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, 2021, 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 December 1, 2021. 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 100 to 106 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 2022", "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, ongoing objectives, strategies, the regulatory environment in which we operate and outlook for calendar year 2022 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 2022" section of this report, and are subject to inherent risks and uncertainties that may be general or specific. Given the continuing impact of the coronavirus (COVID-19) pandemic 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: 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 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.

External reporting changes

The following external reporting changes were made in 2021.

Changes made to our business segments

- Simplii Financial and CIBC Investor's Edge, previously reported in Canadian Personal and Business Banking, are now part of the newly-created Direct Financial Services line of business in Capital Markets, along with certain other direct payment services that were previously in Capital Markets. This change was made to align with the mandates of the relevant strategic business units (SBUs).
- The financial results associated with U.S. treasury activities in U.S. Commercial Banking and Wealth Management are now included within Treasury in Corporate and Other. In addition, the transfer pricing methodology between U.S. Commercial Banking and Wealth Management and Treasury in Corporate and Other has been enhanced. Both changes align the treatment of U.S. Commercial Banking and Wealth Management with our other SBUs, and allow for better management of interest rate and liquidity risks.

Prior period amounts have been revised accordingly. The changes impacted the results of our SBUs and how we measure the performance of our SBUs. There was no impact on our consolidated financial results from these changes.

Overview

CIBC is a leading 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 ambitions a reality, and our focus on creating a more secure, equitable and sustainable future through our environmental, social and governance (ESG) principles.

Across Personal and Business Banking, Commercial Banking and Wealth Management, and Capital Markets businesses, our 45,000 employees provide a full range of financial products and services to 11 million personal banking, business, public sector and institutional clients in Canada, the U.S. and around the world.

Our strategy

In 2021, we continued to focus on building a modern, relationship-oriented bank. Through these efforts, we're delivering superior client experience and top-tier shareholder returns while maintaining our financial strength, risk discipline and advancing our purpose-driven culture. Foundational to our progress is a consistent focus on three strategic priorities:

- Further strengthening our Canadian consumer franchise;
- Maintaining and growing our resilient North American Commercial Banking, Wealth Management, and Capital Markets businesses; and
- Accelerating ongoing investments in growth initiatives.

Performance against objectives

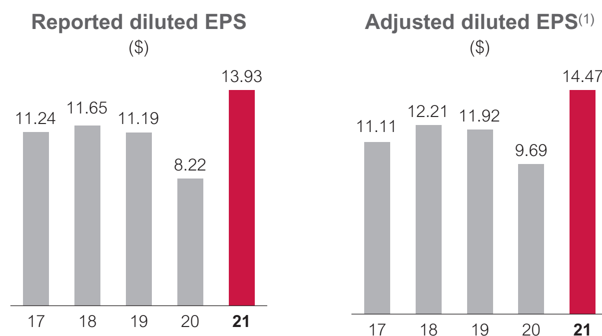
CIBC reports a scorecard of financial measures that we use to evaluate and report on our progress to external stakeholders. These measures can be categorized into four key areas – earnings growth, operating leverage, profitability, and balance sheet strength. We have set targets for each of these measures over the medium term, which we 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.

Global economic activity accelerated this year, although the COVID-19 pandemic continues to pose a headwind to the pace of that recovery. Distribution of COVID-19 vaccines has allowed for the re-opening of much of the economy, but not all economic activities have returned to pre-pandemic levels and continue to have an impact on our ability to achieve certain performance objectives.

Earnings growth

To assess our earnings growth, we monitor our earnings per share (EPS). Our target of 5% to 10% growth reflects a simple average of annual adjusted[(1)] EPS growth. In 2021, against a backdrop of an improving economic environment, year-over-year reported and adjusted[(1)] diluted EPS increased by 69% and 49%, respectively.

Going forward, we are maintaining our target to deliver average annual adjusted[(1)] EPS growth of 5% to 10%.

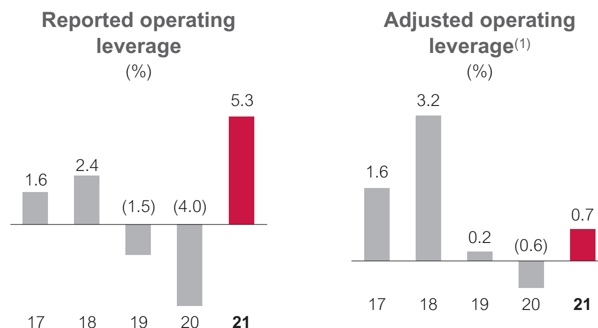


(1) Adjusted measures are non-GAAP measures. For additional information, see the "Non-GAAP measures" section.

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 2021, our reported and adjusted[1] operating leverage was 5.3% and 0.7%, respectively, compared with (4.0)% and (0.6)%, respectively in 2020.

Going forward, our target is to deliver positive adjusted[1] operating leverage.



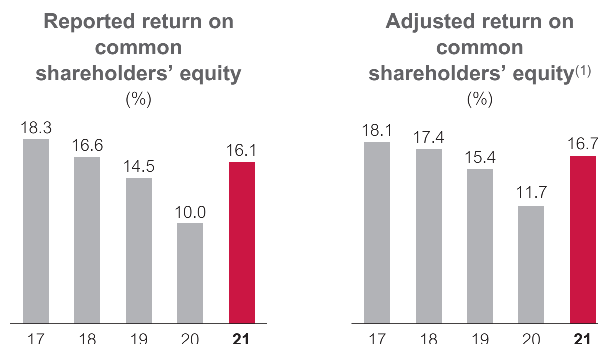
Profitability

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 2021, our reported and adjusted[1] ROE were at 16.1% and 16.7%, respectively, compared with 10.0% and 11.7%, respectively, in 2020.

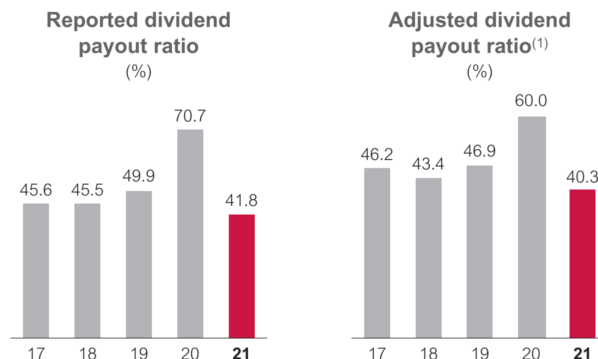
Going forward, we will continue to target a strong adjusted[1] ROE of at least 15%.



2. Dividend payout ratio

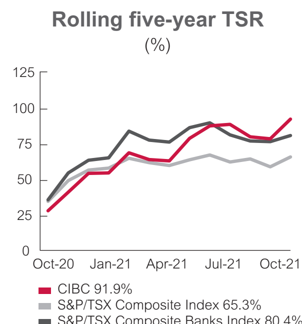
Dividend payout ratio is defined as the ratio of common share dividends paid as a percentage of net income after preferred share dividends, premium on preferred share redemptions, and distributions on other equity instruments. Our key criteria for considering dividend increases are our current level of payout relative to our target and our view on the sustainability of our current earnings level. In 2021, our reported and adjusted[1] dividend payout ratios were 41.8% and 40.3%, respectively, compared with 70.7% and 60.0%, respectively, in 2020. 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 halt share buybacks and dividend increases until further notice. The temporary measure was lifted effective November 4, 2021.

Going forward, we will continue to target an adjusted[1] dividend payout ratio of 40% to 50%.



3. Total shareholder return (TSR)

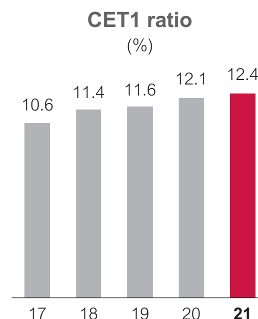
TSR is the ultimate measure of shareholder value, and the output of delivering against the financial targets within our control. We have an objective to deliver a TSR that exceeds the industry average, which we have defined as the Standard & Poor's (S&P)/Toronto Stock Exchange (TSX) Composite Banks Index, over a rolling five-year period. For the five years ended October 31, 2021, our TSR was 91.9% (2020: 27.7%), which was above the S&P/TSX Composite Banks Index return over the same period of 80.4%.



(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.

Balance sheet strength

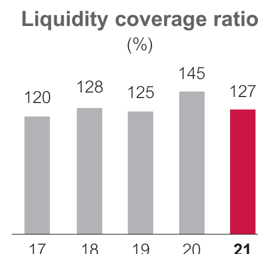
Maintaining a strong balance sheet is foundational to our long-term success. Our goal is to maintain strong capital and liquidity positions. We look to constantly balance our objectives of holding a prudent amount of excess capital for unexpected events and environmental uncertainties, investing in our core businesses, growing through acquisitions and returning capital to our shareholders.



1. Basel III Common Equity Tier 1 (CET1) ratio

For the year ended October 31, 2021, our Basel III CET1[(1)] ratio was 12.4%, compared with 12.1% in 2020, well above the current regulatory target set by OSFI of 10.5%.

In response to the COVID-19 pandemic, effective March 2020, OSFI directed that all federally regulated financial institutions halt share buybacks and dividend increases until further notice. The temporary measure was lifted effective November 4, 2021.



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 for 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, 2021, our three-month daily average LCR[(1)] was 127% compared to 145% for the same period last year. The decrease returns our LCR to pre-pandemic levels.

(1) 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	**2021**	2020	2019	2018	2017
Financial results ($ millions)					
Net interest income	**$ 11,459**	$ 11,044	$ 10,551	$ 10,065	$ 8,977
Non-interest income	**8,556**	7,697	8,060	7,769	7,303
Total revenue	**20,015**	18,741	18,611	17,834	16,280
Provision for credit losses	**158**	2,489	1,286	870	829
Non-interest expenses	**11,535**	11,362	10,856	10,258	9,571
Income before income taxes	**8,322**	4,890	6,469	6,706	5,880
Income taxes	**1,876**	1,098	1,348	1,422	1,162
Net income	**$ 6,446**	$ 3,792	$ 5,121	$ 5,284	$ 4,718
Net income attributable to non-controlling interests	**17**	2	25	17	19
Preferred shareholders and other equity instrument holders	**158**	122	111	89	52
Common shareholders	**6,271**	3,668	4,985	5,178	4,647
Net income attributable to equity shareholders	**$ 6,429**	$ 3,790	$ 5,096	$ 5,267	$ 4,699
Financial measures					
Reported efficiency ratio [(1)]	**57.6 %**	60.6 %	58.3 %	57.5 %	58.8 %
Reported operating leverage [(1)]	**5.3 %**	(4.0)%	(1.5)%	2.4 %	1.6 %
Loan loss ratio [(2)]	**0.16 %**	0.26 %	0.29 %	0.26 %	0.25 %
Reported return on common shareholders' equity [(1)]	**16.1 %**	10.0 %	14.5 %	16.6 %	18.3 %
Net interest margin [(1)]	**1.42 %**	1.50 %	1.65 %	1.68 %	1.66 %
Net interest margin on average interest-earning assets [(3)(4)]	**1.59 %**	1.69 %	1.84 %	1.88 %	1.85 %
Return on average assets [(4)(5)]	**0.80 %**	0.52 %	0.80 %	0.88 %	0.87 %
Return on average interest-earning assets [(3)(4)(5)]	**0.89 %**	0.58 %	0.89 %	0.99 %	0.97 %
Reported effective tax rate	**22.5 %**	22.5 %	20.8 %	21.2 %	19.8 %
Common share information					
Per share ($) – basic earnings	**$ 13.97**	$ 8.23	$ 11.22	$ 11.69	$ 11.26
– reported diluted earnings	**13.93**	8.22	11.19	11.65	11.24
– dividends	**5.84**	5.82	5.60	5.32	5.08
– book value [(6)]	**91.66**	84.05	79.87	73.83	66.55
Closing share price ($)	**150.17**	99.38	112.31	113.68	113.56
Shares outstanding (thousands) – weighted-average basic	**448,953**	445,435	444,324	443,082	412,636
– weighted-average diluted	**450,183**	446,021	445,457	444,627	413,563
– end of period	**450,828**	447,085	445,342	442,826	439,313
Market capitalization ($ millions)	**$ 67,701**	$ 44,431	$ 50,016	$ 50,341	$ 49,888
Value measures					
Total shareholder return	**58.03 %**	(5.90)%	4.19 %	4.70 %	18.30 %
Dividend yield (based on closing share price)	**3.9 %**	5.9 %	5.0 %	4.7 %	4.5 %
Reported dividend payout ratio [(1)]	**41.8 %**	70.7 %	49.9 %	45.5 %	45.6 %
Market value to book value ratio	**1.64**	1.18	1.41	1.54	1.71
Selected financial measures – adjusted [(7)]					
Adjusted efficiency ratio [(8)]	**55.4 %**	55.8 %	55.5 %	55.6 %	57.2 %
Adjusted operating leverage [(8)]	**0.7 %**	(0.6)%	0.2 %	3.2 %	1.6 %
Adjusted return on common shareholders' equity	**16.7 %**	11.7 %	15.4 %	17.4 %	18.1 %
Adjusted effective tax rate	**22.7 %**	21.8 %	20.6 %	20.0 %	20.3 %
Adjusted diluted earnings per share ($)	**$ 14.47**	$ 9.69	$ 11.92	$ 12.21	$ 11.11
Adjusted dividend payout ratio	**40.3 %**	60.0 %	46.9 %	43.4 %	46.2 %
On- and off-balance sheet information ($ millions)					
Cash, deposits with banks and securities	**$ 218,398**	$ 211,564	$ 138,669	$ 119,355	$ 107,571
Loans and acceptances, net of allowance for credit losses	**462,879**	416,388	398,108	381,661	365,558
Total assets	**837,683**	769,551	651,604	597,099	565,264
Deposits	**621,158**	570,740	485,712	461,015	439,706
Common shareholders' equity [(1)]	**41,323**	37,579	35,569	32,693	29,238
Average assets [(4)]	**809,621**	735,492	639,716	598,441	542,365
Average interest-earning assets [(3)(4)]	**721,686**	654,142	572,677	536,059	485,837
Average common shareholders' equity [(1)(4)]	**38,881**	36,792	34,467	31,184	25,393
Assets under administration (AUA) [(1)(9)(10)(11)]	**2,963,221**	2,364,005 [(8)]	2,423,240 [(8)]	2,303,962	2,192,947
Assets under management (AUM) [(1)(10)(11)]	**316,834**	261,037 [(8)]	249,596 [(8)]	225,379	221,571
Balance sheet quality (All-in basis) and liquidity measures [(12)]					
Risk-weighted assets (RWA) ($ millions)					
Total RWA	**$ 272,814**	$ 254,871	$ 239,863	n/a	n/a
CET1 capital RWA	**n/a**	n/a	n/a	$ 216,144	$ 203,321
Tier 1 capital RWA	**n/a**	n/a	n/a	216,303	203,321
Total capital RWA	**n/a**	n/a	n/a	216,462	203,321
Capital ratios					
CET1 ratio [(13)]	**12.4 %**	12.1 %	11.6 %	11.4 %	10.6 %
Tier 1 capital ratio [(13)]	**14.1 %**	13.6 %	12.9 %	12.9 %	12.1 %
Total capital ratio [(13)]	**16.2 %**	16.1 %	15.0 %	14.9 %	13.8 %
Leverage ratio	**4.7 %**	4.7 %	4.3 %	4.3 %	4.0 %
LCR [(14)]	**127 %**	145 %	125 %	128 %	120 %
Other information					
Full-time equivalent employees	**45,282**	43,853	45,157	44,220	44,928

(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 interest-earning assets include interest-bearing deposits with banks, interest-bearing demand deposits with Bank of Canada, securities, cash collateral on securities borrowed, securities purchased under resale agreements, loans net of allowance for credit losses, and certain sublease-related assets.
(4) Average balances are calculated as a weighted average of daily closing balances.
(5) Net income expressed as a percentage of average assets or average interest-earning assets.
(6) Common shareholders' equity divided by the number of common shares issued and outstanding at end of period.
(7) 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.
(8) Calculated on a taxable equivalent basis (TEB).
(9) 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 $2,341.1 billion as at October 31, 2021 (2020: $1,861.5 billion).
(10) AUM amounts are included in the amounts reported under AUA.
(11) Certain prior year information has been restated.
(12) 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 is 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.
(13) Effective beginning in the second quarter of 2020, ratios reflect the expected credit loss (ECL) transitional arrangement announced by OSFI on March 27, 2020 in response to the onset of the COVID-19 pandemic.
(14) Average for the three months ended October 31 for each respective year.
n/a Not applicable.

