 1 amendments) issued by the IASB as of November 1, 2019, and adopted "Interest Rate Benchmark Reform: Phase 2 Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4, and IFRS 16" (Phase 2 amendments) as of November 1, 2020. See "Reforms to interest rate benchmarks" in the "Other regulatory developments" section for more information.

Securitizations and structured entities

Securitization of our own assets

Under IFRS 10 "Consolidated Financial Statements" (IFRS 10), judgment is exercised in determining whether an investor controls an investee including assessing whether the investor has: (i) power over the investee; (ii) exposure, or rights, to variable returns from its involvement with the investee; and (iii) the ability to affect those returns through its power over the investee. Power may be exercised through voting or similar rights or, in the case of SEs, through contractual arrangements that direct the relevant activities of the investee. When voting rights are not relevant in deciding whether CIBC has power over an entity, particularly for complex SEs, the assessment of control considers all facts and circumstances, including the purpose and design of the investee, its relationship with other parties and each party's ability to make decisions over significant activities, and whether CIBC is acting as a principal or as an agent.

We sponsor several SEs that have purchased and securitized our own assets including Cards II Trust, which we consolidate under IFRS 10.

We also securitize our own mortgage assets through a government-sponsored securitization program. We sell these securitized assets to a government-sponsored securitization vehicle that we do not consolidate, as well as to other third parties. IFRS 9 provides guidance on when to derecognize financial assets. A financial asset is derecognized when the contractual rights to receive cash flows from the asset have expired, or when we have transferred the rights to receive cash flows from the asset such that:

- We have transferred substantially all the risks and rewards of the asset; or
- We have neither transferred nor retained substantially all the risks and rewards of the asset, but have transferred control of the asset.

We have determined that our securitization activities related to residential mortgages and cards receivables are accounted for as secured borrowing transactions because we have not met the aforementioned criteria.

Securities lending and repurchase transactions generally do not result in the transfer of substantially all the risks and rewards of the securities and as a result do not result in derecognition of the securities.

We also sell certain U.S. commercial mortgages to third parties that qualify for derecognition because we have transferred substantially all the risks and rewards of the mortgages and have no continuous involvement after the transfer.

Securitization of third-party assets

We also sponsor several SEs that purchase pools of third-party assets. We consider a number of factors in determining whether CIBC controls these SEs. We monitor the extent to which we support these SEs, through direct investment in the debt issued by the SEs and through the provision of liquidity protection to the other debtholders, to assess whether we should consolidate these entities.

IFRS 10 also requires that we reconsider our consolidation assessment if facts and circumstances relevant to the entities indicate that there are changes to one or more of the three elements of control described above. Factors that trigger reassessment include, but are not limited to, significant changes in ownership structure of the entities, changes in contractual or governance arrangements, provision of a liquidity facility beyond the original terms, transactions with the entities that were not contemplated originally and changes in the financing structure of the entities.

Specifically, in relation to our multi-seller conduits, we would reconsider our consolidation assessment if our level of interest in the ABCP issued by the conduits changes significantly, or in the rare event that the liquidity facility that we provide to the conduits is drawn or amended.

A significant increase in our holdings of the outstanding commercial paper issued by the conduits would become more likely in a scenario in which the market for bank-sponsored ABCP suffered a significant deterioration such that the conduits were unable to roll their ABCP.

For additional information on the securitizations of our own assets and third-party assets, see the "Off-balance sheet arrangements" section and Note 6 to the consolidated financial statements.

Leases

As a lessee, we recognize a right-of-use asset and a corresponding lease liability based on the present value of future lease payments, less any lease incentives receivable, when the lessor makes the leased asset available for use to CIBC. We apply judgment in determining the appropriate lease term, which is based on the non-cancellable portion of the lease term, adjusted for any renewal or termination options that are reasonably certain to be exercised. In accounting for the lease, we also determine the appropriate discount rates based on the rate implicit in the lease, if determinable, or on CIBC's incremental borrowing rate.

As an intermediate lessor, we apply judgment to classify a sublease as an operating or finance sublease based on whether substantially all of the risks and rewards related to the underlying right-of-use asset are transferred to the sub-lessee. If classified as a finance sublease, the related right-of-use asset is derecognized and an investment in sublease is recognized based on the head lease discount rate unless the rate implicit in the sublease is determinable. Where a finance sublease includes lease and non-lease components, we allocate the total consideration in the contract to each component based on our estimation of the standalone prices for each of these components. The investment in sublease is subsequently measured using the effective interest rate method, with interest income recognized over the term of the sublease. Rental income from operating subleases is recognized on a systematic basis over the lease term. For both finance and operating subleases, we apply similar judgments as when we are acting as a lessee to determine the appropriate lease term.

Asset impairment

Goodwill

As at October 31, 2022, we had goodwill of $5,348 million (2021: $4,954 million). Goodwill is not amortized, but is tested, at least annually, for impairment by comparing the recoverable amount of the cash-generating unit (CGU) to which goodwill has been allocated, with the carrying amount of the CGU including goodwill. Any deficiency is recognized as impairment of goodwill. The recoverable amount of a CGU is defined as the higher of its estimated fair value less cost to sell and its value in use. Goodwill is also required to be tested for impairment whenever there are indicators that it may be impaired.

Estimation of the recoverable amount is an area of significant judgment. Recoverable amounts are estimated using internally developed models that require the use of significant assumptions including forecasted earnings, discount rates, growth rates, forecasted regulatory capital requirements, and price-earnings multiples. Reductions in the estimated recoverable amount could arise from various factors, such as reductions in forecasted cash flows, an increase in the assumed level of required capital, and any adverse changes to the discount rate or terminal growth rates either in isolation or in any combination thereof. Where our estimated recoverable amount is not significantly in excess of the carrying amount of the CGU, additional judgment is required, and reductions in the recoverable amount are more likely to result in an impairment charge.

In the fourth quarter of 2022, we performed our annual impairment test. We concluded that the recoverable amounts of our CGUs were in excess of their carrying amounts.

For additional information, see Note 8 to the consolidated financial statements.

Other intangible assets and long-lived assets

As at October 31, 2022, we had other intangible assets with an indefinite life of $143 million (2021: $140 million) and with a definite life of $358 million (2021: $195 million), including purchased credit card relationships with a carrying value of $218 million (2021: nil) that were acquired as part of the acquisition of the Canadian Costco credit card portfolio. Acquired intangible assets are separately recognized if the benefits of the intangible assets are obtained through contractual or other legal rights, or if the intangible assets can be sold, transferred, licensed, rented, or exchanged. Determining the useful lives of intangible assets requires judgment and fact-based analysis.

Intangible assets with an indefinite life are not amortized but are assessed for impairment by comparing the recoverable amount to the carrying amount. The recoverable amount is defined as the higher of the estimated fair value less cost to sell and value in use. An impairment test is required at least annually, or whenever there are indicators that these assets may be impaired.

Long-lived assets and other identifiable intangible assets with a definite life are amortized over their estimated useful lives. These assets are tested for impairment whenever events or changes in circumstances indicate that the carrying amount is higher than the recoverable amount.

Determining the recoverable amount of intangible assets and long-lived assets is an area of judgment as we estimate the future cash flows expected to result from the use of the asset and, where appropriate, cash flows arising from the asset's eventual disposition.

For additional information, see Note 8 to the consolidated financial statements.

Income taxes

We are committed to responsible tax practices. We execute active tax governance and tax compliance processes to meet the requirements of tax laws in all countries where we operate. We seek to manage tax and reputational risk to ensure any financial exposure is well understood and remains consistent with our strategy, risk appetite and financial goals.

We are subject to income tax laws in the various jurisdictions where we operate, and the tax laws in those jurisdictions are potentially subject to different interpretations by us and the relevant taxation authority, which gives rise to uncertainty. We use judgment in the estimation of income taxes and deferred tax assets and liabilities. As a result, management judgment is applied in the interpretation of the relevant tax laws and in estimating the provision for current and deferred income taxes. For tax positions where there is uncertainty regarding the ultimate determination of the tax impact, including positions which are under audit, dispute or appeal, we recognize provisions to consider this uncertainty based on our best estimate of the amount expected to be paid based on an assessment of the relevant factors.

Current tax is calculated using tax rates enacted or substantively enacted as at the reporting date. For Canadian income taxes, substantively enacted is generally interpreted to occur at the point of a third reading in a Canadian Parliament held by a minority government, or the first reading in a Canadian Parliament held by a majority government.

Deferred tax assets or liabilities are determined for each temporary difference based on the tax rates that are expected to be in effect in the period that the assets are realized or the liabilities are settled, based on the laws that have been enacted or substantively enacted as at the reporting date.

Deferred tax liabilities are generally recognized for all taxable temporary differences unless the temporary differences relate to our NIFOs and will not reverse in the foreseeable future.

We are required to assess whether it is probable that our deferred tax assets will be realized prior to their expiration and, based on all of the available evidence, determine if any portion of our deferred tax assets should not be recognized. The factors used to assess the probability of realization are based on our past experience of income and capital gains, forecasts of future net income before income taxes, available tax planning strategies that could be implemented to realize the deferred tax assets, and the remaining expiration period of tax loss carryforwards. In addition, for deductible temporary differences arising from our NIFOs, we must consider whether the temporary difference will reverse in the foreseeable future. Although realization is not assured, we believe, based on all of the available evidence, it is probable that the recognized deferred tax assets will be realized. Income tax accounting impacts all of our reporting segments. For further details on our income taxes, see Note 19 to the consolidated financial statements.

Contingent liabilities and provisions

Legal proceedings and other contingencies

In the ordinary course of its business, CIBC is a party to a number of legal proceedings, including regulatory investigations, in which claims for substantial monetary damages are asserted against CIBC and its subsidiaries. Legal provisions are established if, in the opinion of management, it is both probable that an outflow of economic benefits will be required to resolve the matter, and a reliable estimate can be made of the amount of the obligation. If the reliable estimate of probable loss involves a range of potential outcomes within which a specific amount appears to be a better estimate, that amount is accrued. If no specific amount within the range of potential outcomes appears to be a better estimate than any other amount, the mid-point in the range is accrued. In some instances, however, it is not possible to determine whether an obligation is probable or to reliably estimate the amount of loss, in which case no accrual can be made.

While there is inherent difficulty in predicting the outcome of legal proceedings, based on current knowledge and in consultation with legal counsel, we do not expect the outcome of these matters, individually or in aggregate, to have a material adverse effect on our consolidated financial

statements. However, the outcome of these matters, individually or in aggregate, may be material to our operating results for a particular reporting period. We regularly assess the adequacy of CIBC's litigation accruals and make the necessary adjustments to incorporate new information as it becomes available.

CIBC considers losses to be reasonably possible when they are neither probable nor remote. It is reasonably possible that CIBC may incur losses in addition to the amounts recorded when the loss accrued is the mid-point of a range of reasonably possible losses, or the potential loss pertains to a matter in which an unfavourable outcome is reasonably possible but not probable.

A description of significant ongoing matters to which CIBC is a party can be found in Note 22 to the consolidated financial statements. The provisions disclosed in Note 22 include all of CIBC's accruals for legal matters as at October 31, 2022, including amounts related to the significant legal proceedings described in that note and to other legal matters.