Economic and market environment

Year in review – 2021

Progress towards containing outbreaks of the COVID-19 pandemic through vaccination campaigns and less restrictive public health measures provided an improving economic backdrop for CIBC. The move from broad economic closures to lighter control measures enabled a partial recovery in service sector activity, with spending supported by job growth, fiscal measures that had elevated savings in the prior year, and ongoing monetary stimulus that kept interest rates at low levels. Some goods sector industries remained disrupted by global supply chain bottlenecks caused by the pandemic. Job gains, growing business output and rising resource prices offset diminished usage of government support measures, resulting in an improvement in business and household credit quality, although continued low interest rates held down lending margins in Canada and the U.S. Improved consumer spending had a positive impact on retail transactions volumes relative to the lows of the pandemic in 2020, but spending has not returned to pre-pandemic levels partly as a result of supply chain issues and consumer credit usage remained sluggish as households drew on ample savings. Healthy growth in mortgage demand was driven by an active housing market and higher average prices. Business credit demand picked up as firms responded to improving opportunities, while capital markets activity was supported by strong corporate and government bond issuance, mergers tied to consolidations, and constructive equity markets in both the U.S. and Canada. Deposit growth continued to decelerate after outsized gains early in the pandemic.

Outlook for calendar year 2022

Global economic activity accelerated this year, although the COVID-19 pandemic, fueled by the more contagious Delta and Omicron variants, continues to pose a headwind to the pace of that recovery, impacting services demand and the supply of goods. Restrictions imposed by governments around the world to limit the impact of the infection have eased significantly in most jurisdictions, but disruptions in production and shipping continue to impact global supply chains and consumer caution is holding back travel and demand for other services. Vaccination rates are climbing, and although the virus remains a threat, our outlook assumes that targeted health measures rather than broader economic closures will be used to contain future infections in most countries. We also assume that the increased global distribution of vaccines will help relieve supply chain disruptions, improving the availability and lowering price pressures on internationally traded goods.

In Canada, after a gain of approximately 4.5% in 2021, real gross domestic product (GDP) is expected to grow by approximately 4% in calendar 2022, led by a further recovery in consumer services demand, as well as improvements in exports and capital spending as global supply chain pressures ease. We expect that the unemployment rate will average near 6% in calendar 2022, approaching full-employment levels in the latter half of the year. Improving economic activity will more than offset diminished government assistance for business and households, supporting business and household credit growth and credit quality. Government bond issuance will decrease in 2022 on reduced deficits. Although inflation is expected to ease during the year on improved goods supplies, we expect that the Bank of Canada will respond to a tightening labour market by raising the overnight interest rate by 50 basis points in the latter half of the year. Longer-term rates will drift higher over the year as the market builds in expectations for rate hikes beyond 2022, and global central banks pull back from bond purchases under quantitative easing.

In the U.S., real GDP is expected to grow by 4.2% in calendar 2022, after growing by 5.5% in the prior calendar year. Unemployment is expected to average in the 4% range in calendar 2022, reaching full employment levels in the second half of the year. Strong employment gains and improving business revenues will support lower insolvencies. In response to achieving its employment objectives, after maintaining near-zero short-term interest rates in the first half of the year, the Federal Reserve is likely to increase rates by 50 basis points in the latter half of calendar 2022, after winding down its net purchases of bonds in the first half of the calendar year.

The economic challenges from COVID-19 have impacted all our SBUs, and while they are likely to still be present in the coming year, lower case counts and fatalities, facilitated by higher vaccination rates and other potential treatments for COVID-19, will shape the environment ahead. From a credit perspective, lower and more targeted government support will be more than offset by improving employment and business volumes. Deposit growth will continue at moderate rates, having already adjusted to the deceleration in the flow of government support payments to households and businesses. The interest rate environment is expected to continue to have a modestly negative impact on the net interest margins for all our SBUs.

For Canadian Personal and Business Banking, mortgage demand growth could decelerate slightly in the coming fiscal year on softer home sales volumes and higher interest rates. We expect to see a modest acceleration in growth in non-mortgage credit demand in the next fiscal year as a result of the continued easing of pandemic-related constraints on economic activity, which will support an increase in consumer spending. Further increases in consumer spending are expected to have a positive impact on retail transaction volumes. Continued demand for business lending products is anticipated as small businesses expand in response to the economic recovery.

Our Canadian and U.S. wealth management businesses are expected to benefit in the coming fiscal year from a further economic recovery, with investors continuing to look for alternatives to what will still be low real interest rates.

Our Capital Markets business is expected to benefit in the coming fiscal year from trading volumes driven by greater volatility as interest rates rise, from merger and acquisition activity as corporate consolidations continue, as well as from healthy equity issuance, but could be negatively impacted by lower corporate and provincial bond issuance. Loan demand in our Canadian and U.S. commercial banking businesses is expected to continue to grow at a moderate pace in the coming fiscal year in response to improving economic conditions.

The economic outlook described above reflects numerous assumptions regarding the economic impact of the COVID-19 pandemic. Although its severity appears to be diminishing where vaccination rates are high, case counts are still escalating in some countries, and uncertainties remain regarding the pace of global vaccination efforts, the need for booster doses, and the degree to which they will contain existing and potential new variants, without measures that limit economic activity. Expectations reflect currently available information and are subject to change as new information on epidemiology and government health measures becomes available. As a result, actual experience may differ materially from expectations.

Our financial condition and our regulatory capital and liquidity positions continue to be strong. See "Capital management" and "Liquidity risk" for further details. The impact of the pandemic on our risk environment is discussed in "Top and emerging risks". Changes in the level of economic uncertainty arising from the pandemic continue to impact key accounting estimates and assumptions, particularly the estimation of ECLs. See "Accounting and control matters", as well as Note 2 and Note 6 to our consolidated financial statements for further details. With the economic recovery well underway, and the significant easing of restrictive public health measures, the level of our client relief programs has reduced significantly relative to 2020. See "CIBC client relief programs in response to COVID-19" and "Government lending programs in response to COVID-19" for further details regarding the client relief and government support programs we are involved in.

Significant events

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 transactions are subject to regulatory approvals and other closing conditions, which are expected to be finalized in the first half of fiscal 2022. The impacts upon closing are not expected to be material.

Acquisition of Canadian Costco credit card portfolio

On September 2, 2021, we announced that we entered into a long-term agreement to become the exclusive issuer of Costco-branded Mastercard credit cards in Canada. We will also acquire the existing Canadian Costco credit card portfolio, which has over $3 billion in outstanding balances. This transaction is expected to be completed in the first half of fiscal 2022, subject to customary closing conditions.

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.

As a result of the lengthy regulatory review process, the worsening impact of the COVID-19 pandemic on the Caribbean economy and our revised expectations concerning the likelihood and timing of a potential transaction, we discontinued the application of held for sale accounting of CIBC FirstCaribbean in the fourth quarter of 2020 and recorded a goodwill impairment charge of $220 million. 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.

For additional information, see Note 4 and Note 9 to our consolidated financial statements.

Financial performance overview

This section provides a review of our consolidated financial results for 2021. A review of our SBU results follows on pages 18 to 29. Refer to page 13 for a review of our financial performance for 2020.

2021 Financial results review

Reported net income for the year was $6,446 million, compared with $3,792 million in 2020.

Adjusted net income[1] for the year was $6,687 million, compared with $4,447 million in 2020.

Reported diluted EPS for the year was $13.93, compared with $8.22 in 2020.

Adjusted diluted EPS[1] for the year was $14.47, compared with $9.69 in 2020.

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 transaction and integration-related costs[2] 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.

2020

Net income was affected by the following items of note:

- $339 million ($250 million after-tax) restructuring charge primarily related to employee severance (Corporate and Other);
- $248 million ($248 million after-tax) goodwill impairment charges related to our controlling interest in CIBC FirstCaribbean of which $28 million was recognized in the second quarter and $220 million was recognized in the fourth quarter (Corporate and Other);
- $114 million ($84 million after-tax) charge related to the consolidation of our real estate portfolio (Corporate and Other);
- $105 million ($80 million after-tax) amortization of acquisition-related intangible assets ($6 million after-tax in Canadian Personal and Business Banking, $1 million after-tax in Canadian Commercial Banking and Wealth Management, $61 million after-tax in U.S. Commercial Banking and Wealth Management, and $12 million after-tax in Corporate and Other);
- $79 million ($58 million after-tax) gain as a result of plan amendments related to pension and other post-employment plans (Corporate and Other); and
- $70 million ($51 million after-tax) increase in legal provisions (Corporate and Other).

The above items of note increased non-interest expenses by $797 million and decreased income taxes by $142 million. In aggregate, these items of note decreased net income by $655 million.

(1) Adjusted measures are non-GAAP measures. For additional information, see the "Non-GAAP measures" section.
(2) Transaction and integration costs are comprised of direct and incremental costs incurred as part of planning for and executing the integration of the Canadian Costco credit card portfolio, including enabling cross-sell opportunities, the upgrade and conversion of systems and processes, project management and communication costs.

Net interest income and margin

$ millions, for the year ended October 31	**2021**	2020	2019
Average interest-earning assets	**$ 721,686**	$ 654,142	$ 572,677
Net interest income	**11,459**	11,044	10,551
Net interest margin on average interest-earning assets	**1.59 %**	1.69 %	1.84 %

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.

Net interest margin on average interest-earning assets was down 10 basis points, primarily due to a shift in the mix of average interest-earning assets, and an increase in HQLA driven by deposit growth, as well as the current low interest environment.

Additional information on net interest income and margin is provided in the "Supplementary annual financial information" section.

Non-interest income

$ millions, for the year ended October 31	2021	2020	2019
Underwriting and advisory fees	**$ 713**	$ 468	$ 475
Deposit and payment fees	**797**	781	908
Credit fees	**1,152**	1,020	958
Card fees	**460**	410	458
Investment management and custodial fees [1][2]	**1,621**	1,382	1,305
Mutual fund fees [2]	**1,772**	1,586	1,595
Insurance fees, net of claims	**358**	386	430
Commissions on securities transactions	**426**	362	313
Gains (losses) from financial instruments measured/designated at fair value through profit or loss (FVTPL), net [3]	**607**	694	761
Gains (losses) from debt securities measured at fair value through other comprehensive income (FVOCI) and amortized cost, net	**90**	9	34
Foreign exchange other than trading	**276**	234	304
Income from equity-accounted associates and joint ventures [1]	**55**	79	92
Other	**229**	286	427
	$ 8,556	$ 7,697	$ 8,060

(1) 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.
(2) 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).
(3) Includes $87 million of loss (2020: $31 million of loss; 2019: $54 million of loss) relating to non-trading financial instruments measured/designated at FVTPL.

Non-interest income was up $859 million or 11% from 2020.

Underwriting and advisory fees were up $245 million or 52%, primarily due to higher equity and debt issuance revenue and advisory activity.

Credit fees were up $132 million or 13%, primarily due to growth in commercial loans.

Card fees were up $50 million or 12%, primarily due to higher client transaction activity in Canadian Personal and Business Banking.

Investment management and custodial fees were up $239 million or 17%, primarily due to AUA and AUM growth in our wealth management businesses.

Mutual fund fees were up $186 million or 12%, primarily due to market appreciation and net sales in our wealth management businesses.

Commissions on securities transactions were up $64 million or 18%, primarily due to higher trading volume in our retail brokerage business.

Gains (losses) from financial instruments measured/designated at FVTPL, net were down $87 million or 13%, primarily due to lower trading revenue, treasury activities and mark-to-market losses related to certain non-trading derivatives that were largely offset by net interest income recognized on FVTPL securities held as economic hedges.

Trading revenue (TEB)[1][2]

$ millions, for the year ended October 31	2021	2020	2019
Trading revenue consists of:			
Net interest income [1]	**$ 1,020**	$ 904	$ 633
Non-interest income [3]	**694**	725	815
	$ 1,714	$ 1,629	$ 1,448
Trading revenue by product line:			
Interest rates	**$ 328**	$ 528	$ 300
Foreign exchange	**651**	674	585
Equities [1]	**548**	280	386
Commodities	**158**	182	117
Other	**29**	(35)	60
	$ 1,714	$ 1,629	$ 1,448

(1) Includes a TEB adjustment of $204 million (2020: $183 million; 2019: $177 million) reported within Capital Markets. Excludes a TEB adjustment of nil (2020: nil; 2019: $2 million) on non-trading activities reported within U.S. Commercial Banking and Wealth Management. See "Strategic business units overview" section and Note 31 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 Capital Adequacy Requirements.
(3) Gains (losses) from financial instruments measured/designated at FVTPL of $607 million (2020: $694 million; 2019: $761 million) consists of a gain of $694 million (2020: $725 million; 2019: $815 million) related to trading financial instruments measured/designated at FVTPL and a loss of $87 million (2020: $31 million; 2019: $54 million) relating to non-trading financial instruments measured/designated at FVTPL.

Trading revenue was up $85 million or 5% from 2020, primarily due to higher equities trading revenue, partially offset by lower interest rates 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	2021	2020	2019
Provision for (reversal of) credit losses – impaired			
Canadian Personal and Business Banking	**$ 484**	$ 625	$ 790
Canadian Commercial Banking and Wealth Management	**6**	162	159
U.S. Commercial Banking and Wealth Management	**104**	133	68
Capital Markets	**32**	121	109
Corporate and Other	**76**	24	21
	702	1,065	1,147
Provision for (reversal of) credit losses – performing			
Canadian Personal and Business Banking	**(134)**	564	99
Canadian Commercial Banking and Wealth Management	**(45)**	141	4
U.S. Commercial Banking and Wealth Management	**(179)**	354	5
Capital Markets	**(132)**	190	51
Corporate and Other	**(54)**	175	(20)
	(544)	1,424	139
	$ 158	$ 2,489	$ 1,286

Provision for credit losses was down $2,331 million or 94% from 2020, as the current year reflected an improvement in economic conditions as well as our economic outlook, while the prior year was adversely impacted by the onset of 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	2021	2020	2019
Employee compensation and benefits			
Salaries	**$ 3,213**	$ 3,529	$ 3,081
Performance-based compensation	**2,329**	1,948	1,873
Benefits	**908**	782	772
	6,450	6,259	5,726
Occupancy costs [(1)]	**916**	944	892
Computer, software and office equipment	**2,030**	1,939	1,874
Communications	**318**	308	303
Advertising and business development	**237**	271	359
Professional fees	**277**	203	226
Business and capital taxes	**111**	117	110
Other	**1,196**	1,321	1,366
	$ 11,535	$ 11,362	$ 10,856

(1) In 2021 and 2020, occupancy costs include charges of $109 million and $114 million, respectively, related to the consolidation of our real estate portfolio, shown as items of note.

Non-interest expenses were up $173 million or 2% from 2020.

Employee compensation and benefits were up $191 million or 3%, primarily due to higher performance-based compensation. The prior year included a restructuring charge primarily related to employee severance, and a gain as a result of plan amendments related to pension and other post-employment benefit plans, both shown as an item of note.

Computer, software and office equipment were up $91 million or 5%, primarily due to higher spending on strategic initiatives.

Advertising and business development were down $34 million or 13%, primarily due to lower spending driven by the impact of the COVID-19 pandemic.

Professional fees were up $74 million or 36%, primarily due to higher spending on strategic initiatives.

Other expenses were down $125 million or 9%, as the prior year included a goodwill impairment charge, partially offset by an increase in legal provisions in the current year, both shown as an item of note.

Taxes

$ millions, for the year ended October 31	2021	2020	2019
Income taxes	**$ 1,876**	$ 1,098	$ 1,348
Indirect taxes [(1)]			
Goods and Services Tax (GST), Harmonized Sales Tax (HST) and sales taxes	**403**	411	418
Payroll taxes	**306**	292	271
Capital taxes	**77**	79	76
Property and business taxes	**70**	76	72
Total indirect taxes	**856**	858	837
Total taxes	**$ 2,732**	$ 1,956	$ 2,185
Reported effective tax rate	**22.5 %**	22.5 %	20.8 %
Total taxes as a percentage of net income before deduction of total taxes	**29.8 %**	34.0 %	29.9 %

(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 up $776 million from 2020.

Income tax expense was $1,876 million, up $778 million from 2020. This was primarily due to higher income.

Indirect taxes overall were consistent with the prior year, with an increase in payroll taxes offset by decreases in other indirect taxes. 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 (the Agreement) with the CRA that provides certainty with respect to the portion of the Enron expenses deductible in Canada. The Agreement resulted in the recognition of a net $38 million tax recovery in the first quarter of 2019. This recovery was determined after taking into account taxable refund interest in Canada and also the portion of the Enron expenses that are expected to be deductible in the United States (the U.S. deduction). The U.S. deduction has not 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 for approximately $1,420 million of additional income tax by denying the tax deductibility of certain 2011 to 2016 Canadian corporate dividends on the basis that they were part of a "dividend rental arrangement". 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. In August 2021, CIBC filed a Notice of Appeal with the Tax Court of Canada and the matter is now in litigation. It is possible that subsequent years may be reassessed for similar activities. 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. 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 $500 million in unrecognized capital tax loss carryforwards.

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	**2021 vs. 2020**	2020 vs. 2019	2019 vs. 2018
Estimated increase (decrease) in:			
Total revenue	**$ (307)**	$ 50	$ 124
Provision for credit losses	**13**	9	7
Non-interest expenses	**(141)**	26	66
Income taxes	**(26)**	3	5
Net income	**(153)**	12	46
Impact on EPS:			
Basic	**$ (0.34)**	$ 0.03	$ 0.10
Diluted	**(0.34)**	0.03	0.10
Average USD appreciation relative to CAD	**(6.6)%**	1.1 %	3.2 %

Fourth quarter review

$ millions, except per share amounts, for the three months ended	**2021**				2020 (1)			
	Oct. 31	**Jul. 31**	**Apr. 30**	**Jan. 31**	Oct. 31	Jul. 31	Apr. 30	Jan. 31
Revenue								
Canadian Personal and Business Banking	**$ 2,128**	**$ 2,056**	**$ 1,941**	**$ 2,025**	$ 1,997	$ 1,910	$ 1,936	$ 2,079
Canadian Commercial Banking and Wealth Management	**1,240**	**1,207**	**1,135**	**1,088**	1,028	1,013	1,025	1,055
U.S. Commercial Banking and Wealth Management	**562**	**539**	**532**	**561**	519	512	511	501
Capital Markets (2)	**1,012**	**1,140**	**1,194**	**1,174**	934	1,146	967	1,006
Corporate and Other (2)	**122**	**114**	**130**	**115**	122	127	139	214
Total revenue	**$ 5,064**	**$ 5,056**	**$ 4,932**	**$ 4,963**	$ 4,600	$ 4,708	$ 4,578	$ 4,855
Net interest income	**$ 2,980**	**$ 2,893**	**$ 2,747**	**$ 2,839**	$ 2,792	$ 2,729	$ 2,762	$ 2,761
Non-interest income	**2,084**	**2,163**	**2,185**	**2,124**	1,808	1,979	1,816	2,094
Total revenue	**5,064**	**5,056**	**4,932**	**4,963**	4,600	4,708	4,578	4,855
Provision for (reversal of) credit losses	**78**	**(99)**	**32**	**147**	291	525	1,412	261
Non-interest expenses	**3,135**	**2,918**	**2,756**	**2,726**	2,891	2,702	2,704	3,065
Income before income taxes	**1,851**	**2,237**	**2,144**	**2,090**	1,418	1,481	462	1,529
Income taxes	**411**	**507**	**493**	**465**	402	309	70	317
Net income	**$ 1,440**	**$ 1,730**	**$ 1,651**	**$ 1,625**	$ 1,016	$ 1,172	$ 392	$ 1,212
Net income (loss) attributable to:								
Non-controlling interests	**$ 4**	**$ 5**	**$ 4**	**$ 4**	$ 1	$ 2	$ (8)	$ 7
Equity shareholders	**1,436**	**1,725**	**1,647**	**1,621**	1,015	1,170	400	1,205
EPS – basic	**$ 3.08**	**$ 3.77**	**$ 3.56**	**$ 3.56**	$ 2.21	$ 2.56	$ 0.83	$ 2.64
– diluted	**3.07**	**3.76**	**3.55**	**3.55**	2.20	2.55	0.83	2.63

(1) Certain prior period information has been revised. See the "External reporting changes" section for additional details.
(2) 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.

Compared with Q4/20

Net income for the quarter was $1,440 million, up $424 million or 42% from the fourth quarter of 2020.

Net interest income was up $188 million, primarily due to volume growth across our businesses and higher treasury revenue, partially offset by lower product spreads.

Non-interest income was up $276 million or 15%, primarily due to higher fee-based revenue and underwriting and advisory fees.

Provision for credit losses was down $213 million or 73% from the same quarter last year. The current quarter included a provision reversal on performing loans of $34 million, while the same quarter last year included a provision for credit losses of $113 million. Provision for credit losses on impaired loans was down $66 million as the same quarter last year was adversely impacted by the COVID-19 pandemic.

Non-interest expenses were up $244 million or 8%, primarily due to higher employee-related compensation, spending on strategic initiatives and an increase in legal provisions, shown as an item of note. The same quarter last year included a goodwill impairment charge, partially offset by a gain as a result of plan amendments related to pension and other post-employment plans.

Income tax expense was up $9 million or 2%, primarily due to higher income.

Compared with Q3/21

Net income for the quarter was down $290 million or 17% from the prior quarter.

Net interest income was up $87 million or 3%, primarily due to volume growth across our businesses and higher trading revenue, partially offset by lower product spreads.

Non-interest income was down $79 million or 4%, primarily due to lower trading revenue and lower underwriting and advisory fees, partially offset by higher fee-based revenue.

The current quarter included a provision for credit losses of $78 million while the prior quarter included a provision reversal for credit losses of $99 million. The provision reversal on performing loans was down $173 million as the prior quarter included a higher reversal related to the favourable change in economic conditions as well as our economic outlook. Provision for credit losses on impaired loans was comparable with the prior quarter.

Non-interest expenses were up $217 million or 7%, primarily due to the charge related to the consolidation of our real estate portfolio, shown as an item of note, higher corporate support costs and the timing of spending on strategic initiatives.

Income tax expense was down $96 million or 19%, 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 the interest rate environment, volume growth and fees related to client transaction activity. Our wealth management businesses are driven by market conditions and net sales activity impacting AUA and AUM, as well as the level of client investment activity. Capital Markets revenue is also influenced, to a large extent, by market conditions affecting client trading and underwriting activity. The COVID-19 pandemic beginning in the second quarter of 2020 and the lower interest rate environment continue to impact revenue for all our SBUs.

Canadian Personal and Business Banking revenue has been negatively impacted by the lower interest rate environment and lower client transaction activity as a result of the COVID-19 pandemic, partially offset by volume growth.

Canadian Commercial Banking and Wealth Management has benefitted from commercial banking loan and deposit growth as well as from strong markets. In Commercial Banking, loan growth has accelerated throughout fiscal 2021 as the economic recovery strengthened. The benefit from loan and deposit growth has been partially offset by the lower interest rate environment. In Wealth Management, AUA and AUM growth has been driven by continued strong market performance and record levels of investment sales subsequent to the market volatility noted in the second quarter of 2020.

U.S. Commercial Banking and Wealth Management has benefitted from growth in strategic clients that is driving increased loans, deposits, AUM, and fee income. Loan growth has accelerated due to the new client additions and economic recovery. Wealth management AUA and AUM growth has been driven by a continued market recovery and strong sales momentum subsequent to the market volatility in the second quarter of 2020.

Capital Markets had lower trading revenue in the second and fourth quarters of 2020, while the second and third quarters of 2021 included increased revenue from underwriting and advisory activities.

Corporate and Other included the impact of the COVID-19 pandemic that led to excess liquidity costs from the second quarter of 2020 to the second quarter of 2021 that negatively impacted revenue. The interest rate environment and narrower margins have negatively impacted revenue 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. As a result of the impact of the COVID-19 pandemic beginning in the second quarter of 2020, some portions of our loan portfolios were negatively impacted by the decline in economic activity associated with restrictive public health measures, mitigated to a large extent by large-scale government support and relief programs targeting both individuals and businesses. Although public health measures in most jurisdictions have eased in response to increasing vaccination rates, and economic recovery is well underway, uncertainty related to the economic environment persists. There is considerable judgment involved in the estimation of credit losses in the current environment.

The significant increase in provision for credit losses on performing loans in the second quarter and, to a lesser extent, the third and fourth quarters of 2020 reflects the early stages of the COVID-19 pandemic, which impacted all our SBUs, as well as continued pressure on oil prices. All four quarters of 2021 reflect a moderate improvement in economic conditions as well as our economic outlook.

In Canadian Personal and Business Banking, the third and fourth quarters of 2020 and the first, third and the fourth quarters of 2021 included lower insolvencies and write-offs in credit cards. The decrease in insolvencies was in line with the national Canadian trend. The low level of write-offs was impacted by the assistance offered to clients from our payment deferral programs, lower client spending as well as government support. 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.

In Canadian Commercial Banking and Wealth Management, the first quarter and the second half of 2020 included provisions on one fraud-related impairment.

In U.S. Commercial Banking and Wealth Management, the first quarter of 2021 and the second half of 2020 included higher provisions on impaired loans.

In Capital Markets, the second and third quarters of 2020 included higher provisions on impaired loans in the oil and gas 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 fourth quarter of 2019 and the second and fourth quarters of 2020 included goodwill impairment charges related to our controlling interest in CIBC FirstCaribbean. The fourth quarter of 2019, the third quarter of 2020 and the third

quarter and fourth quarter of 2021 included increases in legal provisions in Corporate and Other, all shown as items of note. The first quarter of 2020 included a restructuring charge associated with ongoing efforts to transform our cost structure and simplify our bank. The fourth quarter of 2020 and the fourth quarter of 2021 included charges related to the consolidation of our real estate portfolio as a result of our upcoming move to our new global headquarters. The fourth quarter of 2020 included a gain as a result of plan amendments related to pension and other post-employment plans.

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 2020 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 [1]	Capital Markets [1]	Corporate and Other [1]	CIBC Total
2020 [2]	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
2019 [2]	Net interest income	$ 5,944	$ 1,205	$ 1,327	$ 1,681	$ 394	$ 10,551
	Non-interest income	2,296	2,822	584	1,794	564	8,060
	Total revenue	8,240	4,027	1,911	3,475	958	18,611
	Provision for credit losses	889	163	73	160	1	1,286
	Non-interest expenses	4,459	2,106	1,114	1,802	1,375	10,856
	Income (loss) before income taxes	2,892	1,758	724	1,513	(418)	6,469
	Income taxes	766	471	76	396	(361)	1,348
	Net income (loss)	$ 2,126	$ 1,287	$ 648	$ 1,117	$ (57)	$ 5,121
	Net income (loss) attributable to:						
	Non-controlling interests	$ –	$ –	$ –	$ –	$ 25	$ 25
	Equity shareholders	2,126	1,287	648	1,117	(82)	5,096

(1) Capital Markets revenue and income taxes are reported on a TEB, as were U.S. Commercial Banking and Wealth Management revenue and income taxes in 2019, with an equivalent offset in the revenue and income taxes of Corporate and Other.
(2) Certain prior period information has been revised. See the "External reporting changes" section for additional details.