CIBC believes the estimate of the aggregate range of reasonably possible losses, in excess of the amounts accrued, for its significant legal proceedings, where it is possible to make such an estimate, is from nil to approximately $1.5 billion as at October 31, 2022. This estimated aggregate range of reasonably possible losses is based upon currently available information for those significant proceedings in which CIBC is involved, taking into account CIBC's best estimate of such losses for those cases for which an estimate can be made. CIBC's estimate involves significant judgment, given the varying stages of the proceedings and the existence of multiple defendants in many of such proceedings whose share of the liability has yet to be determined. The range does not include potential punitive damages. The matters underlying the estimated range as at October 31, 2022, consist of the significant legal matters disclosed in Note 22 to the consolidated financial statements. The matters underlying the estimated range will change from time to time, and actual losses may vary significantly from the current estimate. For certain matters, CIBC does not believe that an estimate can currently be made as many of them are in preliminary stages and certain matters have no specific amount claimed. Consequently, these matters are not included in the range.

Post-employment and other long-term benefit plan assumptions

We sponsor a number of benefit plans to eligible employees, including registered and supplemental pension plans, and post-retirement medical and dental plans (other post-employment benefit plans). We also continue to sponsor long-term disability medical and dental benefit plans (collectively, other long-term benefit plans). The long-term disability income replacement plan that was previously closed to new claims as of June 2004, was settled effective December 2021.

The calculation of net defined benefit plan expense and obligations depends on various actuarial assumptions such as discount rates, health-care cost trend rates, turnover of employees, projected salary increases, retirement age, and mortality rates. The actuarial assumptions used for determining the net defined benefit plan expense for a fiscal year are set at the beginning of the annual reporting period, are reviewed in accordance with accepted actuarial practice and are approved by management. We applied additional judgment in developing salary-related assumptions for the year ended October 31, 2022 given the impact of inflationary pressures on employee compensation and our public commitments to additional wage increases for certain employees.

The discount rate assumption used in measuring the net defined benefit plan expense and obligations reflects market yields, as of the measurement date, on high-quality debt instruments with a currency and term to maturity that match the currency and expected timing of benefit payments. Our discount rate is estimated by developing a yield curve based on high-quality corporate bonds. While there is a deep market of high-quality corporate bonds denominated in Canadian dollars with short and medium terms to maturity, there is not a deep market in bonds with terms to maturity that match the timing of all the expected benefit payments for all of our Canadian plans. As a result, for our Canadian pension, other post-employment and other long-term benefit plans, we estimate the yields of high-quality corporate bonds with longer-term maturities by extrapolating current yields on bonds with short- and medium-term durations along the yield curve. Judgment is required in constructing the yield curve, and as a result, different methodologies applied in constructing the yield curve can give rise to different discount rates.

For further details of our annual pension and other post-employment expense and obligations, see Note 18 and Note 1 to the consolidated financial statements.

Self-managed loyalty points program

We sponsor certain self-managed credit card loyalty points programs for which we recognize credit card loyalty point liabilities that are subject to periodic remeasurement to reflect the expected cost of redemption as this expectation changes over time. The calculation of the expected cost of redemption requires the use of judgment and depends on various assumptions, including estimation of the cost per point and the long-term redemption rate.

For further details on our self-managed loyalty points programs, see Note 1 to the consolidated financial statements.

Accounting developments

Transition to IFRS 17

IFRS 17 "Insurance Contracts" (IFRS 17), issued in May 2017, replaces IFRS 4 "Insurance Contracts". In June 2020, the IASB issued amendments to IFRS 17 partly aimed at helping companies implement the standard. IFRS 17, incorporating the amendments, is effective for annual reporting periods beginning on or after January 1, 2023, which for us, will be November 1, 2023. IFRS 17 provides comprehensive guidance on the recognition, measurement, presentation and disclosure of insurance contracts we issue and reinsurance contracts we hold. IFRS 17 is to be applied retrospectively unless impracticable. We expect changes in the timing of revenue recognition for our insurance contracts and changes to our insurance contract liabilities as a result of IFRS 17.

We continue to prepare for the implementation of IFRS 17, which is overseen by an Executive Steering Committee. The Executive Steering Committee includes stakeholders from the frontline business and functional groups including Finance, Technology and Risk Management as well as our Appointed Actuary. We have evaluated the changes to our accounting and actuarial policies resulting from the adoption of IFRS 17 and are in the process of implementing a technology solution to support the new accounting requirements.

We continue to evaluate the effect of this standard on our consolidated financial statements.

Other regulatory developments

Reforms to interest rate benchmarks

Various interest rate and other indices that are deemed to be "benchmarks" (including LIBOR) are the subject of international regulatory guidance and proposals for reform. Regulators in various jurisdictions have pushed for the transition from Interbank Offered Rates (IBORs) to alternative benchmark rates (alternative rates), based upon risk-free rates determined using actual market transactions. Following the previous announcements by various regulators, the publication of LIBOR settings for all sterling, Japanese yen, Swiss franc and euro, as well as 1-week and 2-month USD LIBOR settings was discontinued on December 31, 2021. The remaining USD LIBOR settings will cease to be published after June 30, 2023. In March 2022, the *Adjustable Interest Rate (LIBOR) Act* was enacted in the U.S., which allows for contracts that do not contain adequate fallback provisions to automatically transition to Secured Overnight Financing Rate (SOFR) upon the cessation of USD LIBOR. The enactment of this legislation is a positive step towards facilitating the remediation efforts for USD LIBOR exposures.

In December 2021, CARR recommended to Refinitiv Benchmark Services (UK) Limited (RBSL), the CDOR administrator, to cease the calculation and publication of CDOR after June 30, 2024 and proposed a two-staged approach to the transition from CDOR to CORRA. Following public consultation, on May 16, 2022, RBSL announced that it will permanently cease the publication and calculation of all remaining tenors of CDOR after June 28, 2024. Following this announcement, OSFI published its expectations for CDOR transition which is consistent with the two-stage transition approach proposed by CARR. OSFI expects all new derivatives and securities to transition to the alternative rates by June 30, 2023, with no new CDOR exposures after that date, with limited exceptions. OSFI also expects all loan agreements referencing CDOR to be transitioned by June 28, 2024, and FRFIs to prioritize system and model updates to accommodate the use of CORRA prior to June 28, 2024.

The transition from current reference rates to alternative rates may adversely affect the value of, return on, or trading market for contracts linked to existing benchmarks. These developments may cause some LIBOR and other benchmarks to be discontinued. A significant number of CIBC's derivatives, securities, and lending and deposit contracts reference various interest rate benchmarks, including contracts with maturity dates that extend beyond the cessation dates announced by the regulators.

In response to the reforms to interest rate benchmarks, CIBC established an Enterprise IBOR Transition Program (Program), to manage and coordinate all aspects of the transition. The Program is supported by a formal governance structure and dedicated working groups that include stakeholders from frontline businesses as well as functional groups such as Treasury, Technology and Operations, Risk Management, Legal, and Finance, to facilitate the transition.

Our Enterprise IBOR Transition Program continues to manage and coordinate all aspects of the transition. Consistent with regulatory expectations, we have completed the transition of our non-USD LIBOR and 1-week and 2-month USD LIBOR referenced contracts, and no new USD LIBOR products were originated after December 31, 2021 with limited permitted exceptions. We are in the process of transitioning our remaining USD LIBOR based contracts to the alternative rates and have developed business processes to support the transition. The Program is also assessing the impact of the cessation of CDOR on our operations and is developing plans to facilitate the transition of CDOR to alternative rates. As part of the Program, we continue to engage with industry associations on ongoing developments, and continue to incorporate these into our project plan and make information available to our clients, advising them on recent developments. The Program provides regular updates to senior management, including the Executive Committee, and the Board.

The IASB issued amendments to impacted accounting standards to provide relief to entities impacted by the transition to alternative rates. In September 2019, the IASB issued "Interest Rate Benchmark Reform: Amendments to IFRS 9, IAS 39 and IFRS 7" (the Phase 1 amendments), which provides relief for specific hedge accounting requirements to address uncertainties in the period before interest rate benchmark reform, and provides certain disclosure requirements. In August 2020, the IASB issued "Interest Rate Benchmark Reform: Phase 2 Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16" (the Phase 2 amendments), which addresses issues that affect financial reporting once an existing rate is replaced with an alternative rate and provides for additional disclosure requirements. As we elected to continue to apply the hedge accounting requirements of IAS 39 upon the adoption of IFRS 9, only the amendments to the classification and measurement sections of IFRS 9, the hedge accounting sections of IAS 39 and IFRS 7, IFRS 4 and IFRS 16 apply to us. CIBC elected to early adopt the Phase 1 and Phase 2 amendments effective November 1, 2019 and November 1, 2020, respectively. As a result, we have provided additional disclosures related to our exposures to significant benchmark rates subject to the reform in Note 1 to our consolidated financial statements.

Client-focused reforms

In October 2019, the CSA published final amendments to National Instrument 31-103 "Registration Requirements, Exemptions, and Ongoing Registrant Obligations" and its Companion Policy. The client-focused reforms are supported by new and/or amended requirements with respect to know your client, enhanced suitability, product due diligence, know your product, conflicts of interest, relationship disclosure, referrals, and misleading communications. The CSA expects that these requirements will result in a new, higher standard of conduct across all categories for registered dealers, advisers and their representatives. In addition, the Investment Industry Regulatory Organization of Canada and the Mutual Fund Dealers Association (MFDA) published rule amendments aligning to the CSA client-focused reforms.

Due to COVID-19, the original implementation dates scheduled for June 30, 2020 (conflicts of interest) and December 31, 2020 (all remaining amendments) were deferred to 2021. Pursuant to the new timelines, the requirements related to conflicts of interest were effective June 30, 2021 and all other remaining requirements are effective December 31, 2021.

These requirements impact our Canadian Commercial Banking and Wealth Management and Canadian Personal and Business Banking SBUs, as well as Direct Financial Services within our Capital Markets SBU. Relevant changes to our policies and procedures to comply with the conflicts of interest requirements were implemented by June 30, 2021. The remaining changes to our policies and procedures to comply were implemented by December 31, 2021.

CDIC – Deposit protection modernization

In April 2019, the Canadian Federal government approved changes to the *Canada Deposit Insurance Corporation Act* intended to strengthen and modernize deposit protection. The changes occur in two phases. The first phase was effective on April 30, 2020, and included changes to extend CDIC coverage to foreign currency deposits and deposits with terms greater than five years, and to eliminate coverage for travellers' cheques. The second phase was effective on April 30, 2022, and included additional changes such as providing separate coverage for certain registered plans and introducing new requirements for deposits held in trust.

OSFI Guideline B-13 – Technology and Cyber Risk Management
On July 13, 2022, OSFI issued the final Guideline B-13, which will become effective on January 1, 2024. This guideline sets out OSFI's expectations for how FRFIs should manage technology and cyber risks such as data breaches, technology outages and more. The Guideline is organized around three "domains," each of which sets out key components for sound risk management: Governance and Risk Management, Technology Operations and Resilience, and Cyber Security. Efforts are underway to self-assess and ensure compliance with the Guideline.