The following discussion provides a comparison of our results of operations for the years ended October 31, 2020 and 2019.

Overview

Net income for 2020 was $3,792 million, compared with $5,121 million in 2019. The decrease in net income of $1,329 million was due to a higher provision for credit losses and higher non-interest expenses, partially offset by higher revenue.

Consolidated CIBC

Net interest income

Net interest income was up $493 million or 5% from 2019, primarily due to volume growth across our businesses, higher trading revenue and higher revenue from Capital Markets financing activities, partially offset by narrower margins driven by changes in the interest rate environment and interest rate relief provided to our credit card clients as part of the CIBC client relief programs offered to support our clients during the COVID-19 pandemic.

Non-interest income

Non-interest income was down $363 million or 5% from 2019, primarily due to lower client transaction activity as a result of the pandemic, lower sublease revenue relating to our adoption of IFRS 16 "Leases" in 2020 that was largely offset in interest income and non-interest expenses, mark-to-market losses related to economic hedges of certain non-trading activities that were largely offset in net interest income and lower trading revenue.

Provision for credit losses

Provision for credit losses was up $1,203 million or 94% from 2019. Provision for credit losses on performing loans was up $1,285 million from 2019, mainly due to increased provisions related to the onset of the COVID-19 pandemic. Provision for credit losses on impaired loans was down $82 million, due to lower insolvencies and write-offs in credit cards and personal lending, reflecting the impact of the client relief and government support programs, partially offset by higher provisions in business and government loans.

Non-interest expenses

Non-interest expenses were up $506 million or 5% from 2019, mainly due to a restructuring charge primarily related to employee severance, shown as an item of note, and higher performance-based compensation and additional employee benefits provided to support our employees during the COVID-19 pandemic.

Income taxes

Income tax expense was down $250 million or 19% from 2019, primarily due to lower income.

Revenue by segment

Canadian Personal and Business Banking[1]

Revenue was down $318 million or 4% from 2019, primarily due to narrower margins largely due to changes in the interest rate environment and interest rate relief provided to our credit card clients as part of the CIBC client relief programs offered to support our clients during the COVID-19 pandemic, and lower fees driven by lower client transaction activity, partially offset by volume growth.

Canadian Commercial Banking and Wealth Management

Revenue was up $94 million or 2% from 2019. Commercial banking revenue was up primarily due to volume growth and impact of an additional day in 2020, partially offset by narrower margins and lower fees. Wealth management revenue was up primarily due to higher investment management and custodial fees driven by higher average AUM and AUA and higher commission revenue, as well as higher foreign exchange revenue reflecting higher trading volume in our full service brokerage business, partially offset by lower mutual fund fees.

U.S. Commercial Banking and Wealth Management[1]

Revenue was up $132 million or 7% from 2019. Commercial banking revenue was up primarily due to volume growth, and the impact of foreign exchange translation, partially offset by narrower margins. Wealth management revenue was up primarily due to volume growth, higher investment management and custodial fees driven by higher AUM and the impact of foreign exchange translation, partially offset by narrower margins.

Capital Markets[1]

Revenue was up $578 million or 17% from 2019. Global markets revenue was up primarily due to higher revenue from our interest rate, foreign exchange and commodities trading businesses and higher revenue from financing activities, partially offset by lower revenue from our equity derivatives trading business. Corporate and investment banking revenue was up primarily due to higher debt and equity underwriting activity and higher corporate banking revenue, partially offset by lower advisory revenue. Direct financial services revenue was up primarily due to higher direct brokerage trading volumes.

Corporate and Other[1]

Revenue was down $356 million or 37% from 2019. International banking revenue was down primarily due to lower revenue in CIBC FirstCaribbean as a result of narrower margins largely due to changes in the interest rate environment related to COVID-19 and lower fees. Other revenue was down primarily due to lower treasury revenue largely as a result of excess liquidity costs, interest income related to the settlement of certain income tax matters in 2019, shown as an item of note, and due to lower sublease revenue relating to our adoption of IFRS 16 in 2020.

(1) Certain prior period information has been revised. See the "External reporting changes" section for additional details.

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 31 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 ROE.

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 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. 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.

The following table provides a reconciliation of GAAP (reported) results to non-GAAP (adjusted) results on a consolidated basis.

$ millions, for the year ended October 31	**2021**	2020	2019	2018	2017
Operating results – reported					
Total revenue	**$ 20,015**	$ 18,741	$ 18,611	$ 17,834	$ 16,280
Provision for credit losses	**158**	2,489	1,286	870	829
Non-interest expenses	**11,535**	11,362	10,856	10,258	9,571
Income before income taxes	**8,322**	4,890	6,469	6,706	5,880
Income taxes	**1,876**	1,098	1,348	1,422	1,162
Net income	**6,446**	3,792	5,121	5,284	4,718
Net income attributable to non-controlling interests	**17**	2	25	17	19
Net income attributable to equity shareholders	**6,429**	3,790	5,096	5,267	4,699
Diluted EPS ($)	**$ 13.93**	$ 8.22	$ 11.19	$ 11.65	$ 11.24
Impact of items of note [1]					
Revenue					
Settlement of certain income tax matters [2]	**$ –**	$ –	$ (67)	$ –	$ –
Purchase accounting adjustments [3]	**–**	–	(34)	(63)	(9)
Incremental losses on debt securities and loans in CIBC FirstCaribbean resulting from the Barbados government debt restructuring [2]	**–**	–	–	61	–
Gain on the sale and lease back of certain retail properties	**–**	–	–	–	(299)
Fees and charges related to the launch of Simplii Financial and the related wind-down of President's Choice Financial	**–**	–	–	–	3
Impact of items of note on revenue	**–**	–	(101)	(2)	(305)
Provision for (reversal of) credit losses					
Incremental losses on debt securities and loans in CIBC FirstCaribbean resulting from the Barbados government debt restructuring [2]	**–**	–	–	(28)	–
Transaction and integration-related costs as well as purchase accounting adjustments [3]	**–**	–	–	–	(35)
Increase (decrease) in collective allowance [4]	**–**	–	–	–	18
Impact of items of note on provision for (reversal of) credit losses	**–**	–	–	(28)	(17)
Non-interest expenses					
Amortization of acquisition-related intangible assets [5]	**(79)**	(105)	(109)	(115)	(41)
Transaction and integration-related costs as well as purchase accounting adjustments [3]	**(12)**	–	11	(79)	(78)
Charge related to the consolidation of our real estate portfolio [2]	**(109)**	(114)	–	–	–
Gain as a result of plan amendments related to pension and other post-employment plans [2]	**–**	79	–	–	–
Restructuring charge [6]	**–**	(339)	–	–	–
Goodwill impairment [7]	**–**	(248)	(135)	–	–
Increase in legal provisions [2]	**(125)**	(70)	(28)	–	(45)
Charge for payment made to Air Canada [8]	**–**	–	(227)	–	–
Fees and charges related to the launch of Simplii Financial and the related wind-down of President's Choice Financial	**–**	–	–	–	(95)
Impact of items of note on non-interest expenses	**(325)**	(797)	(488)	(194)	(259)
Total pre-tax impact of items of note on pre-provision, pre-tax earnings and net income	**325**	797	387	220	(29)
Settlement of certain income tax matters [2]	**–**	–	(18)	–	–
Amortization of acquisition-related intangible assets [5]	**19**	25	27	30	13
Transaction and integration-related costs as well as purchase accounting adjustments [3]	**3**	–	(12)	2	31
Charge related to the consolidation of our real estate portfolio	**29**	30	–	–	–
Gain as a result of plan amendments related to pension and other post-employment plans	**–**	(21)	–	–	–
Restructuring charge [6]	**–**	89	–	–	–
Increase in legal provisions [2]	**33**	19	7	–	12
Charge for payment made to Air Canada [8]	**–**	–	60	–	–
Incremental losses on debt securities and loans in CIBC FirstCaribbean resulting from the Barbados government debt restructuring [2]	**–**	–	–	19	–
Charge from net tax adjustments resulting from U.S. tax reforms [2]	**–**	–	–	(88)	–
Gain on the sale and lease back of certain retail properties	**–**	–	–	–	(54)
Fees and charges related to the launch of Simplii Financial and the related wind-down of President's Choice Financial	**–**	–	–	–	27
Increase (decrease) in collective allowance [4]	**–**	–	–	–	(5)
Impact of items of note on income taxes	**84**	142	64	(37)	24
Total after-tax impact of items of note on net income	**241**	655	323	257	(53)
After-tax impact of items of note on non-controlling interests	**–**	–	–	5	–
After-tax impact of items of note on net income attributable to equity shareholders	**241**	655	323	252	(53)
Impact of items of note on diluted EPS ($)	**$ 0.54**	$ 1.47	$ 0.73	$ 0.56	$ (0.13)

For footnotes, see next page.

$ millions, for the year ended October 31	2021	2020	2019	2018	2017
Operating results – adjusted [9]					
Total revenue – adjusted [10]	**$ 20,015**	$ 18,741	$ 18,510	$ 17,832	$ 15,975
Provision for credit losses – adjusted	**158**	2,489	1,286	842	812
Non-interest expenses – adjusted	**11,210**	10,565	10,368	10,064	9,312
Income before income taxes – adjusted	**8,647**	5,687	6,856	6,926	5,851
Income taxes – adjusted	**1,960**	1,240	1,412	1,385	1,186
Net income – adjusted	**6,687**	4,447	5,444	5,541	4,665
Net income attributable to non-controlling interests – adjusted	**17**	2	25	22	19
Net income attributable to equity shareholders – adjusted	**6,670**	4,445	5,419	5,519	4,646
Adjusted diluted EPS ($)	**$ 14.47**	$ 9.69	$ 11.92	$ 12.21	$ 11.11

(1) Items of note are removed from reported results to calculate adjusted results.
(2) Recognized in Corporate and Other.
(3) This item of note comprises integration costs, transaction costs and purchase accounting adjustments for various acquisitions. Transaction and integration costs, shown as an item of note starting in the fourth quarter of 2021, are comprised of direct and incremental costs incurred as part of planning for and executing the integration of the Canadian Costco credit card portfolio, including enabling cross-sell opportunities, the upgrade and conversion of systems and processes, project management and communication costs. Integration costs, shown as an item of note from second quarter of 2017 to 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 second quarter of 2017 to fourth quarter of 2019, included legal and other advisory fees, as well as financing costs associated with pre-funding the cash component of the merger consideration, and interest adjustments relating to the obligation payable to dissenting shareholders. Purchase accounting adjustments, shown as an item of note from fourth quarter of 2017 to fourth quarter of 2019, include the accretion of the acquisition date fair value discount on the acquired loans of The PrivateBank, the collective allowance established for new loan originations and renewals of acquired loans (prior to the adoption of IFRS 9 in the first quarter of 2018), and changes in the fair value of contingent consideration relating to the Geneva Advisors and Wellington Financial acquisitions.
(4) Relates to collective allowance (prior to the adoption of IFRS 9), except for: (i) residential mortgages greater than 90 days delinquent; (ii) personal loans and scored small business loans greater than 30 days delinquent; (iii) net write-offs for the card portfolio; and (iv) the collective allowance related to CIBC Bank USA, which were all reported in the respective SBUs.
(5) Amortization of acquisition-related intangible assets is recognized in the SBU of the acquired business or Corporate and Other. A summary is provided in the table below.

	2021	2020	2019	2018	2017
Canadian Personal and Business Banking (pre-tax)	**$ –**	$ (8)	$ (9)	$ (12)	$ (5)
Canadian Personal and Business Banking (after-tax)	**–**	(6)	(7)	(9)	(4)
Canadian Commercial Banking and Wealth Management (pre-tax)	**–**	(1)	(1)	(1)	(1)
Canadian Commercial Banking and Wealth Management (after-tax)	**–**	(1)	(1)	(1)	(1)
U.S. Commercial Banking and Wealth Management (pre-tax)	**(68)**	(83)	(88)	(91)	(27)
U.S. Commercial Banking and Wealth Management (after-tax)	**(50)**	(61)	(65)	(65)	(16)
Corporate and Other (pre-tax)	**(11)**	(13)	(11)	(11)	(8)
Corporate and Other (after-tax)	**(10)**	(12)	(9)	(10)	(7)

(6) Restructuring charge associated with ongoing efforts to transform our cost structure and simplify our bank. This charge consists primarily of employee severance and related costs and was recognized in Corporate and Other.
(7) Goodwill impairment charge related to our controlling interest in CIBC FirstCaribbean recognized in Corporate and Other with $28 million recognized in the second quarter of 2020, $220 million recognized in the fourth quarter of 2020 and $135 million recognized in the fourth quarter of 2019.
(8) Charge for a payment made to Air Canada, including related sales tax and transaction costs, to secure our participation in its new loyalty program recognized in Canadian Personal and Business Banking.
(9) Adjusted to exclude the impact of items of note.
(10) Excludes TEB adjustments of $204 million (2020: $183 million; 2019: $179 million). Our adjusted operating leverage and efficiency ratio are calculated on a TEB.

The following table provides a reconciliation of GAAP (reported) net income to non-GAAP (adjusted) net income 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
2021	**Reported net income (loss)**	**$ 2,494**	**$ 1,665**	**$ 926**	**$ 1,857**	**$ (496)**	**$ 6,446**
	After-tax impact of items of note [1]	**9**	**–**	**50**	**–**	**182**	**241**
	Adjusted net income (loss) [2]	**$ 2,503**	**$ 1,665**	**$ 976**	**$ 1,857**	**$ (314)**	**$ 6,687**
2020 [3]	Reported net income (loss)	$ 1,785	$ 1,202	$ 375	$ 1,308	$ (878)	$ 3,792
	After-tax impact of items of note [1]	6	1	61	–	587	655
	Adjusted net income (loss) [2]	$ 1,791	$ 1,203	$ 436	$ 1,308	$ (291)	$ 4,447
2019 [3]	Reported net income (loss)	$ 2,126	$ 1,287	$ 648	$ 1,117	$ (57)	$ 5,121
	After-tax impact of items of note [1]	174	1	40	–	108	323
	Adjusted net income (loss) [2]	$ 2,300	$ 1,288	$ 688	$ 1,117	$ 51	$ 5,444
2018	Reported net income (loss)	$ 2,540	$ 1,286	$ 561	$ 1,086	$ (189)	$ 5,284
	After-tax impact of items of note [1]	9	1	27	–	220	257
	Adjusted net income (loss) [2]	$ 2,549	$ 1,287	$ 588	$ 1,086	$ 31	$ 5,541
2017	Reported net income (loss)	$ 2,420	$ 1,138	$ 203	$ 1,090	$ (133)	$ 4,718
	After-tax impact of items of note [1]	(170)	1	19	–	97	(53)
	Adjusted net income (loss) [2]	$ 2,250	$ 1,139	$ 222	$ 1,090	$ (36)	$ 4,665

(1) Items of note are removed from reported results to calculate adjusted results.
(2) Non-GAAP measure.
(3) Certain prior period information has been revised. See the "External reporting changes" section for additional details.

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.

External reporting changes were made in the first quarter of 2021 which affected the results of our SBUs. See the "External reporting changes" section for additional details.

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. Consistent with the external reporting changes made in the first quarter of 2021 (see the "External reporting changes" section for additional details), the residual financial results associated with Treasury activities are reported in Corporate and Other. 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, digital and mobile channels to help make their ambitions a reality.

Our business strategy

We are focused on continuing to help our clients achieve their ambitions, and delivering sustainable, market-leading performance. To achieve this, our strategy comprises 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 and experiences to our clients in a way that is meaningful and relevant to each of them.

2021 progress

In 2021, we demonstrated positive momentum, despite the economic challenges and lower client transaction activity due to the COVID-19 pandemic. While demand for certain lending products was down, we saw a significant increase in mortgage demand this year as we helped more clients achieve their ambition of owning a home. We also delivered above market growth in everyday banking and investments solutions. As a result of our strategy, we have seen record client growth driven by strong acquisition and client retention, and made important investments to elevate both the experience of our clients and our team members. We will continue to maintain focus on our three strategic priorities and build on the momentum and successes of 2021.

Introducing more opportunities for our clients to deal with us digitally

- Ranked #1 again in Digital Satisfaction for Mobile Banking by J.D. Power; #1 in mobile banking experience in Surviscor's 2021 Mobile Banking Review; #1 ranking in Forrester's Digital Experience Review: Canadian Mobile Banking App Review; and named Best Consumer Digital Bank in North America by Global Finance for the second consecutive year.
- Launched CIBC Virtual Assistant for online and mobile clients, helping them answer their everyday banking questions in real-time.
- Introduced CIBC Insights, a digital financial coach that provides recommendations to help clients keep a pulse on their day-to-day finances.
- Launched Digital Identity Verification and FastApp, streamlining how clients open chequing and savings accounts, a personal line of credit, or a credit card digitally.
- Introduced more digital options for clients to renew their mortgage online, including an enhanced online pre-qualification tool.
- Enabled digital card issuance, so clients can receive a new or replacement digital credit card within minutes in the event their card is lost or stolen.

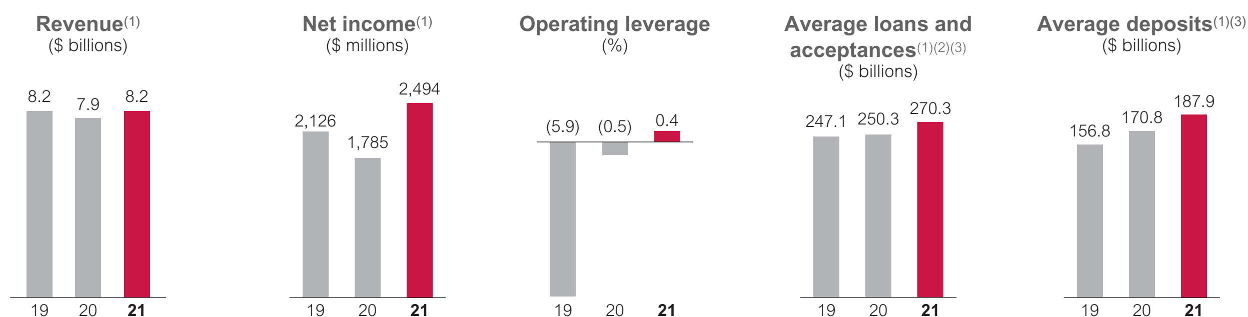
Providing our team with the tools to deliver an excellent experience for our clients

- Continued the rollout of CIBC GoalPlanner, a digitally enabled goal setting platform, allowing our Imperial Service advisors to better understand our clients' ambitions and to spend more time with them developing plans.
- Introduced a new client relationship management tool, enabling advisors to offer more personalized advice and deepen client relationships.
- Delivered a more integrated advice experience at our banking centres, including introducing a new Associate Financial Advisor role to support clients with complex financial needs.
- Extended our newcomer banking offer to include foreign workers and expanded our outreach, including a Newcomer Financial Guide in partnership with Canadian Immigrant magazine.
- Refreshed our Dividend Visa Cards with a new set of cashback categories, and introduced on-demand points redemption.

Delivering personalized advice to our clients in a way that is meaningful to them

- Announced an agreement to become the exclusive issuer of Costco-branded Mastercards in Canada, expected to close in the first half of fiscal 2022, and the acquisition of the existing Canadian Costco credit card portfolio, reflecting our focus on growing our Canadian consumer franchise.
- Expanded our business banking specialist team in support of our focus on entrepreneurs at all life stages, including the launch of Canada's first banking platform for Black-owned businesses.
- Helped clients build financial knowledge and confidence by offering virtual seminars and education focused on a range of topics such as, women and wealth, home ownership, as well as tax and estate planning for the LGBTQ+ community.
- Grew our mobile mortgage advisor workforce while strengthening our market position through a strategic partnership with REMAX.
- Ranked #1 on *Investment Executive* 2021 Report Card on Banks, for the sixth consecutive year.
- Helped our clients meet their personal climate ambitions with solutions such as offering a carbon offset for their gas purchases through the Parkland Journie Rewards program.

2021 financial review



(1) Certain prior period information has been revised. See the "External reporting changes" section for additional details.
(2) Loan amounts are stated before any related allowances.
(3) Average balances are calculated as a weighted average of daily closing balances.

Our focus for 2022

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:

- Introduce more opportunities for our clients to deal with us digitally;
- Provide our team with the tools to deliver an excellent experience for our clients; and
- Deliver personalized advice to our clients in a way that is meaningful to them.

Results[1]

$ millions, for the year ended October 31	2021	2020 [2]	2019 [2]
Revenue	**$ 8,150**	$ 7,922	$ 8,240
Provision for (reversal of) credit losses			
Impaired	**484**	625	790
Performing	**(134)**	564	99
Provision for credit losses	**350**	1,189	889
Non-interest expenses	**4,414**	4,308	4,459
Income before income taxes	**3,386**	2,425	2,892
Income taxes	**892**	640	766
Net income	**$ 2,494**	$ 1,785	$ 2,126
Net income attributable to:			
Equity shareholders	**$ 2,494**	$ 1,785	$ 2,126
Efficiency ratio	**54.2 %**	54.4 %	54.1 %
Operating leverage	**0.4 %**	(0.5)%	(5.9)%
Return on equity [3]	**38.1 %**	27.1 %	34.3 %
Average allocated common equity [3]	**$ 6,554**	$ 6,591	$ 6,192
Average assets ($ billions) [4]	**$ 272.6**	$ 253.0	$ 249.5
Average loans and acceptances ($ billions) [4]	**$ 270.3**	$ 250.3	$ 247.1
Average deposits ($ billions) [4]	**$ 187.9**	$ 170.8	$ 156.8
Full-time equivalent employees	**12,629**	12,437	13,013

(1) For additional segmented information, see Note 31 to the consolidated financial statements.
(2) Certain prior period information has been revised. See the "External reporting changes" section for additional details.
(3) For additional information, see the "Non-GAAP measures" section.
(4) Average balances are calculated as a weighted average of daily closing balances.

Financial overview

Net income was up $709 million or 40% from 2020, primarily due to lower provision for credit losses and higher revenue, partially offset by higher non-interest expenses.

Revenue

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.

Provision for credit losses

Provision for credit losses was down $839 million or 71% from 2020. The current year included a provision reversal on performing loans mainly due to a favourable change in economic conditions as well as our economic outlook partially offset by model parameter updates, while the prior year included a provision for credit losses due to an unfavourable change in our economic outlook relating to the onset of the COVID-19 pandemic. Provision for credit losses on impaired loans was down as the current year continued to benefit from higher levels of consumer liquidity from lower relative levels of spending and from government support programs, while the prior year included a normal level of loan losses prior to the onset of the pandemic.

Non-interest expenses

Non-interest expenses were up $106 million or 2% from 2020, primarily due to higher spending on strategic initiatives and performance-related compensation, partially offset by a favourable commodity tax adjustment in the current year.

Income taxes

Income taxes were up $252 million or 39% from 2020, primarily due to higher income.

Average assets

Average assets were up $19.6 billion or 8% from 2020, primarily due to growth in residential mortgages.

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 are:

- Accelerating the growth of Private Wealth Management;
- Evolving our Asset Management business in response to client needs; and
- Delivering focused, risk-controlled growth in our Commercial Bank.

2021 progress

In 2021, as the economy began transitioning to a post-pandemic environment, we continued to stay close to our clients, helping them navigate through the ongoing economic recovery. Commercial Banking saw record loan growth among existing clients, driven by an improved economic outlook as well as strong new client activity. Private Wealth Management saw significant growth in asset balances driven by market appreciation, record mutual fund sales, strong referral activity across our internal teams and an increased level of activity by clients.

Accelerating the growth of Private Wealth Management

- Increased recruitment of top talent across Private Wealth Management to broaden and deepen client relationships and accelerate market share growth.
- Launched exclusive banking offers for clients in key market segments to deepen existing and onboard new relationships.
- Launched CIBC Family Office services to support ultra-high net worth clients through wealth transitions within the family and through privately-owned business sales.
- Increased partner referrals activity across the bank to help clients fulfill their broader wealth needs.
- The *Globe and Mail* named 35 CIBC Wood Gundy advisors to its inaugural ranking of Canada's Top Wealth Advisors list.

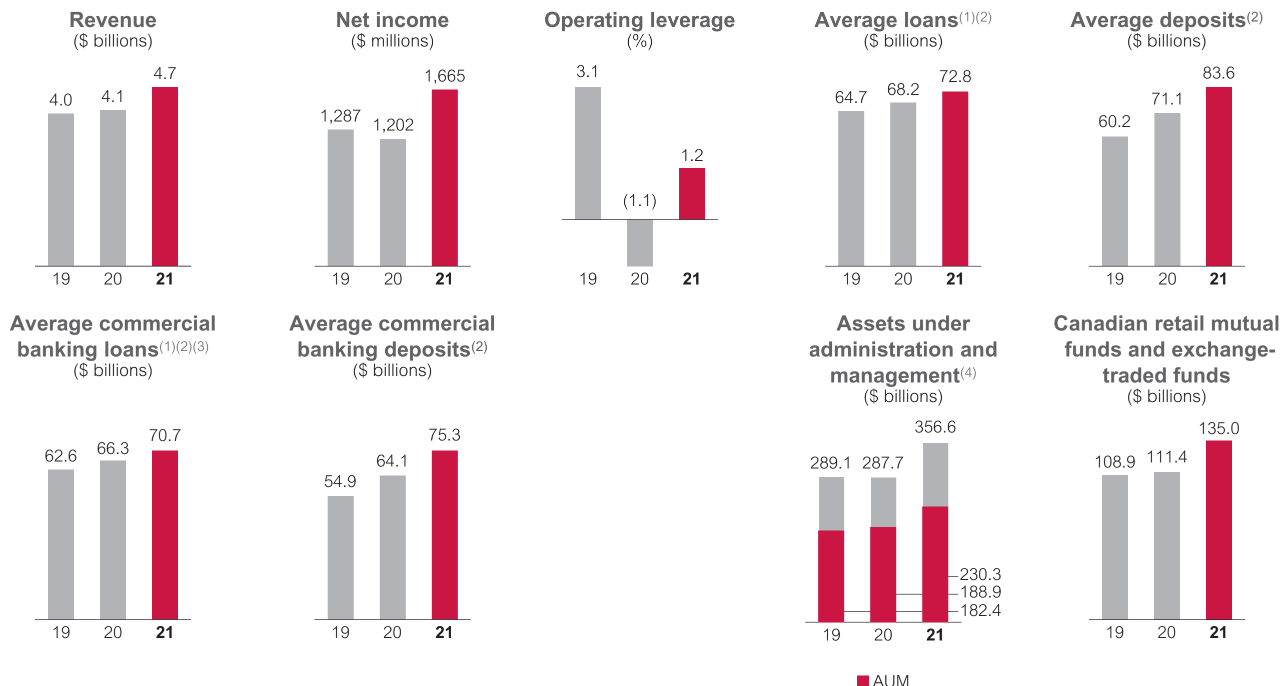
Evolving our Asset Management business in response to client needs

- Met the investment needs of our mass affluent, core banking and high net worth clients, resulting in record net flows in long-term mutual fund sales.
- Launched Sustainable Investment Solution mutual funds to align with our bank-wide ESG efforts, as well as client demand, where a percentage of our revenues are donated to organizations supporting climate transition activities.
- Founding signatory of Climate Engagement Canada and the Responsible Investment Association Canadian Investor Statement on Climate Change as part of our bank's ongoing efforts to address global climate change and to support investor demand for ESG-focused products.
- Refinitiv Lipper Funds Awards recognized four CIBC Asset Management funds for industry-leading performance.

Delivering focused, risk-controlled growth in our Commercial Bank

- Enhanced our offers to address the needs of the smaller end of the commercial banking market in high growth industries such as healthcare, technology, business services and franchising.
- Further expanded CIBC Innovation Banking across Canada, the U.S., and most recently in the U.K., to meet the needs of fast-growing and innovative industries such as technology, life sciences and venture capital funds.
- Global Finance Magazine named CIBC Canada's Best Treasury and Cash Management Bank for the sixth time.

2021 financial review



(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 2022

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:

- Accelerate the growth of Private Wealth Management to broaden and deepen client relationships;
- Evolve our Asset Management business to increase connectivity within our own bank channels and continue to extend our investment capabilities and fee structures to meet evolving client needs; and
- Delivering risk-controlled growth in our Commercial Bank, while fostering strong referrals across CIBC.