OSFI Guideline – Assurance on Capital, Leverage and Liquidity Returns
On November 7, 2022, OSFI issued a Guideline on Assurance on Capital, Leverage and Liquidity Returns, which sets out OSFI's three-step approach to enhancing and aligning assurance expectations over regulatory capital, leverage and liquidity returns, including expectations concerning the role of management, Internal Audit and the external auditors. The Guideline is effective in stages over a three year period beginning in fiscal 2023, including the requirement for an external audit opinion on the numerator and denominator of key regulatory ratios in fiscal 2025.

Related-party transactions

We have various processes in place to ensure that the relevant related-party information is identified and reported to the CGC of the Board on a quarterly basis, as required by the *Bank Act* (Canada). The CGC has the responsibility for reviewing our policies and practices in identifying transactions with our related parties that may materially affect us, and reviewing the associated procedures for promoting compliance with the *Bank Act* (Canada).

In the ordinary course of business, we provide banking services and enter into transactions with related parties on terms similar to those offered to unrelated parties. Related parties include key management personnel[1], their close family members, and entities that they or their close family members control or jointly control. Related parties also include associates and joint ventures accounted for under the equity method, and post-employment benefit plans for CIBC employees. Loans to these related parties are made in the ordinary course of business and on substantially the same terms as for comparable transactions with unrelated parties. We offer a subsidy on annual fees and preferential interest rates on credit card balances to senior officers which is the same offer extended to all employees of CIBC. In addition, CIBC offers deferred share and other plans to non-employee directors, executives, and certain other key employees. Details of our compensation of key management personnel[1] and our investments in equity-accounted associates and joint ventures are disclosed in Notes 17, 18, 24 and 25 to the consolidated financial statements.

(1) Key management personnel are defined as those persons having authority and responsibility for planning, directing and controlling the activities of CIBC directly or indirectly and comprise the members of the Board (referred to as directors), ExCo and certain named officers per the *Bank Act* (Canada) (collectively referred to as senior officers). Board members who are also ExCo members are included as senior officers.

Policy on the Scope of Services of the Shareholders' Auditor

The "Policy on the Scope of Services of the Shareholders' Auditor" sets out the parameters for the engagement of the shareholders' auditor by CIBC that are consistent with applicable law, including the U.S. Sarbanes-Oxley Act of 2002 and SEC rules. The policy requires the Audit Committee's pre-approval of all work performed by the shareholders' auditor and prohibits CIBC from engaging the shareholders' auditor for "prohibited" services. The Audit Committee is accountable for the oversight of the work of the shareholders' auditor and for an annual assessment of the engagement team's qualifications, performance and independence, including lead audit partner rotation. The Audit Committee is also responsible for conducting a periodic comprehensive review of the external auditor at least every five years. The Audit Committee's oversight activities over the shareholders' auditor are disclosed in our Management Proxy Circular.

Controls and procedures

Disclosure controls and procedures

CIBC's disclosure controls and procedures are designed to provide reasonable assurance that relevant information is accumulated and communicated to CIBC's management, including the President and CEO and the Chief Financial Officer (CFO), to allow timely decisions regarding required disclosure.

CIBC's management, with the participation of the President and CEO and the CFO, has evaluated the effectiveness of CIBC's disclosure controls and procedures as at October 31, 2022, (as defined in the rules of the SEC and the CSA). Based on that evaluation, the President and CEO and the CFO have concluded that such disclosure controls and procedures were effective.

Management's annual report on internal control over financial reporting

CIBC's management is responsible for establishing and maintaining adequate internal control over financial reporting for CIBC.

Internal control over financial reporting is a process designed by, or under the supervision of, the President and CEO and the CFO and effected by the Board, management and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS as issued by the IASB. CIBC's internal control over financial reporting includes those policies and procedures that: (i) pertain to the maintenance of records, that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of CIBC; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with IFRS as issued by the IASB, and that receipts and expenditures of CIBC are being made only in accordance with authorizations of CIBC's management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of CIBC's assets that could have a material effect on the consolidated financial statements.

All internal control systems, no matter how well designed, have inherent limitations and may not prevent or detect misstatements on a timely basis. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

CIBC's management has used the Internal Control – Integrated Framework that was published in 2013 by the COSO as the basis to evaluate the effectiveness of CIBC's internal control over financial reporting.

As at October 31, 2022, management assessed the effectiveness of CIBC's internal control over financial reporting and concluded that such internal control was effective.

Ernst & Young LLP, the shareholders' auditor, has audited the consolidated financial statements of CIBC for the year ended October 31, 2022, and has also issued a report on internal control over financial reporting under standards of the Public Company Accounting Oversight Board (United States).

Changes in internal control over financial reporting

There have been no changes in CIBC's internal control over financial reporting during the year ended October 31, 2022, that have materially affected, or are reasonably likely to materially affect, its internal control.

Supplementary annual financial information

Average balance sheet, net interest income and margin

		Average balance [1]			Interest			Average rate		
$ millions, for the year ended October 31		2022	2021	2020	2022	2021	2020	2022	2021	2020
Domestic assets [2]										
Cash and deposits with banks		$ 24,833	$ 37,527	$ 30,232	$ 384	$ 95	$ 150	1.55 %	0.25 %	0.50 %
Securities		88,483	82,262	76,063	2,072	1,567	1,776	2.34	1.90	2.33
Securities borrowed or purchased under resale agreements		29,606	27,203	26,498	509	154	290	1.72	0.57	1.09
Loans	Residential mortgages	256,600	230,606	208,811	6,722	5,141	5,581	2.62	2.23	2.67
	Personal [3]	41,687	39,939	40,690	2,075	1,624	1,949	4.98	4.07	4.79
	Credit card [3]	13,236	10,171	11,258	1,687	1,338	1,484	12.75	13.16	13.18
	Business and government	86,543	70,755	68,072	2,795	1,712	2,043	3.23	2.42	3.00
Total loans		398,066	351,471	328,831	13,279	9,815	11,057	3.34	2.79	3.36
Other interest-bearing assets		9,488	8,901	5,194	123	45	62	1.30	0.51	1.19
Derivative instruments		15,426	11,382	14,334	–	–	–	–	–	–
Customers' liability under acceptances		11,909	10,613	9,560	–	–	–	–	–	–
Other non-interest-bearing assets		25,385	21,371	19,641	–	–	–	–	–	–
Total domestic assets		603,196	550,730	510,353	16,367	11,676	13,335	2.71	2.12	2.61
Foreign assets [2]										
Cash and deposits with banks		34,703	30,270	20,050	324	36	99	0.93	0.12	0.49
Securities		88,234	72,870	62,014	1,350	574	792	1.53	0.79	1.28
Securities borrowed or purchased under resale agreements		49,196	51,157	42,199	666	165	552	1.35	0.32	1.31
Loans	Residential mortgages	4,941	4,501	4,429	187	157	176	3.78	3.49	3.97
	Personal [3]	1,347	1,192	1,156	65	55	62	4.83	4.61	5.36
	Credit card [3]	133	129	153	28	28	35	21.05	21.71	22.88
	Business and government	84,337	66,677	66,015	3,103	1,995	2,416	3.68	2.99	3.66
Total loans		90,758	72,499	71,753	3,383	2,235	2,689	3.73	3.08	3.75
Other interest-bearing assets		2,522	923	701	89	55	55	3.53	5.96	7.85
Derivative instruments		24,127	24,186	20,629	–	–	–	–	–	–
Customers' liability under acceptances		–	1	1	–	–	–	–	–	–
Other non-interest-bearing assets		7,477	6,985	7,792	–	–	–	–	–	–
Total foreign assets		297,017	258,891	225,139	5,812	3,065	4,187	1.96	1.18	1.86
Total assets		$ 900,213	$ 809,621	$ 735,492	$ 22,179	$ 14,741	$ 17,522	2.46 %	1.82 %	2.38 %
Domestic liabilities [2]										
Deposits	Personal	$ 204,075	$ 189,599	$ 172,913	$ 1,535	$ 734	$ 1,405	0.75 %	0.39 %	0.81 %
	Business and government	224,303	198,978	178,476	3,662	1,170	2,019	1.63	0.59	1.13
	Bank	1,513	2,220	2,105	9	3	13	0.59	0.14	0.62
	Secured borrowings	43,892	37,893	39,076	862	378	668	1.96	1.00	1.71
Total deposits		473,783	428,690	392,570	6,068	2,285	4,105	1.28	0.53	1.05
Derivative instruments		15,581	10,621	14,398	–	–	–	–	–	–
Acceptances		11,910	10,614	9,563	–	–	–	–	–	–
Obligations related to securities sold short		18,496	19,018	16,794	333	229	251	1.80	1.20	1.49
Obligations related to securities lent or sold under repurchase agreements		18,594	26,349	27,374	301	151	220	1.62	0.57	0.80
Other liabilities		23,979	20,432	6,464	86	36	49	0.36	0.18	0.76
Subordinated indebtedness		5,901	5,340	4,891	200	120	152	3.39	2.25	3.11
Total domestic liabilities		568,244	521,064	472,054	6,988	2,821	4,777	1.23	0.54	1.01
Foreign liabilities [2]										
Deposits	Personal	18,689	16,795	16,974	108	62	142	0.58	0.37	0.84
	Business and government	157,085	134,038	113,877	1,535	268	964	0.98	0.20	0.85
	Bank	20,842	16,848	13,891	121	20	100	0.58	0.12	0.72
	Secured borrowings	3,290	1,883	1,322	55	16	15	1.67	0.85	1.13
Total deposits		199,906	169,564	146,064	1,819	366	1,221	0.91	0.22	0.84
Derivative instruments		24,369	22,571	20,718	–	–	–	–	–	–
Acceptances		–	1	1	–	–	–	–	–	–
Obligations related to securities sold short		2,789	1,050	1,047	47	7	3	1.69	0.67	0.29
Obligations related to securities lent or sold under repurchase agreements		53,750	50,142	41,881	642	57	436	1.19	0.11	1.04
Other liabilities		3,013	2,395	13,706	39	29	34	1.29	1.21	0.25
Subordinated indebtedness		97	96	152	3	2	7	3.09	2.08	4.61
Total foreign liabilities		283,924	245,819	223,569	2,550	461	1,701	0.90	0.19	0.76
Total liabilities		852,168	766,883	695,623	9,538	3,282	6,478	1.12	0.43	0.93
Shareholders' equity		47,851	42,563	39,682	–	–	–	–	–	–
Non-controlling interests		194	175	187	–	–	–	–	–	–
Total liabilities and equity		$ 900,213	$ 809,621	$ 735,492	$ 9,538	$ 3,282	$ 6,478	1.06 %	0.41 %	0.88 %
Net interest income and net interest margin [4]					$ 12,641	$ 11,459	$ 11,044	1.40 %	1.42 %	1.50 %
Additional disclosures: Non-interest-bearing deposit liabilities										
Domestic		$ 92,579	$ 76,224	$ 59,862						
Foreign		25,950	22,396	18,430						

(1) Average balances are calculated as a weighted average of daily closing balances.
(2) Classification as domestic or foreign is based on domicile of debtor or customer.
(3) Certain prior year information has been revised to conform to current year presentation.
(4) Net interest income as a percentage of average assets.