Results[1]

$ millions, for the year ended October 31	2021	2020	2019
Revenue			
Commercial banking	**$ 1,827**	$ 1,663	$ 1,633
Wealth management	**2,843**	2,458	2,394
Total revenue	**4,670**	4,121	4,027
Provision for (reversal of) credit losses			
Impaired	**6**	162	159
Performing	**(45)**	141	4
Provision for (reversal of) credit losses	**(39)**	303	163
Non-interest expenses	**2,443**	2,179	2,106
Income before income taxes	**2,266**	1,639	1,758
Income taxes	**601**	437	471
Net income	**$ 1,665**	$ 1,202	$ 1,287
Net income attributable to:			
Equity shareholders	**$ 1,665**	$ 1,202	$ 1,287
Efficiency ratio	**52.3 %**	52.9 %	52.3 %
Operating leverage	**1.2 %**	(1.1)%	3.1 %
Return on equity [2]	**24.5 %**	18.6 %	21.7 %
Average allocated common equity [2]	**$ 6,794**	$ 6,454	$ 5,929
Average assets ($ billions) [3]	**$ 70.1**	$ 65.8	$ 62.6
Average loans ($ billions) [3]	**$ 72.8**	$ 68.2	$ 64.7
Average deposits ($ billions) [3]	**$ 83.6**	$ 71.1	$ 60.2
AUA ($ billions)	**$ 356.6**	$ 287.7	$ 289.1
AUM ($ billions)	**$ 230.3**	$ 188.9	$ 182.4
Full-time equivalent employees	**5,241**	4,984	5,048

(1) For additional segmented information, see Note 31 to the consolidated financial statements.
(2) For additional information, see the "Non-GAAP measures" section.
(3) Average balances are calculated as a weighted average of daily closing balances.

Financial overview

Net income was up $463 million or 39% from 2020, primarily due to higher revenue and a provision reversal in the current year compared with a provision for credit losses in the prior year, partially offset by higher non-interest expenses.

Revenue

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.

Provision for credit losses

The current year included a reversal of credit losses of $39 million, while the prior year included a provision for credit losses of $303 million. The current year included a provision reversal on performing loans due to a favourable change in economic conditions as well as our economic outlook, while the prior year included a provision for credit losses due to an unfavourable change in our economic outlook relating to the onset of the COVID-19 pandemic. Provision for credit losses on impaired loans was down as the prior year was impacted by the onset of the COVID-19 pandemic and provisions related to one fraud-related impairment.

Non-interest expenses

Non-interest expenses were up $264 million or 12% from 2020, primarily due to higher performance-based compensation.

Income taxes

Income taxes were up $164 million or 38% from 2020, primarily due to higher income.

Average assets

Average assets were up $4.3 billion or 6% from 2020, primarily due to growth in commercial loans.

Assets under administration

AUA were up $68.9 billion or 24% from 2020, primarily due to market appreciation and net sales. 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 commercial banking and private wealth services across the U.S., as well as personal and small business banking services in four U.S. Midwestern markets and focuses on middle-market and mid-corporate companies and high-net-worth individuals and families.

Our business strategy

Our goal is to continue building a best-in-class commercial and wealth management financial institution in the U.S., with seamless connectivity to our Capital Markets and Canadian Commercial Banking and Wealth Management franchise. Our key strategic priorities, which have evolved over the year, are:

- 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.

2021 progress

In 2021, our continued focus on deep-rooted relationship banking helped attract new clients and guide existing relationships through a challenging economic environment. This approach continues to generate strong loan, deposit and AUM/AUA growth, which coupled with prudent investments, helped mitigate revenue pressures associated with margin compression experienced throughout the industry. Our offering of products and services continues to expand as we leverage cross-border capabilities and maintain investment in improving processes, technology and meeting client needs.

Building and deepening client relationships

- Drove solid loan and deposit growth given market conditions, including continued expansion of our private banking business with existing commercial and wealth clients.
- Supported our clients who faced continued headwinds as a result of the pandemic with an additional $500 million of Paycheck Protection Program (PPP) financing in the first half of fiscal 2021.
- Generated strong growth in AUM and AUA, bolstered by the performance of our investment strategies and net inflows, driving asset management fees to nearly 50% of non-interest income for 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.
- Recognized as Retail Banking and Commercial Banking Client Experience leaders by Coalition Greenwich.
- Ranked as a Top Five Registered Investment Advisor by *Barron's* for the second straight 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, expanding the team and introducing online account opening for private banking clients.
- Expanded deposit gathering, including with our specialty commercial banking and institutional real estate clients.

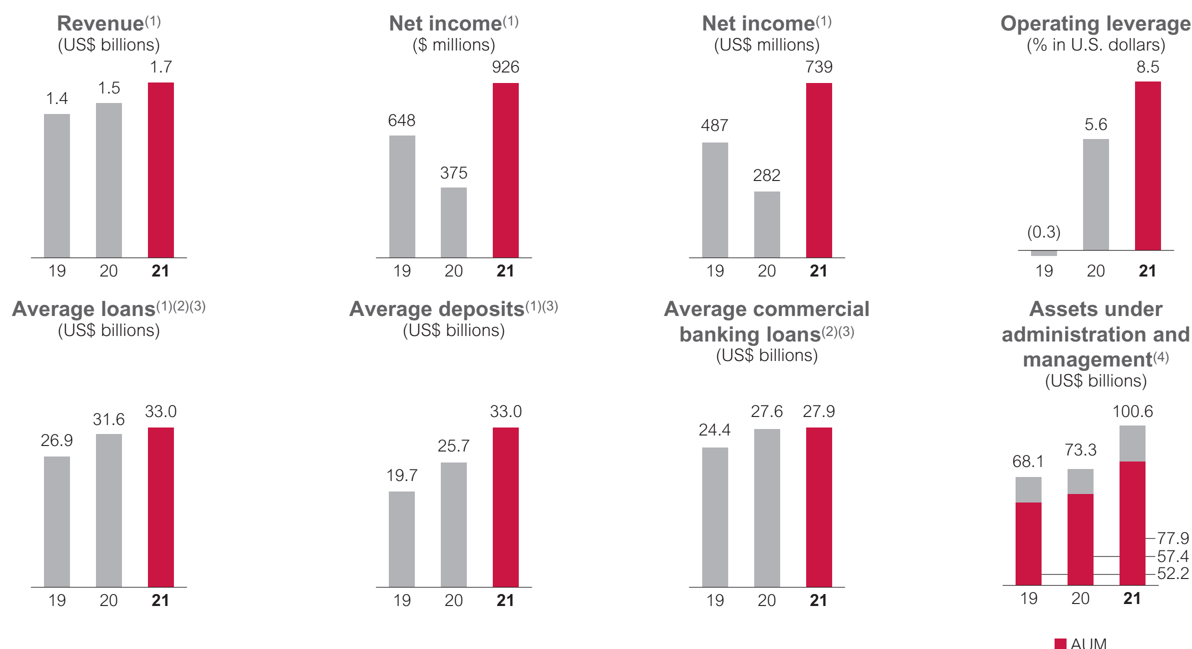
Improving efficiency through data and technology

- Advanced the implementation of customer relationship management (CRM) 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 adding online account opening capabilities for consumer clients, introducing card control features to consumer mobile banking and enhancing our servicing platform for our commercial banking clients.

Advancing the growth and transformation of our business

- Expanded Commercial Real Estate banking in the southeast U.S. region.
- Further enhanced our risk and change management infrastructure to support our growth.

2021 financial review



(1) Certain prior period information has been revised. See the "External reporting changes" section for additional details.
(2) Loan amounts are stated before any related allowances.
(3) Average balances are calculated as a weighted average of daily closing balances.
(4) AUM amounts are included in the amounts reported under AUA.

Our focus for 2022

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:

- Building and deepening client relationships through referral activity across all businesses, disciplined growth in Commercial Banking and greater scale in Private Wealth Management;
- Strengthen and diversify our deposit base by leveraging private banking services for commercial and wealth clients and continued growth in regional expansion markets such as Florida and Texas;
- Improve efficiency through data and technology to support growth, modernizing consumer and commercial digital platforms and enhancing data-driven decision making; and
- Advance the transformation of our business through continued investment in people, infrastructure and growth initiatives.

Results in Canadian dollars[1]

$ millions, for the year ended October 31	2021	2020 [2]	2019 [2]
Revenue			
Commercial banking	**$ 1,444**	$ 1,421	$ 1,300
Wealth management [3]	**750**	622	611
Total revenue [4][5]	**2,194**	2,043	1,911
Provision for (reversal of) credit losses			
Impaired	**104**	133	68
Performing	**(179)**	354	5
Provision for (reversal of) credit losses	**(75)**	487	73
Non-interest expenses	**1,121**	1,126	1,114
Income before income taxes	**1,148**	430	724
Income taxes [5]	**222**	55	76
Net income	**$ 926**	$ 375	$ 648
Net income attributable to:			
Equity shareholders	**$ 926**	$ 375	$ 648
Average allocated common equity [6]	**$ 8,975**	$ 9,196	$ 8,533
Average assets ($ billions) [7]	**$ 46.7**	$ 48.2	$ 41.2
Average loans ($ billions) [7]	**$ 41.4**	$ 42.5	$ 35.7
Average deposits ($ billions) [7]	**$ 41.4**	$ 34.6	$ 26.1
AUA ($ billions) [8]	**$ 124.5**	$ 97.6	$ 89.7
AUM ($ billions) [8]	**$ 96.4**	$ 76.4	$ 68.8
Full-time equivalent employees	**2,170**	2,085	2,095

(1) For additional segmented information, see Note 31 to the consolidated financial statements.
(2) Certain prior period information has been revised. See the "External reporting changes" section for additional details.
(3) Includes revenue related to the U.S. Paycheck Protection Program.
(4) Included $15 million of income relating to the accretion of the acquisition date fair value discount on the acquired loans of The PrivateBank (2020: $20 million; 2019: $35 million).
(5) Revenue and income taxes are reported on a TEB. Accordingly, revenue and income taxes include a TEB adjustment of nil (2020: nil; 2019: $2 million). The equivalent amounts are offset in the revenue and income taxes of Corporate and Other.
(6) For additional information, see the "Non-GAAP measures" section.
(7) Average balances are calculated as a weighted average of daily closing balances.
(8) Includes certain Canadian Commercial Banking and Wealth Management assets that U.S. Commercial Banking and Wealth Management provides sub-advisory services for.

Results in U.S. dollars[1]

US$ millions, for the year ended October 31	2021	2020 [2]	2019 [2]
Revenue			
Commercial banking	**$ 1,151**	$ 1,056	$ 978
Wealth management [3]	**597**	464	460
Total revenue [4][5]	**1,748**	1,520	1,438
Provision for (reversal of) credit losses			
Impaired	**82**	99	52
Performing	**(143)**	259	3
Provision for (reversal of) credit losses	**(61)**	358	55
Non-interest expenses	**893**	838	838
Income before income taxes	**916**	324	545
Income taxes [5]	**177**	42	58
Net income	**$ 739**	$ 282	$ 487
Net income attributable to:			
Equity shareholders	**$ 739**	$ 282	$ 487
Efficiency ratio	**51.1 %**	55.1 %	58.3 %
Operating leverage	**8.5 %**	5.6 %	(0.3) %
Return on equity [6]	**10.3 %**	4.1 %	7.6 %
Average allocated common equity [6]	**$ 7,149.0**	$ 6,841.0	$ 6,419.0
Average assets ($ billions) [7]	**$ 37.2**	$ 35.9	$ 31.0
Average loans ($ billions) [7]	**$ 33.0**	$ 31.6	$ 26.9
Average deposits ($ billions) [7]	**$ 33.0**	$ 25.7	$ 19.7
AUA ($ billions) [8]	**$ 100.6**	$ 73.3	$ 68.1
AUM ($ billions) [8]	**$ 77.9**	$ 57.4	$ 52.2

(1) For additional segmented information, see Note 31 to the consolidated financial statements.
(2) Certain prior period information has been revised. See the "External reporting changes" section for additional details.
(3) Includes revenue related to the U.S. Paycheck Protection Program.
(4) Included US$12 million of income relating to the accretion of the acquisition date fair value discount on the acquired loans of The PrivateBank (2020: US$15 million; 2019: US$25 million).
(5) Revenue and income taxes are reported on a TEB. Accordingly, revenue and income taxes include a TEB adjustment of nil (2020: nil; 2019: US$2 million). The equivalent amounts are offset in the revenue and income taxes of Corporate and Other.
(6) For additional information, see the "Non-GAAP measures" section.
(7) Average balances are calculated as a weighted average of daily closing balances.
(8) Includes certain Canadian Commercial Banking and Wealth Management assets that U.S. Commercial Banking and Wealth Management provides sub-advisory services for.

Financial overview

Net income was up $551 million (US$457 million) or 147% from 2020, primarily due to a provision reversal in the current year compared with a provision for credit losses in the prior year and higher revenue.

Revenue

Revenue was up US$228 million or 15% from 2020.

Commercial banking revenue was up US$95 million or 9%, primarily due to volume growth and higher fees, partially offset by lower product spreads.

Wealth management revenue was up US$133 million or 29%, 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, and volume growth.

Provision for credit losses

The current year included a reversal of credit losses of US$61 million while the prior year included a provision for credit losses of US$358 million. The current year included a provision reversal on performing loans due to a favourable change in economic conditions as well as our economic outlook, while the prior year included a provision for credit losses due to an unfavourable change in our economic outlook relating to the onset of the COVID-19 pandemic. Provision for credit losses on impaired loans was down as the prior year was impacted by the onset of the COVID-19 pandemic.

Non-interest expenses

Non-interest expenses were up US$55 million or 7% from 2020, primarily due to higher employee-related compensation, partially offset by lower business development costs and the timing of spending on strategic initiatives.

Income taxes

Income taxes were up US$135 million or 321% from 2020, primarily due to higher income.

Average assets

Average assets were up US$1.3 billion or 4% from 2020, primarily due to growth in loans.

Assets under administration

AUA were up US$27.3 billion or 37% from 2020, primarily due to market appreciation and 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 digitally enabled 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 are:

- Being the leading capital markets platform in Canada for our core clients;
- Building a North American client platform with global capabilities; and
- Increasing connectivity across CIBC to deliver greater value and a better experience for our clients.

2021 progress

In 2021, 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 2021 was enabled by our strong focus on our clients, favourable market conditions for investment banking and corporate banking activity, and continuing strong performance in Global Markets. In addition, we further expanded our Direct Financial Services business to generate more fee-based revenue and attract new clients seeking a self-serve, digitally enabled banking and investing model.

Being the leading capital markets platform in Canada for our core clients

- Established a new Energy, Infrastructure and Transition investment banking group with a global focus on delivering industry-leading advice and capital markets solutions to clients across the full infrastructure and energy spectrum, and enabling the transition to a lower carbon future.
- Continued to support the growth ambitions of our clients emerging from the pandemic, managing their funding and liquidity needs with expert advice for the long-term.
- Strengthened our platform by continuing to invest in talent and technology, including investments in simplifying processes and promoting talent to foster our client-focused culture.
- Recognized as a leader in bond trading in 2021, ranked #1 or #2 in the Investment Industry Regulatory Organization of Canada (IIROC)'s Monthly Bond Trading Volumes.

Building a North American client platform with global capabilities

- Made a strategic investment in Chicago-headquartered financial services firm Loop Capital, which is aligned with our strategy to accelerate our momentum in the U.S.
- Established a leadership position in sustainable finance, acting as a Sustainability Agent on eight sustainability-linked loans ("SLLs") during the year and ranking first on the Bloomberg SLL league tables for Canadian issuances for 2021.
- Achieved top 10 ranking in financing for the renewable industry across North America for transactions that closed from January 1, 2021 to September 30, 2021 (North American Renewables League Tables by Inframation).
- Partnered with three global banks to launch Project Carbon, a platform that brings liquidity and transparency to the market for carbon credits, helping to enable the sustainability ambitions of our clients.

Increasing connectivity across CIBC to deliver greater value and a better experience for our clients

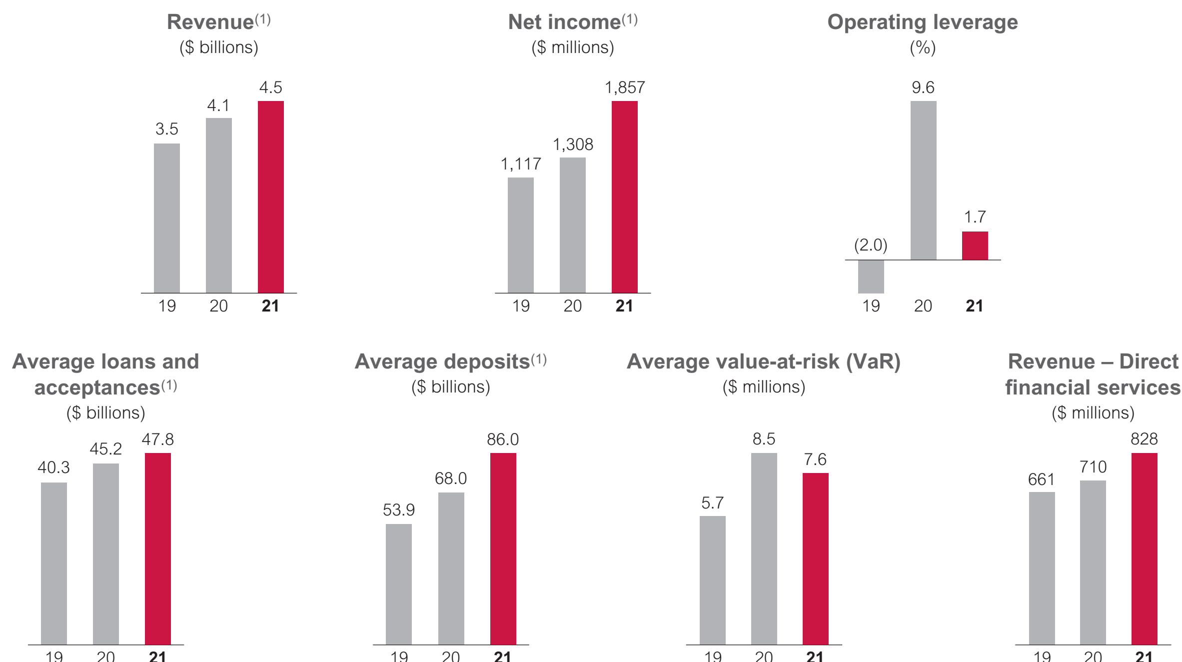
- Launched the industry-first Canadian Depositary Receipts (CDRs) as part of our ongoing commitment to developing innovative, market-based solutions that meet investor needs.
- Broadened the banking services available to clients through Simplii Financial, including the introduction of a U.S. dollar account and the rollout of Visa Direct.
- Continued to enhance our offerings to clients with services such as Global Money Transfer, and further expanded the capabilities of our International Student Pay program.
- Recognized as a 2021 Canadian FX Service Quality Leader as measured by the Greenwich Quality Index by Canadian Corporations and Financial Institutional clients.

As a leading capital markets franchise in Canada and banking partner to our clients around the world, Capital Markets acted as:

- Financial advisor to Husky Energy on its combination with Cenovus Energy in an all-stock transaction valued at approximately $23.6 billion (including debt) to create a resilient integrated energy leader that is well positioned to provide superior returns for investors over the long term, as well as strong environmental, social and governance performance.
- Financial Advisor to Intact Financial Corporation (Company) on its acquisition, together with Tryg A/S, of international P&C insurer RSA Insurance Group Plc for a transaction value of approximately $12.3 billion; joint bookrunner on the underwritten financing package including £1.465 billion in bridge facilities and a £350 million term loan, sole bookrunner on an increase to the Company's existing revolving credit facility from $750 million to $1.5 billion and lead left bookrunner on a $1.25 billion issue of subscription receipts and an aggregate $1.85 billion of notes.
- Joint bookrunner and joint lead arranger on a US$1.825 billion 7-year term loan B, US$700 million of 7-year senior secured notes, and US$1.035 billion of 8-year senior unsecured notes in connection with an acquisition financing and refinancing for Madison IAQ, a portfolio company of Madison Industries.
- Bookrunner on the two largest Canadian initial public offerings (IPOs) of the year: Joint bookrunner on a US$1.1 billion IPO of subordinate voting shares for TELUS International (Cda) Inc. consisting of a treasury offering and a secondary offering from TELUS Corporation and Barings Private Equity Asia Group Limited, the largest technology IPO, and lead on a $719 million IPO of subordinate voting shares for dentalcorp Holdings Ltd., the largest healthcare IPO in Canada.
- Joint bookrunner on a number of corporate green bonds including Allied Properties REIT's $600 million and $500 million green debentures, Algonquin Power Co.'s $400 million green debentures and BCI Quadreal Realty's $400 million green notes offerings as well as joint lead manager for the Province of Ontario's $1.25 billion green bond and European Investment Bank's $1 billion maple green bond offerings.

- Led the structuring and execution of a number of SLLs in Canada, including acting as the administrative agent, joint bookrunner, and co-sustainability structuring agent for Enbridge's $1 billion SLL, the first SLL for a Canadian energy infrastructure client, and acting as administrative agent, sole bookrunner, and sole sustainability structuring agent for TransAlta Corporation's $1.25 billion SLL and Enerplus Corporation's US$900 million SLL.

2021 financial review



(1) Certain prior period information has been revised. See the "External reporting changes" section for additional details.

Our focus for 2022

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	2021	2020 [2]	2019 [2]
Revenue			
Global markets	$ 2,076	$ 1,999	$ 1,583
Corporate and investment banking	1,616	1,344	1,231
Direct financial services	828	710	661
Total revenue [3]	4,520	4,053	3,475
Provision for (reversal of) credit losses			
Impaired	32	121	109
Performing	(132)	190	51
Provision for (reversal of) credit losses	(100)	311	160
Non-interest expenses	2,117	1,929	1,802
Income before income taxes	2,503	1,813	1,513
Income taxes [3]	646	505	396
Net income	$ 1,857	$ 1,308	$ 1,117
Net income attributable to:			
Equity shareholders	$ 1,857	$ 1,308	$ 1,117
Efficiency ratio	46.8 %	47.6 %	51.8 %
Operating leverage	1.7 %	9.6 %	(2.0)%
Return on equity [4]	25.6 %	18.8 %	17.5 %
Average allocated common equity [4]	$ 7,241	$ 6,948	$ 6,399
Average assets ($ billions) [5]	$ 255.1	$ 230.2	$ 194.1
Average loans and acceptances ($ billions) [5]	$ 47.8	$ 45.2	$ 40.3
Average deposits ($ billions) [5]	$ 86.0	$ 68.0	$ 53.9
Full-time equivalent employees [6]	2,225	1,912	1,867

(1) For additional segmented information, see Note 31 to the consolidated financial statements.
(2) Certain prior period information has been revised. See the "External reporting changes" section for additional details.
(3) Revenue and income taxes are reported on a TEB. Accordingly, revenue and income taxes include a TEB adjustment of $204 million (2020: $183 million; 2019: $177 million). The equivalent amounts are offset in the revenue and income taxes of Corporate and Other.
(4) For additional information, see the "Non-GAAP measures" section.
(5) Average balances are calculated as a weighted average of daily closing balances.
(6) 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 $549 million or 42% from 2020, primarily due to higher revenue and a provision reversal in the current year compared to a provision for credit losses in the prior year, partially offset by higher non-interest expenses.

Revenue

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 trading brokerage, and innovative foreign exchange and payments business.

Provision for (reversal of) credit losses

The current year included a reversal of credit losses of $100 million while the prior year included a provision for credit losses of $311 million. The current year included a provision reversal on performing loans due to a favourable change in economic conditions as well as our economic outlook, while the prior year included a provision for credit losses due to an unfavourable change in our economic outlook relating to the onset of the COVID-19 pandemic. Provision for credit losses on impaired loans was down as the prior year included higher provisions in the oil and gas sector.

Non-interest expenses

Non-interest expenses were up $188 million or 10% from 2020, primarily due to higher employee-related compensation and the timing of spending on strategic initiatives.

Income taxes

Income taxes were up $141 million or 28% from 2020, primarily due to higher income.

Average assets

Average assets were up $24.9 billion or 11% from 2020, primarily due to higher securities purchased under resale agreements, higher trading securities and higher loan balances.

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	**2021**	2020 [2]	2019 [2]
Revenue			
International banking	**$ 687**	$ 734	$ 798
Other	**(206)**	(132)	160
Total revenue [3]	**481**	602	958
Provision for (reversal of) credit losses			
Impaired	**76**	24	21
Performing	**(54)**	175	(20)
Provision for credit losses	**22**	199	1
Non-interest expenses	**1,440**	1,820	1,375
Loss before income taxes	**(981)**	(1,417)	(418)
Income taxes [3]	**(485)**	(539)	(361)
Net income (loss)	**$ (496)**	$ (878)	$ (57)
Net income (loss) attributable to:			
Non-controlling interests	**$ 17**	$ 2	$ 25
Equity shareholders	**(513)**	(880)	(82)
Full-time equivalent employees	**23,017**	22,435	23,134

(1) For additional segmented information, see Note 31 to the consolidated financial statements.
(2) Certain prior period information has been revised. See the "External reporting changes" section for additional details.
(3) Revenue and income taxes of Capital Markets and U.S. Commercial Banking and Wealth Management 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 $204 million (2020: $183 million; 2019: $179 million).

Financial overview

Net loss was down $382 million from 2020, due to lower non-interest expenses and lower provision for credit losses, partially offset by lower revenue.

Revenue

Revenue was down $121 million 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 the prior year, volume growth and higher fees.

Other revenue was down $74 million, primarily due to lower revenue from our strategic investments, interest income in the prior year related to the settlement of certain income tax matters, a higher TEB adjustment and lower treasury revenue.

Provision for (reversal of) credit losses

Provision for credit losses was down $177 million from 2020. The current year included a reversal of credit losses on performing loans due to a favourable change in our economic outlook for the Caribbean region, while the prior year included a provision for credit losses due to an unfavourable change in economic conditions as well as our economic outlook relating to the onset of the COVID-19 pandemic. Provision for credit losses on impaired loans was up due to higher provisions in CIBC FirstCaribbean.

Non-interest expenses

Non-interest expenses were down $380 million from 2020, as the prior year included a restructuring charge and a goodwill impairment charge, partially offset by a gain in the prior year as a result of plan amendments related to pension and other post-employment plans, all shown as items of note. The current year included higher unallocated corporate support costs, donations and legal provisions.

Income taxes

Income tax benefit was down $54 million from 2020, primarily due to a lower loss.

Financial condition

Review of condensed consolidated balance sheet

$ millions, as at October 31	2021	2020
Assets		
Cash and deposits with banks	**$ 56,997**	$ 62,518
Securities	**161,401**	149,046
Securities borrowed and purchased under resale agreements	**79,940**	74,142
Loans and acceptances	**462,879**	416,388
Derivative instruments	**35,912**	32,730
Other assets	**40,554**	34,727
	$ 837,683	$ 769,551
Liabilities and equity		
Deposits	**$ 621,158**	$ 570,740
Obligations related to securities lent, sold short and under repurchase agreements	**97,133**	89,440
Derivative instruments	**32,101**	30,508
Acceptances	**10,961**	9,649
Other liabilities	**24,961**	22,167
Subordinated indebtedness	**5,539**	5,712
Equity	**45,830**	41,335
	$ 837,683	$ 769,551

Assets

Total assets as at October 31, 2021 were up $68.1 billion or 9% from 2020, net of a decrease of approximately $17 billion due to the depreciation of the U.S. dollar.

Cash and deposits with banks decreased by $5.5 billion or 9%, primarily due to lower short-term placements in Treasury.

Securities increased by $12.4 billion or 8%, primarily due to increases in corporate equity and debt securities in foreign governments, partially offset by decreases in debt securities in Canadian governments. Further details on the composition of securities are provided in the "Supplementary annual financial information" section and Note 5 to the consolidated financial statements.

Securities borrowed and purchased under resale agreements increased by $5.8 billion or 8%, primarily due to client-driven activities.

Net loans and acceptances increased by $46.5 billion or 11%, primarily due to increases in Canadian residential mortgages, and Canadian and U.S. business and government loans. Further details on the composition of loans and acceptances are provided in the "Supplementary annual financial information" section and Note 6 to the consolidated financial statements.

Derivative instruments increased by $3.2 billion or 10%, largely driven by increases in other commodity and equity derivatives valuation, partially offset by a decrease in interest rate derivatives valuation.

Other assets increased by $5.8 billion or 17%, primarily due to increases in broker receivables and collateral pledged for derivatives.

Liabilities

Total liabilities as at October 31, 2021 were up $63.6 billion or 9% from 2020, net of a decrease of approximately $16 billion due to the depreciation of the U.S. dollar.

Deposits increased by $50.4 billion or 9%, primarily due to increased wholesale funding, increased business and government deposits, and domestic retail volume growth. Further details on the composition of deposits are provided in the "Supplementary annual financial information" section and Note 11 to the consolidated financial statements.