Volume/rate analysis of changes in net interest income

$ millions		2022/2021			2021/2020		
		Increase (decrease) due to change in:			Increase (decrease) due to change in:		
		Average balance	Average rate	Total	Average balance	Average rate	Total
Domestic assets [1]							
Cash and deposits with banks		**$ (32)**	**$ 321**	**$ 289**	$ 36	$ (91)	$ (55)
Securities		**119**	**386**	**505**	145	(354)	(209)
Securities borrowed or purchased under resale agreements		**14**	**341**	**355**	8	(144)	(136)
Loans	Residential mortgages	**579**	**1,002**	**1,581**	583	(1,023)	(440)
	Personal [2]	**71**	**380**	**451**	(36)	(289)	(325)
	Credit card [2]	**403**	**(54)**	**349**	(143)	(3)	(146)
	Business and government	**382**	**701**	**1,083**	81	(412)	(331)
Total loans [2]		**1,435**	**2,029**	**3,464**	485	(1,727)	(1,242)
Other interest-bearing assets		**3**	**75**	**78**	44	(61)	(17)
Change in domestic interest income [2]		**1,539**	**3,152**	**4,691**	718	(2,377)	(1,659)
Foreign assets [1]							
Cash and deposits with banks		**5**	**283**	**288**	50	(113)	(63)
Securities		**121**	**655**	**776**	139	(357)	(218)
Securities borrowed or purchased under resale agreements		**(6)**	**507**	**501**	117	(504)	(387)
Loans	Residential mortgages	**15**	**15**	**30**	3	(22)	(19)
	Personal [2]	**7**	**3**	**10**	2	(9)	(7)
	Credit card [2]	**1**	**(1)**	**–**	(5)	(2)	(7)
	Business and government	**528**	**580**	**1,108**	24	(445)	(421)
Total loans [2]		**551**	**597**	**1,148**	24	(478)	(454)
Other interest-bearing assets		**95**	**(61)**	**34**	17	(17)	–
Change in foreign interest income [2]		**766**	**1,981**	**2,747**	347	(1,469)	(1,122)
Total change in interest income [2]		**$ 2,305**	**$ 5,133**	**$ 7,438**	$ 1,065	$ (3,846)	$ (2,781)
Domestic liabilities [1]							
Deposits	Personal	**$ 56**	**$ 745**	**$ 801**	$ 136	$ (807)	$ (671)
	Business and government	**149**	**2,343**	**2,492**	232	(1,081)	(849)
	Bank	**(1)**	**7**	**6**	1	(11)	(10)
	Secured borrowings	**60**	**424**	**484**	(20)	(270)	(290)
Total deposits		**264**	**3,519**	**3,783**	349	(2,169)	(1,820)
Obligations related to securities sold short		**(6)**	**110**	**104**	33	(55)	(22)
Obligations related to securities lent or sold under repurchase agreements		**(44)**	**194**	**150**	(8)	(61)	(69)
Other liabilities		**6**	**44**	**50**	106	(119)	(13)
Subordinated indebtedness		**13**	**67**	**80**	14	(46)	(32)
Change in domestic interest expense		**233**	**3,934**	**4,167**	494	(2,450)	(1,956)
Foreign liabilities [1]							
Deposits	Personal	**7**	**39**	**46**	(1)	(79)	(80)
	Business and government	**46**	**1,221**	**1,267**	171	(867)	(696)
	Bank	**5**	**96**	**101**	21	(101)	(80)
	Secured borrowings	**12**	**27**	**39**	6	(5)	1
Total deposits		**70**	**1,383**	**1,453**	197	(1,052)	(855)
Obligations related to securities sold short		**12**	**28**	**40**	–	4	4
Obligations related to securities lent or sold under repurchase agreements		**4**	**581**	**585**	86	(465)	(379)
Other liabilities		**7**	**3**	**10**	(28)	23	(5)
Subordinated indebtedness		**–**	**1**	**1**	(3)	(2)	(5)
Change in foreign interest expense		**93**	**1,996**	**2,089**	252	(1,492)	(1,240)
Total change in interest expense		**$ 326**	**$ 5,930**	**$ 6,256**	$ 746	$ (3,942)	$ (3,196)
Change in total net interest income		**$ 1,979**	**$ (797)**	**$ 1,182**	$ 319	$ 96	$ 415

(1) Classification as domestic or foreign is based on domicile of debtor or customer.
(2) Certain prior year information has been revised to conform to current year presentation.

Analysis of net loans and acceptances

	Canada[1]		U.S.[1]		Other[1]		Total	
$ millions, as at October 31	**2022**	2021	**2022**	2021	**2022**	2021	**2022**	2021
Residential mortgages	**$ 264,089**	$ 246,581	**$ 2,439**	$ 2,071	**$ 2,885**	$ 2,594	**$ 269,413**	$ 251,246
Personal	**43,210**	39,940	**626**	542	**691**	647	**44,527**	41,129
Credit card	**15,523**	10,362	**26**	22	**146**	125	**15,695**	10,509
Total net consumer loans	**322,822**	296,883	**3,091**	2,635	**3,722**	3,366	**329,635**	302,884
Non-residential mortgages	**5,827**	6,259	**–**	48	**250**	268	**6,077**	6,575
Financial institutions	**13,593**	11,407	**20,045**	13,705	**6,805**	3,896	**40,443**	29,008
Retail and wholesale	**9,304**	6,549	**3,156**	2,449	**650**	596	**13,110**	9,594
Business services	**9,932**	6,663	**6,188**	4,808	**2,077**	1,789	**18,197**	13,260
Manufacturing – capital goods	**3,012**	2,222	**2,746**	2,500	**39**	93	**5,797**	4,815
Manufacturing – consumer goods	**5,014**	3,430	**1,610**	1,283	**133**	91	**6,757**	4,804
Real estate and construction	**29,486**	25,151	**22,705**	18,138	**1,218**	1,264	**53,409**	44,553
Agriculture	**7,901**	7,242	**242**	129	**32**	36	**8,175**	7,407
Oil and gas	**2,391**	2,539	**1,214**	1,818	**55**	238	**3,660**	4,595
Mining	**993**	415	**167**	127	**554**	490	**1,714**	1,032
Forest products	**442**	283	**111**	165	**–**	–	**553**	448
Hardware and software	**940**	589	**3,056**	2,275	**412**	130	**4,408**	2,994
Telecommunications and cable	**1,066**	238	**1,348**	1,196	**141**	130	**2,555**	1,564
Publishing, printing, and broadcasting	**211**	343	**259**	71	**85**	95	**555**	509
Transportation	**2,673**	2,526	**2,176**	1,255	**2,406**	2,909	**7,255**	6,690
Utilities	**5,583**	4,397	**3,870**	3,654	**4,159**	3,519	**13,612**	11,570
Education, health and social services	**3,828**	3,664	**4,932**	3,927	**48**	23	**8,808**	7,614
Governments	**2,074**	1,666	**302**	229	**2,304**	1,736	**4,680**	3,631
Others	**–**	–	**–**	–	**–**	–	**–**	–
Stage 1 and 2 allowance for credit losses [2][3]	**(260)**	(245)	**(370)**	(282)	**(113)**	(141)	**(743)**	(668)
Total net business and government loans, including acceptances	**104,010**	85,338	**73,757**	57,495	**21,255**	17,162	**199,022**	159,995
Total net loans and acceptances	**$ 426,832**	$ 382,221	**$ 76,848**	$ 60,130	**$ 24,977**	$ 20,528	**$ 528,657**	$ 462,879

(1) Classification by country is primarily based on domicile of debtor or customer.
(2) Stage 3 allowance for credit losses is allocated to business and government loans, including acceptances, by category above.
(3) Includes the allocation of Stage 1 and 2 allowance based on the geographic location where they are recorded.

Summary of allowance for credit losses

$ millions, as at or for the year ended October 31	**2022**	2021
Balance at beginning of year	**$ 2,970**	$ 3,722
Provision for credit losses	**1,057**	158
Write-offs [1]		
Residential mortgages	**47**	27
Personal	**274**	266
Credit card	**397**	414
Business and government	**312**	279
Total write-offs	**1,030**	986
Recoveries [1]		
Residential mortgages	**2**	3
Personal	**69**	70
Credit card	**114**	119
Business and government	**33**	14
Total recoveries	**218**	206
Net write-offs	**812**	780
Interest income on impaired loans	**(35)**	(41)
Foreign exchange and other	**96**	(89)
Balance at end of year	**$ 3,276**	$ 2,970
Comprises:		
Loans	**$ 3,073**	$ 2,849
Undrawn credit facilities and other off-balance sheet exposures	**203**	121
Ratio of net write-offs during the year to average loans outstanding during the year [1]		
Residential mortgages	**0.02 %**	0.01 %
Personal	**0.48**	0.48
Credit card	**2.12**	2.86
Business and government	**0.16**	0.19

(1) Certain prior year information has been revised to conform to current year presentation.

Net loans and acceptances by geographic location [1]

$ millions, as at October 31	2022	2021
Canada		
Atlantic provinces	**$ 16,108**	$ 14,898
Quebec	**41,703**	35,092
Ontario	**229,250**	202,789
Prairie provinces	**16,580**	15,092
Alberta, Northwest Territories and Nunavut	**49,666**	46,816
British Columbia and Yukon	**75,385**	69,110
Stage 1 and 2 allowance allocated to Canada [2][3]	**(1,860)**	(1,576)
Total Canada	**426,832**	382,221
U.S. [2][3]	**76,848**	60,130
Other countries [2][3]	**24,977**	20,528
Total net loans and acceptances	**$ 528,657**	$ 462,879

(1) Classification by country is primarily based on domicile of debtor or customer.
(2) Includes the allocation of Stage 1 and 2 allowance based on the geographic location where they are recorded.
(3) For Canada, Stage 3 allowance for credit losses is allocated to provinces above, including acceptances. For U.S. and Other countries, amounts are net of Stage 3 allowances for credit losses.

Loans interest rate sensitivity

$ millions, as at October 31	2022				2021			
	Floating	**Fixed rate [1]**	**Non-rate sensitive**	**Total**	Floating	Fixed rate [1]	Non-rate sensitive	Total
Loans								
Residential mortgages	**$ 104,379**	**$ 165,327**	**$ –**	**$ 269,706**	$ 72,507	$ 179,019	$ –	$ 251,526
Personal	**37,023**	**8,406**	**–**	**45,429**	35,626	6,271	–	41,897
Credit card	**–**	**–**	**16,479**	**16,479**	–	–	11,134	11,134
Business and government	**137,478**	**50,842**	**222**	**188,542**	104,724	45,336	153	150,213
Gross loans	**278,880**	**224,575**	**16,701**	**520,156**	212,857	230,626	11,287	454,770
Allowance for credit losses				**(3,073)**				(2,849)
				$ 517,083				$ 451,921

(1) Bankers' acceptances are included as part of fixed rate loans.

Net impaired loans

	Canada [1]		U.S. [1]		Other [1]		Total	
$ millions, as at October 31	**2022**	2021	**2022**	2021	**2022**	2021	**2022**	2021
Gross impaired loans								
Residential mortgages	**$ 355**	$ 425	**$ 19**	$ 18	**$ 222**	$ 195	**$ 596**	$ 638
Personal	**155**	104	**18**	3	**54**	55	**227**	162
Total gross impaired consumer loans	**510**	529	**37**	21	**276**	250	**823**	800
Non-residential mortgages	**1**	2	**–**	–	**23**	11	**24**	13
Financial institutions	**11**	4	**30**	70	**–**	1	**41**	75
Retail, wholesale and business services	**187**	192	**55**	55	**51**	53	**293**	300
Manufacturing – consumer and capital goods	**26**	24	**67**	51	**3**	16	**96**	91
Real estate and construction	**63**	16	**131**	239	**41**	42	**235**	297
Agriculture	**11**	10	**–**	–	**–**	–	**11**	10
Resource-based industries	**12**	50	**23**	7	**–**	–	**35**	57
Telecommunications, media and technology	**6**	4	**15**	6	**–**	–	**21**	10
Transportation	**4**	6	**–**	–	**1**	2	**5**	8
Utilities	**28**	93	**–**	–	**–**	–	**28**	93
Other	**129**	71	**2**	8	**–**	–	**131**	79
Total gross impaired – business and government loans	**478**	472	**323**	436	**119**	125	**920**	1,033
Total gross impaired loans	**988**	1,001	**360**	457	**395**	375	**1,743**	1,833
Other past due loans [2]	**122**	64	**–**	–	**3**	2	**125**	66
Total gross impaired and other past due loans	**1,110**	1,065	**360**	457	**398**	377	**1,868**	1,899
Allowance for credit losses								
Residential mortgages	**48**	54	**5**	5	**114**	99	**167**	158
Personal	**101**	64	**6**	2	**39**	40	**146**	106
Total allowance – consumer loans	**149**	118	**11**	7	**153**	139	**313**	264
Non-residential mortgages	**–**	–	**–**	–	**8**	2	**8**	2
Financial institutions	**1**	1	**–**	15	**–**	1	**1**	17
Retail, wholesale and business services	**161**	177	**17**	19	**34**	33	**212**	229
Manufacturing – consumer and capital goods	**9**	9	**–**	3	**1**	4	**10**	16
Real estate and construction	**10**	8	**8**	62	**18**	22	**36**	92
Agriculture	**7**	7	**–**	–	**–**	–	**7**	7
Resource-based industries	**9**	33	**10**	1	**–**	–	**19**	34
Telecommunications, media and technology	**4**	3	**3**	1	**–**	–	**7**	4
Transportation	**2**	3	**–**	–	**1**	1	**3**	4
Utilities	**9**	79	**–**	–	**–**	–	**9**	79
Other	**39**	24	**–**	–	**–**	–	**39**	24
Total allowance – business and government loans	**251**	344	**38**	101	**62**	63	**351**	508
Total allowance	**400**	462	**49**	108	**215**	202	**664**	772
Net impaired loans								
Residential mortgages	**307**	371	**14**	13	**108**	96	**429**	480
Personal	**54**	40	**12**	1	**15**	15	**81**	56
Total net impaired consumer loans	**361**	411	**26**	14	**123**	111	**510**	536
Non-residential mortgages	**1**	2	**–**	–	**15**	9	**16**	11
Financial institutions	**10**	3	**30**	55	**–**	–	**40**	58
Retail, wholesale and business services	**26**	15	**38**	36	**17**	20	**81**	71
Manufacturing – consumer and capital goods	**17**	15	**67**	48	**2**	12	**86**	75
Real estate and construction	**53**	8	**123**	177	**23**	20	**199**	205
Agriculture	**4**	3	**–**	–	**–**	–	**4**	3
Resource-based industries	**3**	17	**13**	6	**–**	–	**16**	23
Telecommunications, media and technology	**2**	1	**12**	5	**–**	–	**14**	6
Transportation	**2**	3	**–**	–	**–**	1	**2**	4
Utilities	**19**	14	**–**	–	**–**	–	**19**	14
Other	**90**	47	**2**	8	**–**	–	**92**	55
Total net impaired – business and government loans	**227**	128	**285**	335	**57**	62	**569**	525
Total net impaired loans	**$ 588**	$ 539	**$ 311**	$ 349	**$ 180**	$ 173	**$ 1,079**	$ 1,061

(1) Classification by country is primarily based on domicile of debtor or customer.
(2) Represents loans where repayment of principal or payment of interest is contractually in arrears between 90 and 180 days.

Deposits

$ millions, for the year ended October 31	Average balance [1] 2022	Average balance [1] 2021	Interest 2022	Interest 2021	Rate 2022	Rate 2021
Deposits in domestic bank offices [2]						
Payable on demand						
Personal	**$ 14,123**	$ 12,820	**$ 5**	$ 5	**0.04 %**	0.04 %
Business and government	**77,567**	67,233	**731**	164	**0.94**	0.24
Bank	**11,076**	8,881	**2**	–	**0.02**	–
Payable after notice						
Personal	**135,937**	130,636	**490**	194	**0.36**	0.15
Business and government	**68,671**	64,661	**1,115**	390	**1.62**	0.60
Bank	**129**	351	**2**	2	**1.55**	0.57
Payable on a fixed date						
Personal	**58,700**	50,479	**1,075**	552	**1.83**	1.09
Business and government	**116,811**	105,251	**2,190**	684	**1.87**	0.65
Bank	**2,362**	2,167	**20**	2	**0.85**	0.09
Secured borrowings	**43,892**	37,893	**862**	378	**1.96**	1.00
Total domestic	**529,268**	480,372	**6,492**	2,371	**1.23**	0.49
Deposits in foreign bank offices						
Payable on demand						
Personal	**2,650**	2,213	**2**	1	**0.08**	0.05
Business and government	**28,621**	24,156	**69**	8	**0.24**	0.03
Bank	**14**	37	**1**	1	**4.29**	2.70
Payable after notice						
Personal	**9,333**	8,305	**57**	33	**0.61**	0.40
Business and government	**18,834**	16,623	**153**	26	**0.81**	0.16
Payable on a fixed date						
Personal	**2,021**	1,941	**14**	11	**0.69**	0.57
Business and government	**70,884**	55,092	**939**	166	**1.32**	0.30
Bank	**8,774**	7,632	**105**	18	**1.20**	0.24
Secured borrowings	**3,290**	1,883	**55**	16	**1.67**	0.85
Total foreign	**144,421**	117,882	**1,395**	280	**0.97**	0.24
Total deposits	**$ 673,689**	$ 598,254	**$ 7,887**	$ 2,651	**1.17 %**	0.44 %

(1) Average balances are calculated as a weighted average of daily closing balances.
(2) Deposits by foreign depositors in our domestic bank offices amounted to $55.8 billion (2021: $51.9 billion).

Fees paid to the shareholders' auditor

$ millions, for the year ended October 31	2022	2021
Audit fees [1]	**$ 24.6**	$ 23.1
Audit-related fees [2]	**2.2**	2.3
Tax fees [3]	**1.9**	1.3
All other fees [4]	**–**	–
Total	**$ 28.7**	$ 26.7

(1) For the audit of CIBC's annual financial statements and the audit of certain of our subsidiaries, as well as other services normally provided by the principal auditor in connection with CIBC's statutory and regulatory filings. Audit fees also include the audit of internal control over financial reporting under the standards of the Public Company Accounting Oversight Board (United States).
(2) For the assurance and related services that are reasonably related to the performance of the audit or review of CIBC's consolidated financial statements, including accounting consultation, various agreed upon procedures and translation of financial reports.
(3) For tax compliance and advisory services.
(4) Includes fees for non-audit services.

Glossary

Allowance for credit losses
Under International Financial Reporting Standard (IFRS) 9, allowance for credit losses represents 12 months of expected credit losses (ECL) for instruments that have not been subject to a significant increase in credit risk since initial recognition, while allowance for credit losses represents lifetime ECL for instruments that have been subject to a significant increase in credit risk, including impaired instruments. ECL allowances for loans and acceptances are included in Allowance for credit losses on the consolidated balance sheet. ECL allowances for fair value through other comprehensive income (FVOCI) debt securities are included as a component of the carrying value of the securities, which are measured at fair value. ECL allowances for other financial assets are included in the carrying value of the instrument. ECL allowances for guarantees and loan commitments are included in Other liabilities.
Allowance for credit losses are adjusted for provisions for (reversals of) credit losses and are reduced by write-offs, net of recoveries.

Amortized cost
The amount at which a financial asset or financial liability is measured at initial recognition minus repayments, plus or minus any unamortized origination date premiums or discounts, plus or minus any basis adjustments resulting from a fair value hedge, and minus any reduction for impairment (directly or through the use of an allowance account). The amount of a financial asset or liability measured at initial recognition is the cost of the financial asset or liability including capitalized transaction costs and deferred fees.

Assets under administration (AUA)
Assets administered by CIBC that are beneficially owned by clients and are, therefore, not reported on the consolidated balance sheet. The services provided by CIBC are of an administrative nature, such as safekeeping of securities, client reporting and record keeping, collection of investment income, and the settlement of purchase and sale transactions. In addition, assets under management (AUM) amounts are included in the amounts reported under AUA.

Assets under management (AUM)
Assets managed by CIBC that are beneficially owned by clients and are, therefore, not reported on the consolidated balance sheet. The service provided in respect of these assets is discretionary portfolio management on behalf of the clients.

Average interest-earning assets
Average interest-earning assets include interest-bearing deposits with banks, interest-bearing demand deposits with the Bank of Canada, securities, cash collateral on securities borrowed or securities purchased under resale agreements, loans net of allowance for credit losses, and certain sublease-related assets.

Basis point
One-hundredth of a percentage point (0.01%).

Collateral
Assets pledged to secure loans or other obligations, which are forfeited if the obligations are not repaid.

Collateralized debt obligation (CDO)
Securitization of any combination of corporate debt, asset-backed securities (ABS), mortgage-backed securities or tranches of other CDOs to form a pool of diverse assets that are tranched into securities that offer varying degrees of risk and return to meet investor demand.

Collateralized loan obligation (CLO)
Securitizations of diversified portfolios of corporate debt obligations and/or ABS that are tranched into securities that offer varying degrees of risk and return to meet investor demand.

Common shareholders' equity
Common shareholders' equity includes common shares, contributed surplus, retained earnings and accumulated other comprehensive income (AOCI).

Credit derivatives
A category of financial instruments that allow one party (the beneficiary) to separate and transfer the credit risk of nonpayment or partial payment of an underlying financial instrument to another party (the guarantor).

Credit valuation adjustment (CVA)
A valuation adjustment that is required to be considered in measuring fair value of over-the-counter (OTC) derivatives to recognize the risk that any given derivative counterparty may not ultimately be able to fulfill its obligations. In assessing the net counterparty credit risk (CCR) exposure, we take into account credit mitigants such as collateral, master netting arrangements, and settlements through clearing houses.

Current replacement cost
The estimated cost of replacing an asset at the present time according to its current worth.

Derivatives
A financial contract that derives its value from the performance of an underlying instrument, index or financial rate.

Dividend payout ratio
Common share dividends paid as a percentage of net income after preferred share dividends, premium on preferred share redemptions, and distributions on other equity instruments.

Dividend yield
Dividends per common share divided by the closing common share price.

Effective interest rate method
A method of calculating the amortized cost of a financial asset or financial liability and of allocating the interest income or interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument or, when appropriate, a shorter period, to the net carrying amount of the financial asset or financial liability.

Efficiency ratio
Non-interest expenses as a percentage of total revenue (net interest income and non-interest income).

Exchange-traded derivative contracts
Standardized derivative contracts (e.g., futures contracts and options) that are transacted on an organized exchange and cleared through a central clearing house, and are generally subject to standard margin requirements.

Fair value
The price that would be received to sell an asset, or paid to transfer a liability, between market participants in an orderly transaction in the principal market at the measurement date under current market conditions.

Forward contracts
A non-standardized contract to buy or sell a specified asset at a specified price and specified date in the future.

Forward rate agreement
An OTC forward contract that determines an interest rate to be paid or received commencing on a specified date in the future for a specified period.

Full-time equivalent employees
A measure that normalizes the number of full-time and part-time employees, base salary plus commissioned employees, and 100% commissioned employees into equivalent full-time units based on actual hours of paid work during a given period, for individuals whose compensation is included in the Employee compensation and benefits line on the consolidated statement of income.

Futures
A standardized contract to buy or sell a specified commodity, currency or financial instrument of standardized quantity and quality at a specific price and date in the future. Futures contracts are traded on an exchange.

Guarantees and standby letters of credit
Primarily represent CIBC's obligation, subject to certain conditions, to make payments to third parties on behalf of clients, if these clients cannot make those payments, or are unable to meet other specified contractual obligations.

Hedge
A transaction intended to offset potential losses/gains that may be incurred in a transaction or portfolio.

Loan loss ratio
The ratio is calculated as the provision for credit losses on impaired loans to average loans and acceptances, net of allowance for credit losses.

Mark-to-market
The fair value (as defined above) at which an asset can be sold or a liability can be transferred.

Net interest income
The difference between interest earned on assets (such as loans and securities) and interest incurred on liabilities (such as deposits and subordinated indebtedness).

Net interest margin
Net interest income as a percentage of average assets.

Net interest margin on average interest-earning assets
Net interest income as a percentage of average interest-earning assets.

Normal course issuer bid (NCIB)
Involves a listed company buying its own shares for cancellation through a stock exchange or other published market, from time to time, and is subject to the various rules of the exchanges and securities commissions.

Notional amount
Principal amount or face amount of a financial contract used for the calculation of payments made on that contract.

Off-balance sheet financial instruments
A financial contract that is based mainly on a notional amount and represents a contingent asset or liability of an institution. Such instruments include credit-related arrangements.

Office of the Superintendent of Financial Institutions (OSFI)
OSFI supervises and regulates all banks, all federally incorporated or registered trust and loan companies, insurance companies, cooperative credit associations, fraternal benefit societies, and federal pension plans in Canada.

Operating leverage
Operating leverage is the difference between the year-over-year percentage change in revenue and year-over-year percentage change in non-interest expenses.

Options
A financial contract under which the writer (seller) confers the right, but not the obligation, to the purchaser to either buy (call option) or sell (put option) a specified amount of an underlying asset or instrument at a specified price either at or by a specified date.

Provision for (reversal of) credit losses
An amount charged or credited to income to adjust the allowance for credit losses to the appropriate level, for both performing and impaired financial assets. Provision for (reversal of) credit losses for loans and acceptances and related off-balance sheet loan commitments is included in the Provision for (reversal of) credit losses line on the consolidated statement of income. Provision for (reversal of) credit losses for debt securities measured at FVOCI or amortized cost is included in Gains (losses) from debt securities measured at FVOCI and amortized cost, net.

Return on average assets or average interest-earning assets
Net income expressed as a percentage of average assets or average interest-earning assets.

Return on common shareholders' equity
Net income attributable to equity shareholders expressed as a percentage of average common shareholders' equity.

Securities borrowed
Securities are typically borrowed to cover short positions. Borrowing requires the pledging of collateral by the borrower to the lender. The collateral may be cash or a highly rated security.

Securities lent
Securities are typically lent to a borrower to cover their short positions. Borrowing requires the pledging of collateral by the borrower to the lender. The collateral provided may be cash or a highly rated security.

Securities purchased under resale agreements
A transaction where a security is purchased by the buyer and, at the same time, the buyer commits to resell the security to the original seller at a specific price and date in the future.

Securities sold short
A transaction in which the seller sells securities that it does not own. Initially the seller typically borrows the securities in order to deliver them to the purchaser. At a later date, the seller buys identical securities in the market to replace the borrowed securities.

Securities sold under repurchase agreements
A transaction where a security is sold by the seller and, at the same time, the seller commits to repurchase the security from the original purchaser at a specific price and date in the future.

Structured entities (SEs)
Entities that have been designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, such as when any voting rights relate to administrative tasks only and the relevant activities are directed by means of contractual arrangements.

Swap contracts
A financial contract in which counterparties exchange a series of cash flows based on a specified notional amount over a specified period.

Taxable equivalent basis (TEB)
The gross-up of tax-exempt revenue on certain securities to a TEB. There is an equivalent offsetting adjustment to the income tax expense.

Total shareholder return
The total return earned on an investment in CIBC's common shares. The return measures the change in shareholder value, assuming dividends paid are reinvested in additional shares.

Risk and capital glossary

Advanced internal ratings-based (AIRB) approach for credit risk
Internal models based on historical experience of key risk assumptions such as probability of default (PD), loss given default (LGD) and exposure at default (EAD) are used to compute the capital requirements subject to OSFI approval. A capital floor based on the standardized approach is also calculated by banks under the AIRB approach for credit risk and an adjustment to risk-weighted assets (RWA) may be required as prescribed by OSFI.

Asset/liability management (ALM)
The practice of managing risks that arise from mismatches between the assets and liabilities, mainly in the non-trading areas of the bank. Techniques are used to manage the relative duration of CIBC's assets (such as loans) and liabilities (such as deposits), in order to minimize the adverse impact of changes in interest rates.

Bail-in eligible liabilities
Bail-in eligible liabilities include long-term (i.e., original maturity over 400 days), unsecured senior debt issued on or after September 23, 2018 that is tradable and transferrable, and any preferred shares and subordinated debt that are not considered non-viability contingent capital (NVCC). Consumer deposits, secured liabilities (including covered bonds), certain financial contracts (including derivatives) and certain structured notes are not bail-in eligible.

Bank exposures
All direct credit risk exposures to deposit-taking institutions and regulated securities firms, and exposures guaranteed by those entities.

Business and government portfolio
A category of exposures that includes lending to businesses and governments, where the primary basis of adjudication relies on the determination and assignment of an appropriate risk rating that reflects the credit risk of the exposure.

Central counterparty (CCP)
A clearing house that interposes itself between counterparties to clear contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer and thereby ensuring the future performance of open contracts.

Comprehensive approach for securities financing transactions
A framework for the measurement of CCR with respect to securities financing transactions, which utilizes a volatility-adjusted collateral value to reduce the amount of the exposure.

Common Equity Tier 1 (CET1), Tier 1 and Total capital ratios
CET1, Tier 1 and total regulatory capital, divided by RWA, as defined by OSFI's Capital Adequacy Requirements (CAR) Guideline, which is based on Basel Committee on Banking Supervision (BCBS) standards.

Corporate exposures
All direct credit risk exposures to corporations, partnerships and proprietorships, and exposures guaranteed by those entities.

Credit risk
The risk of financial loss due to a borrower or counterparty failing to meet its obligations in accordance with contractual terms.

Drawn exposure
The amount of credit risk exposure resulting from loans and other receivables advanced to the customer.

Economic capital
Economic capital provides a framework to evaluate the returns of each strategic business unit, commensurate with risk assumed. Economic capital is a non-GAAP risk measure based upon an internal estimate of equity capital required by the businesses to absorb unexpected losses consistent with our targeted risk rating over a one-year horizon. Economic capital comprises primarily credit, market, operational and strategic risk capital.

Economic profit
A non-GAAP risk-adjusted performance measure used for measuring economic value added. It is calculated as earnings of each business less a charge for the cost of capital.

Exposure at default (EAD)
An estimate of the amount of exposure to a customer at the event of, and at the time of, default.

Incremental risk charge (IRC)
A capital charge applied in addition to market risk capital specifically to cover default and migration risk in unsecuritized credit assets of varying liquidity held in the trading book.

Internal Capital Adequacy Assessment Process (ICAAP)
A framework and process designed to provide a comprehensive view on capital adequacy, as defined by Pillar II of the Basel Accord, wherein we identify and measure our risks on an ongoing basis in order to ensure that the capital available is sufficient to cover all risks across CIBC.

Internal models approach (IMA) for market risk
Models, which have been developed by CIBC and approved by OSFI, for the measurement of risk and regulatory capital in the trading portfolio for general market risk, debt specific risk, and equity specific risk.

Internal model method (IMM) for counterparty credit risk
Models, which have been developed by CIBC and approved by OSFI, for the measurement of CCR with respect to OTC derivatives.

Internal ratings-based (IRB) approach for securitization exposures
This approach comprises two calculation methods available for securitization exposures that require OSFI approval: the Internal Ratings-Based Approach (SEC-IRBA) is available to the banks approved to use the IRB approach for underlying exposures securitized and the Internal Assessment Approach (SEC-IAA) available for certain securitization exposures extended to asset-backed commercial paper (ABCP) programs.

Leverage ratio exposure
The leverage ratio exposure is defined under the OSFI rules as on-balance sheet assets (unweighted) less Tier 1 capital regulatory adjustments plus derivative exposures, securities financing transaction exposures with a limited form of netting under certain conditions, and other off-balance sheet exposures (such as commitments, direct credit substitutes, forward asset purchases, standby/trade letters of credit and securitization exposures).

Leverage ratio
Defined as Tier 1 capital divided by the leverage ratio exposure determined in accordance with guidelines issued by OSFI, which are based on BCBS standards.

Liquidity coverage ratio (LCR)
Derived from the BCBS's Basel III framework and incorporated into OSFI's Liquidity Adequacy Requirements (LAR) Guideline, the LCR is a liquidity standard that aims to ensure that an institution has an adequate stock of unencumbered high-quality liquid assets (HQLA) that consists of cash or assets that can be converted into cash at little or no loss of value in private markets, to meet its liquidity needs for a 30-calendar-day liquidity stress scenario.

Liquidity risk
The risk of having insufficient cash or its equivalent in a timely and cost-effective manner to meet financial obligations as they come due.

Loss given default (LGD)
An estimate of the amount of exposure to a customer that will not be recovered following a default by that customer, expressed as a percentage of the EAD. LGD is generally based on through-the-cycle assumptions for regulatory capital purposes, and generally based on point-in-time assumptions reflecting forward-looking information for IFRS 9 ECL purposes.

Market risk
The risk of economic and/or financial loss in our trading and non-trading portfolios from adverse changes in underlying market factors, including interest rates, foreign exchange rates, equity market prices, commodity prices, credit spreads and customer behaviour for retail products.

Master netting agreement
An industry standard agreement designed to reduce the credit risk of multiple transactions with a counterparty through the creation of a legal right of offset of exposures in the event of a default by that counterparty and through the provision for net settlement of all contracts through a single payment.

Net cumulative cash flow (NCCF)
The NCCF is a liquidity horizon metric defined under OSFI's LAR Guideline as a monitoring and supervision tool for liquidity risk that measures an institution's detailed cash flows in order to capture the risk posed by funding mismatches between assets and liabilities.

Net stable funding ratio (NSFR)
Derived from the BCBS's Basel III framework and incorporated into OSFI's LAR Guideline, the NSFR standard aims to promote long-term resilience of the financial sector by requiring banks to maintain a sustainable stable funding profile in relation to the composition of their assets and off-balance sheet activities.

Non-viability contingent capital (NVCC)
Effective January 1, 2013, in order to qualify for inclusion in regulatory capital, all non-common Tier 1 and Tier 2 capital instruments must be capable of absorbing losses at the point of non-viability of a financial institution. This will ensure that investors in such instruments bear losses before taxpayers where the government determines that it is in the public interest to rescue a non-viable bank.

Operational risk
The risk of loss resulting from people, inadequate or failed internal processes and systems, or from external events.

Other off-balance sheet exposure
The amount of credit risk exposure resulting from the issuance of guarantees and letters of credit.

Other retail
This exposure class includes all loans other than qualifying revolving retail and real estate secured personal lending that are extended to individuals and small businesses under the regulatory capital reporting framework.

Over-the-counter (OTC) derivatives exposure
The amount of credit risk exposure resulting from derivatives that trade directly between two counterparties, rather than through exchanges.

Probability of default (PD)
An estimate of the likelihood of default for any particular customer which occurs when that customer is not able to repay its obligations as they become contractually due. PD is based on through-the-cycle assumptions for regulatory capital purposes, and based on point-in-time assumptions reflecting forward-looking information for IFRS 9 ECL purposes.

Qualifying central counterparty (QCCP)
An entity that is licensed to operate as a CCP and is permitted by the appropriate regulator or oversight body to operate as such with respect to the products offered by that CCP.

Qualifying revolving retail
This exposure class includes credit cards, unsecured lines of credit and overdraft protection products extended to individuals. Under the standardized approach, these exposures would be included under "other retail".

Real estate secured personal lending
This exposure class includes residential mortgages and home equity loans and lines of credit extended to individuals.

Regulatory capital
Regulatory capital, as defined by OSFI's CAR Guideline, is comprised of CET1, Additional Tier 1 (AT1) and Tier 2 capital. CET1 capital includes common shares, retained earnings, AOCI (excluding AOCI relating to cash flow hedges and changes in fair value option liabilities attributable to changes in own credit risk) and qualifying instruments issued by a consolidated banking subsidiary to third parties, less regulatory adjustments for items such as goodwill and other intangible assets, certain deferred tax assets, net assets related to defined benefit pension plans, and certain investments. On March 27, 2020, OSFI introduced transitional arrangements for the capital treatment of expected loss provisioning, such that part of the allowances that would otherwise be included in Tier 2 capital will instead qualify for inclusion in CET1 capital subject to certain scalars and limitations until the end of fiscal year 2022. AT1 capital primarily includes NVCC preferred shares, Limited Recourse Capital Notes, and qualifying instruments issued by a consolidated subsidiary to third parties. Tier 1 capital is comprised of CET1 plus AT1. Tier 2 capital includes NVCC subordinated indebtedness, eligible general allowances, and qualifying instruments issued by a consolidated subsidiary to third parties. Total capital is comprised of Tier 1 capital plus Tier 2 capital. Qualifying regulatory capital instruments must be capable of absorbing loss at the point of non-viability of the financial institution.

Repo-style transactions exposure
The amount of credit risk exposure resulting from our securities bought or sold under resale agreements, as well as securities borrowing and lending activities.

Reputation risk
The risk of negative publicity regarding CIBC's business conduct or practices which, whether true or not, could significantly harm CIBC's reputation as a leading financial institution, or could materially and adversely affect CIBC's business, operations, or financial condition.

Resecuritization
A securitization exposure in which the risk associated with an underlying pool of exposures is tranched and at least one of the underlying exposures is a securitization exposure.

Retail portfolios
A category of exposures that primarily includes consumer but also small business lending, where the primary basis of adjudication relies on credit-scoring models.

Risk-weighted assets (RWA)
RWA consist of three components: (i) RWA for credit risk, which are calculated using the AIRB and standardized approaches, (ii) RWA for market risk, and (iii) RWA for operational risk. The AIRB RWA are calculated using PDs, LGDs, EADs, and in some cases maturity adjustments, while the standardized approach applies risk weighting factors specified in the OSFI guidelines to on- and off-balance sheet exposures. The RWA for market risk in the trading portfolio are based on the internal models approved by OSFI with the exception of the RWA for traded securitization assets where we are using the methodology defined by OSFI. The RWA for operational risk, which relate to the risk of losses resulting from people, inadequate or failed internal processes, and systems or from external events, are calculated under a standardized approach.

Since the introduction of Basel II in 2008, OSFI has prescribed a capital floor requirement for institutions that use the AIRB approach for credit risk. The capital floor is determined by comparing a capital requirement calculated by reference to the Basel II standardized approach against the Basel III calculation, as specified by OSFI. Any shortfall in the Basel III capital requirement is added to RWA.

Securitization
The process of selling assets (normally financial assets such as loans, leases, trade receivables, credit card receivables or mortgages) to trusts or other SEs. A SE normally issues securities or other forms of interests to investors and/or the asset transferor, and the SE uses the proceeds from the issue of securities or other forms of interest to purchase the transferred assets. The SE will generally use the cash flows generated by the assets to meet the obligations under the securities or other interests issued by the SE, which may carry a number of different risk profiles.

Sovereign exposures
All direct credit risk exposures to governments, central banks and certain public sector entities, and exposures guaranteed by those entities.

Standardized approach for credit risk
Applied to exposures when there is not sufficient information to allow for the use of the AIRB approach for credit risk. Credit risk capital requirements are calculated based on a standardized set of risk weights as prescribed in the CAR Guideline. The standardized risk weights are based on external credit assessments, where available, and other risk-related factors, including export credit agencies, exposure asset class, collateral, etc.

Standardized approach for operational risk
Capital is based on prescribed percentages that vary by business activity and is applied to the three-year average gross income.

Standardized approach for securitization exposures
This approach comprises the calculation methods available for securitization exposures that do not require OSFI approval: the External Ratings-Based Approach (SEC-ERBA) and the Standardized Approach (SEC-SA).

Strategic risk
The risk of ineffective or improper implementation of business strategies, including mergers and acquisitions. It includes the potential financial loss and impact to resiliency due to the failure of organic growth initiatives or failure to respond appropriately to changes in the business or industry environments.

Stressed Value-at-Risk (VaR)
A VaR calculation using a one-year observation period related to significant losses for the given portfolio at a specified level of confidence and time horizon.

Structural foreign exchange risk
Structural foreign exchange risk is the risk primarily inherent in net investments in foreign operations due to changes in foreign exchange rates, and foreign currency denominated RWA and foreign currency denominated capital deductions.

Structural interest rate risk
Structural interest rate risk primarily consists of the risk arising due to mismatches in assets and liabilities, which do not arise from trading and trading-related businesses.

Total loss absorbing capacity (TLAC) measure
The sum of Total capital and bail-in eligible liabilities (as defined above) that have a residual maturity greater than one year.

Total loss absorbing capacity ratio
Defined as TLAC measure divided by RWA determined in accordance with guidelines issued by OSFI.

Total loss absorbing capacity leverage ratio
Defined as TLAC measure divided by leverage ratio exposure determined in accordance with guidelines issued by OSFI.

Transitional arrangements for capital treatment of expected loss provisioning
On March 27, 2020, OSFI introduced transitional arrangements for ECL provisioning. These arrangements result in a portion of allowances that would otherwise be included in Tier 2 capital qualifying for inclusion in CET1 capital. The amount of ECL allowances eligible for inclusion in CET1 capital is determined based on the increase in stage 1 and stage 2 allowances relative to balances as at January 31, 2020 as a baseline. This amount is then adjusted for tax effects and is subject to a scaling factor that will decrease over time. The scaling factor has been set at 70% for fiscal 2020, 50% for fiscal 2021, and 25% for fiscal 2022. For exposures under the IRB approach, the lower of this amount and excess allowances eligible for inclusion in Tier 2 capital is included as CET1 capital under the transitional arrangements.

Undrawn exposures
The amount of credit risk exposure resulting from loans that have not been advanced to a customer, but which a customer may be entitled to draw in the future.

Value-at-Risk (VaR)
Generally accepted risk measure that uses statistical models to estimate the distribution of possible returns on a given portfolio at a specified level of confidence and time horizon.

Exhibit B.3(d): Other Pages of CIBC's 2022 Annual Report incorporated in Annual Information Form

- **"Transfer Agent and Registrar" pages 199-200**
- **"Directors and Board Committees" page 201**

Shareholder information

Fiscal Year
November 1st to October 31st

Key Dates

Reporting dates 2023
First quarter results – Friday, February 24, 2023
Second quarter results – Thursday, May 25, 2023
Third quarter results – Thursday, August 31, 2023
Fourth quarter results – Thursday, November 30, 2023

Annual Meeting of Shareholders 2023
CIBC's Annual Meeting of Shareholders will be held on April 4, 2023. For more details, please visit our Annual Meeting webpage at https://www.cibc.com/en/about-cibc/investor-relations/annual-meeting.html.

Common shares of CIBC (CM) are listed on the Toronto Stock Exchange and the New York Stock Exchange. Preferred shares are listed on the Toronto Stock Exchange.

Dividends
Quarterly dividends were paid on CIBC common and preferred shares in 2022:

Common shares(1)

Record date	Payment date	Dividends per share	Number of common shares on record date
Sep 28/22	Oct 28/22	$0.830	905,122,577
Jun 28/22	Jul 28/22	$0.830	903,857,263
Mar 28/22	Apr 28/22	$0.805	902,498,850
Dec 29/21	Jan 28/22	$0.805	901,626,696

Preferred shares

Stock	Series 39	Series 41	Series 43	Series 47	Series 49	Series 51	Series 56
Ticker symbol	CM.PR.O	CM.PR.P	CM.PR.Q	CM.PR.S	CM.PR.T	CM.PR.Y	n/a
Quarterly dividend	$0.232063	$0.244313	$0.196438	$0.281250	$0.325000	$0.321875	n/a
Semi-annual dividend	n/a	n/a	n/a	n/a	n/a	n/a	$36.825000

(1) On April 7, 2022, CIBC shareholders approved a two-for-one share split (Share Split) of CIBC's issued and outstanding common shares. Each shareholder of record at the close of business on May 6, 2022 (Record Date) received one additional share on May 13, 2022 (Payment Date) for every one share held on the Record Date. All common share numbers and per common share amounts have been adjusted to reflect the Share Split as if it was retroactively applied to all periods presented.

2023 dividend payment dates
(Subject to approval by the CIBC Board of Directors)

Record dates	Payment dates
December 28, 2022	January 27, 2023
March 28, 2023	April 28, 2023
June 28, 2023	July 28, 2023
September 28, 2023	October 27, 2023

Eligible dividends
CIBC designates any and all dividends paid or deemed for Canadian federal, provincial or territorial income tax purposes to be paid on or after January 1, 2006 to be "eligible dividends", unless otherwise indicated in respect of dividends paid subsequent to this notification, and hereby notifies all recipients of such dividends of this designation.

Regulatory capital
Information on CIBC's regulatory capital instruments and regulatory capital position may be found at https://www.cibc.com/en/about-cibc/investor-relations/regulatory-capital-instruments.html.

Credit ratings
Credit rating information can be found on pages 80–81 in this Annual Report.

Shareholder investment plan
All Canadian and U.S. resident registered holders of CIBC common shares and designated Class A preferred shares may participate in one or more of the following options and pay no brokerage commissions or service charges:

Dividend reinvestment option – Canadian residents may have dividends reinvested in additional CIBC common shares.
Share purchase option – Canadian residents may purchase up to $50,000 of additional CIBC common shares during the fiscal year.
Stock dividend option – U.S. residents may elect to receive stock dividends on CIBC common shares.

Further information is available through TSX Trust Company and on the CIBC website at www.cibc.com.

Transfer agent and registrar

For information relating to shareholdings, shareholder investment plan, dividends, direct dividend deposit, dividend reinvestment accounts and lost certificates, or to eliminate duplicate mailings of shareholder material, please contact:
TSX Trust Company, P.O. Box 700, Postal Station B, Montreal, QC, H3B 3K3,
416 682-3860 or 1 800 258-0499 (Canada and the U.S. only), fax 1 888 249-6189, Email: shareholderinquiries@tmx.com,
website: www.tsxtrust.com.

Common and preferred shares are transferable in Canada at the offices of our agent, TSX Trust Company, in Toronto, Montreal, Calgary and Vancouver.

In the U.S., common shares are transferable at:
Computershare Inc., By Mail: P.O. Box 43078 Providence, RI 02940; By Overnight Delivery: 150 Royall St., Canton, MA 02021, 1 800-522-6645, website: www.computershare.com/investor.

Registered shareholders can opt to have their shares recorded electronically in the Direct Registration System (DRS). Please contact our transfer agent for details.

How to reach us:

CIBC Head Office

81 Bay Street, CIBC SQUARE,
Toronto, Ontario, Canada
M5J 0E7
SWIFT code: CIBCCATT
Website: www.cibc.com

Investor Relations

Email: Mailbox.InvestorRelations@cibc.com

Corporate Secretary

Email: corporate.secretary@cibc.com

Client Complaint Appeals Office (CCAO)

Toll-free across Canada: 1-888-947-5207
Email: mailbox.clientcomplaintappeals@cibc.com

CIBC Telephone Banking

Toll-free across Canada: 1 800 465-2422

Communications and Public Affairs

Email: Mailbox.Communications@cibc.com

Client Care

Toll-free across Canada: 1 800 465-2255
Email: client.care@cibc.com

Where to find more information

CIBC Annual Report 2022

Additional print copies of the Annual Report will be available in March 2023 and may be obtained by emailing Mailbox.InvestorRelations@cibc.com. The Annual Report is also available online at www.cibc.com/ca/investor-relations/annual-reports.html.

Des exemplaires supplémentaires du Rapport annuel seront disponibles en mars 2023 et peuvent être commandés par courriel à relationsinvestisseurs@cibc.com. Le Rapport annuel est aussi disponible à l'adresse www.cibc.com/ca/investor-relations/annual-reports-fr.html.

CIBC Sustainability Report and Public Accountability Statement 2022

This report reviews our economic, environmental, social and governance activities over the past year and will be available in March 2023 at https://www.cibc.com/en/about-cibc/corporate-responsibility.html.

Management Proxy Circular 2023

The Management Proxy Circular contains information for shareholders about CIBC's annual meeting, including information relating to the election of CIBC's directors, appointment of auditors and shareholder proposals, as well as other matters. The 2023 Proxy Circular will be available in March 2023 at www.cibc.com.

Corporate Governance

CIBC's Statement of Corporate Governance Practices describes the governance framework that guides the Board and management in fulfilling their obligations to CIBC and our shareholders. This statement and other information on Corporate Governance at CIBC, including our CIBC Code of Conduct for all employees and Directors, can be found on our corporate website at www.cibc.com/ca/inside-cibc/governance/governance-practices.html.

Regulatory Filings

In Canada with the Canadian Securities Administrators at www.sedar.com.

In the U.S. with the U.S. Securities and Exchange Commission at www.sec.gov/edgar.shtml.

Incorporation

Canadian Imperial Bank of Commerce (CIBC) is a diversified financial institution governed by the *Bank Act* (Canada). CIBC was formed through the amalgamation of The Canadian Bank of Commerce and Imperial Bank of Canada in 1961.

The Canadian Bank of Commerce was originally incorporated as Bank of Canada by special act of the legislature of the Province of Canada in 1858. Subsequently, the name was changed to The Canadian Bank of Commerce and it opened for business under that name in 1867. Imperial Bank of Canada was incorporated in 1875 by special act of the Parliament of Canada and commenced operations in that year.

Trademarks

Trademarks used in this Annual Report which are owned by Canadian Imperial Bank of Commerce, or its subsidiaries in Canada and/or other countries include, "Ambitions Made Real", "CIBC Agility", "CIBC Bank USA Smart Account", the CIBC logo, "CIBC eAdvantage", "CIBC FirstCaribbean International Bank", "CIBC ForeignCash Online", "CIBC Global Money Transfer", "CIBC GoalPlanner", "CIBC Investor's Edge", "CIBC Miracle Day", "CIBC Mobile Banking", "CIBC Private Wealth", "CIBC Smart", "CIBC Smart Planner", "CIBC SmartBanking", "Simplii Financial" and "Wood Gundy". All other trademarks mentioned in this annual report which are not owned by Canadian Imperial Bank of Commerce or its subsidiaries, are the property of their respective owners.

Board of Directors:

Katharine B. Stevenson
Chair of the Board
CIBC
Corporate Director
Toronto, Ontario, Canada
Joined in 2011

Ammar Aljoundi
(RMC)
President and Chief Executive Officer
Agnico Eagle Mines Limited
Toronto, Ontario, Canada
Joined in 2022

Charles J. G. Brindamour
(RMC)
Chief Executive Officer
Intact Financial Corporation
Toronto, Ontario, Canada
Joined in 2020

Nanci E. Caldwell
(CGC, MRCC)
Corporate Director
Woodside, California, U.S.A.
Joined in 2015

Michelle L. Collins
(AC)
President
Cambium LLC
Chicago, Illinois, U.S.A.
Joined in 2017

Luc Desjardins
(MRCC)
President and Chief Executive Officer
Superior Plus Corp.
Toronto, Ontario, Canada
Joined in 2009

Victor G. Dodig
President and Chief Executive Officer
CIBC
Toronto, Ontario, Canada
Joined in 2014

Kevin J. Kelly
(MRCC – Chair)
Corporate Director
Toronto, Ontario, Canada
Joined in 2013

Christine E. Larsen
(RMC)
Corporate Director
Montclair, New Jersey, U.S.A.
Joined in 2016

Nicholas D. Le Pan
(AC, CGC)
Corporate Director
Ottawa, Ontario, Canada
Joined in 2008

Mary Lou Maher
(AC – Chair)
Corporate Director
Toronto, Ontario, Canada
Joined in 2021

William F. Morneau
Corporate Director
Toronto, Ontario, Canada
Joined in 2022

Jane L. Peverett
(AC, CGC – Chair)
Corporate Director
West Vancouver, British Columbia, Canada
Joined in 2009

Martine Turcotte
(CGC, MRCC)
Corporate Director
Verdun, Québec, Canada
Joined in 2014

Barry L. Zubrow
(CGC, RMC – Chair)
Chief Executive Officer
ITB LLC
West Palm Beach, Florida, U.S.A.
Joined in 2015

AC – Audit Committee
CGC – Corporate Governance Committee
MRCC – Management Resources and Compensation Committee
RMC – Risk Management Committee

Exhibit B.6(a)(1) Certifications required by Rule 13a-14(a)

CERTIFICATIONS

I, Victor G. Dodig, certify that:

1. I have reviewed this annual report on Form 40-F of Canadian Imperial Bank of Commerce;

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, 2022

/s/ Victor G. Dodig
Victor G. Dodig
President and Chief Executive Officer

I, Hratch Panossian, certify that:

1. I have reviewed this annual report on Form 40-F of Canadian Imperial Bank of Commerce;

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, 2022

/s/ Hratch Panossian

Hratch Panossian
Senior Executive Vice-President and
Chief Financial Officer

Exhibit B.6(a)(2): Certifications required by Rule 13a-14(b) and Section 1350 of Chapter 63 of Title 18 of the United States Code

Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the annual report of Canadian Imperial Bank of Commerce ("CIBC") filed under cover of a Form 40-F for the period ended October 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Victor G. Dodig, President and Chief Executive Officer of CIBC, certify that:

(1) the Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of CIBC.

/s/ Victor G. Dodig
Victor G. Dodig
President and Chief Executive Officer

Date: December 1, 2022

In connection with the annual report of Canadian Imperial Bank of Commerce ("CIBC") filed under cover of a Form 40-F for the period ended October 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Hratch Panossian, Senior Executive Vice-President and Chief Financial Officer of CIBC, certify that:

(1) the Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of CIBC.

/s/ Hratch Panossian
Hratch Panossian
Senior Executive Vice-President and
Chief Financial Officer

Date: December 1, 2022

Exhibit D.9: Consent of Independent Registered Public Accounting Firm

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

(1) Form F-3 nos. 333-219550; 333-220284; 333-257113; and 333-259240

(2) Form S-8 nos. 333-09874; 333-130283; and 333-218913

of Canadian Imperial Bank of Commerce ("CIBC") and the use herein of our reports of independent registered public accounting firm dated November 30, 2022, with respect to the consolidated financial statements of CIBC, which comprise the consolidated balance sheets of CIBC as at October 31, 2022 and 2021, and the consolidated statements of income, comprehensive income, changes in equity and cash flows for the years then ended and CIBC's effectiveness of internal control over financial reporting as of October 31, 2022, each of which is included in Exhibit B.3(b) incorporated by reference in this Annual Report on Form 40-F.

We also consent to the reference to us under the caption "Experts", which appears in the Annual Information Form included in Exhibit B.3(a) incorporated by reference in this Annual Report on Form 40-F, which is incorporated by reference in such Registration Statements.

/s/ Ernst & Young LLP

Chartered Professional Accountants
Licensed Public Accountants
Toronto, Canada
November 30, 2022