Obligations related to securities lent, sold short and under repurchase agreements increased by $7.7 billion or 9%, primarily due to client-driven activities.

Derivative instruments increased by $1.6 billion or 5%, largely driven by increases in equity and other commodity derivatives valuation, partially offset by a decrease in interest rate derivatives valuation.

Acceptances increased by $1.3 billion or 14%, driven by client activities.

Other liabilities increased by $2.8 billion or 13%, primarily due to increases in collateral received for derivatives and broker payables.

Subordinated indebtedness decreased by $0.2 billion or 3%. In the first quarter we redeemed subordinated indebtedness and in the second quarter we issued subordinated indebtedness. For further details see the "Capital management" section.

Equity

Equity as at October 31, 2021 increased $4.5 billion or 11% from 2020, primarily due to a net increase in retained earnings, the issuance of a limited recourse capital note, partially offset by a decrease in accumulated other comprehensive income resulting from a net loss from foreign currency translation adjustments, partially offset by a net remeasurement gain from post-employment defined benefit plans. 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.

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.

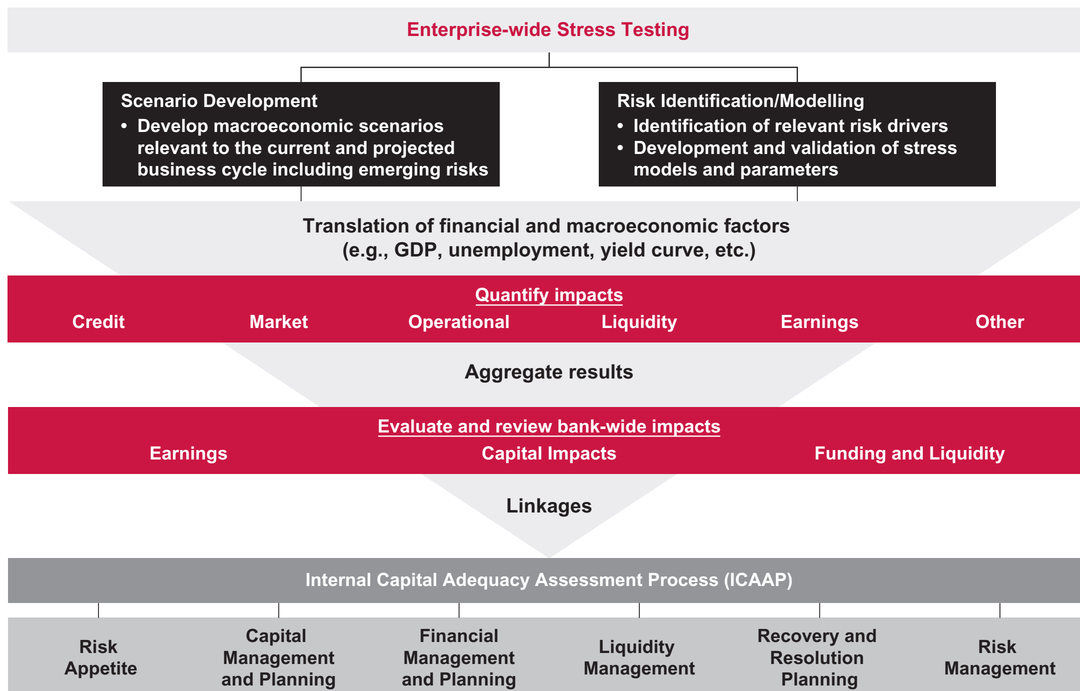
The Board, with endorsement from the Risk Management Committee (RMC), provides oversight of CIBC's capital management through the approval of our risk appetite, capital policy and plan. The RMC is provided with regular updates on our capital position including performance to date, updated forecasts, 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

Federally regulated financial institutions 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.

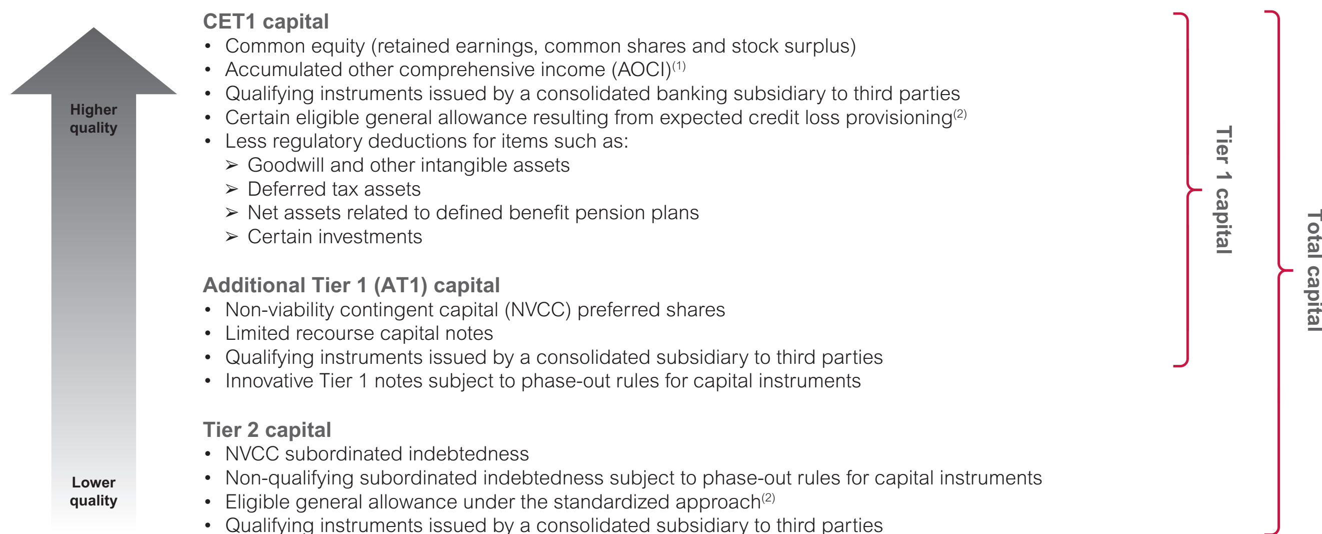
Resolution plan

In 2019, the Canada Deposit Insurance Corporation (CDIC), Canada's resolution authority for its member institutions, including domestic systemically important banks (D-SIBs), issued guidance for the development of comprehensive resolution plans. CDIC considers it a priority to ensure that banks undertake the necessary work to create, maintain and test resolution plans, demonstrate their feasibility, and address any impediments to ensure resolvability can be achieved in an orderly fashion. CIBC has developed its resolution plan in line with the guidance, and provided its latest submission to CDIC in October 2021.

Regulatory capital requirements under Basel III

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) 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 fiscal 2022. 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. Non-qualifying Tier 1 and Tier 2 capital instruments are excluded from regulatory capital at a rate of 10% per annum until November 2021, at which point they will have no regulatory value.

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 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 (see the "Continuous enhancement to regulatory capital requirements" section for details regarding a recent increase to the DSB requirement that became effective October 31, 2021). 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, 2021	**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, 2021.
(2) The DSB was increased to 2.5% effective October 31, 2021. See the "Continuous enhancement to regulatory capital requirements" section for additional details.

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.	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.
	OSFI provides two approaches for calculating counterparty credit risk (CCR) for derivatives transactions: • Standardized Approach (SA-CCR) • Internal Model Method (IMM)	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.
	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	The comprehensive approach, with supervisory haircuts, is used for credit risk mitigation for repo-style transactions.
	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	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.
	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 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 2020 Annual Report.

OSFI capital ruling

On March 15, 2021, OSFI published an update to its July 18, 2020 capital ruling on Limited Recourse Capital Notes (LRCNs). The July 18, 2020 capital ruling assessed LRCNs relative to the eligibility criteria set out in the CAR Guideline, and provided that the LRCNs can qualify as Additional Tier 1 regulatory capital, subject to certain limitations and disclosure requirements. The 2021 revisions provide clarification on the ruling's conditions and limitations on the permitted investor base, and a cap on the amount of LRCN issuances that may be included in regulatory capital. Refer to the "Capital initiatives" section and Note 16 to the consolidated financial statements for further details related to the LRCNs issued in the fourth quarter of 2021 and 2020.

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 resulted 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 Internal Ratings-Based (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.

Basel III reforms and revised Pillar 3 disclosure requirements

On March 27, 2020, the Group of Central Bank Governors and Heads of Supervision (GHOS) announced the deferral of the implementation of the Basel III reforms in order to increase the operational ability of banks and supervisors to respond to the COVID-19 pandemic. On March 27, 2020, OSFI similarly announced that implementation of the Basel III reforms would be delayed consistent with the GHOS announcement. In March and June 2021, OSFI launched public consultations on the implementation of the final Basel III reforms into its capital, leverage and related disclosure guidelines, as well as certain updates to the treatment of credit valuation adjustments (CVA), market risk hedges of other valuation adjustments of over-the-counter derivatives and management of operational risk. OSFI's proposals are in line with the BCBS standards, with considerations given to the Canadian market. OSFI's proposed changes include:

- Revisions to both the IRB 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 beginning in 2023; and
- Modification to the Leverage Ratio framework, including a buffer requirement for D-SIBs.

Consistent with the GHOS announcement on March 27, 2020 that the implementation date of the revised Pillar 3 disclosure requirements finalized in December 2018 would be deferred by one year, on March 27, 2020, OSFI also announced that the implementation date for Canadian deposit-taking institutions would be no earlier than November 1, 2022.

On November 29, 2021, OSFI announced that 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 will continue to be targeted for the first quarter of 2024.

Domestic Stability Buffer

In response to the COVID-19 pandemic and market conditions, OSFI had announced an immediate reduction in the DSB requirement from 2.0% to 1.0% for all D-SIBs effective March 13, 2020. After maintaining the DSB at 1.0% since that time, OSFI announced on June 17, 2021 that it will be increased to 2.5% effective October 31, 2021. The 2.5% reflects the highest DSB requirement under OSFI capital requirements. This increases OSFI's target capital ratios, including all buffers, for CET1, Tier 1 and Total capital to 10.5%, 12.0% and 14.0% respectively.

Capital treatment of federal program supporting highly affected sectors

On January 27, 2021, OSFI provided direction on the capital treatment of the government-guaranteed loans made under the Business Development Bank of Canada (BDC) HASCAP loan guarantee program. Pursuant to this direction, the loans are considered sovereign risk based on the BDC guarantee, and the relevant risk weight under the CAR Guideline is applied accordingly. The entire amount of the loan is included in the exposure measure used for calculating the leverage ratio. See "Government lending programs in response to COVID-19" for further details.

Global systemically important banks – public disclosure requirements

On August 13, 2021, OSFI issued revisions to its Advisory: *"Global systemically important banks – Public disclosure requirements"*. These revisions address changes to the disclosure requirements included in BCBS's updated global systemically important banks (G-SIB) assessment methodology, as well as providing further guidance on the availability of publicly disclosed G-SIB indicators, and the nature of qualitative information to accompany the disclosures. The updated assessment methodology will take effect for the 2022 G-SIB assessment exercise.

Total loss absorbing capacity requirements

Beginning in the first quarter of fiscal 2022, D-SIBs will be required to maintain a supervisory target total loss absorbing capacity requirements (TLAC) ratio (which comprises a minimum risk-based TLAC ratio of 21.5% plus the then applicable DSB) and a minimum TLAC leverage ratio of 6.75%. TLAC is required to ensure that a non-viable bank will have sufficient loss absorbing capacity, through its regulatory capital and bail-in eligible instruments, to support its recapitalization. In accordance with the Bank recapitalization (Bail-in) conversion regulations of the Department of Finance (Canada), senior debt issued by D-SIBs on or after September 23, 2018, with an original term to maturity of more than 400 days (including

explicit or embedded options) that is unsecured or partially secured is subject to bail-in. Consumer deposits, certain derivatives, covered bonds, and certain structured notes are not eligible for bail-in.

Other regulatory capital developments

Market risk capital

On March 16, 2021, OSFI announced that the temporary COVID-19 related reduction of stressed VaR multipliers used in the determination of market risk capital was to be unwound effective May 1, 2021.

Leverage ratio exposure

On August 12, 2021, OSFI advised that the temporary exclusion of qualifying sovereign-issued securities from the leverage ratio exposure measure that was announced on April 9, 2020, in response to the onset of the COVID-19 pandemic, will end after December 31, 2021. However, central bank reserves will continue to be excluded from the measure.

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	2021	2020
Common Equity Tier 1 (CET1) capital: instruments and reserves		
Directly issued qualifying common share capital plus related stock surplus	**$ 14,461**	$ 14,025
Retained earnings	**25,793**	22,119
AOCI (and other reserves)	**1,069**	1,435
Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)	**116**	128
CET1 capital before regulatory adjustments	**41,439**	37,707
CET1 capital: regulatory adjustments		
Prudential valuation adjustments	**18**	24
Goodwill (net of related tax liabilities)	**4,877**	5,177
Other intangibles other than mortgage-servicing rights (net of related tax liabilities)	**1,737**	1,662
Deferred tax assets excluding those arising from temporary differences (net of related tax liabilities)	**7**	24
Defined benefit pension fund net assets (net of related tax liabilities)	**1,051**	206
Other deductions or regulatory adjustments to CET1 as determined by OSFI (1)	**(209)**	(592)
Other	**207**	330
Total regulatory adjustments to CET1 capital	**7,688**	6,831
CET1 capital	**33,751**	30,876
Additional Tier 1 (AT1) capital: instruments		
Directly issued qualifying AT1 instruments plus related stock surplus (2)	**4,325**	3,575
Directly issued capital instruments subject to phase out from AT1 (3)	**251**	302
AT1 instruments issued by subsidiaries and held by third parties (amount allowed in AT1)	**17**	22
AT1 capital	**4,593**	3,899
Tier 1 capital (T1 = CET1 + AT1)	**38,344**	34,775
Tier 2 capital: instruments and provisions		
Directly issued qualifying Tier 2 instruments plus related stock surplus (4)	**4,945**	5,035
Directly issued capital instruments subject to phase out from Tier 2	**451**	628
Tier 2 instruments issued by subsidiaries and held by third parties (amount allowed in Tier 2)	**22**	29
General allowances	**440**	502
Tier 2 capital (T2)	**5,858**	6,194
Total capital (TC = T1 + T2)	**$ 44,202**	$ 40,969
Total RWA	**$ 272,814**	$ 254,871
Capital ratios		
CET1 ratio	**12.4 %**	12.1 %
Tier 1 capital ratio	**14.1 %**	13.6 %
Total capital ratio	**16.2 %**	16.1 %

(1) Beginning in the second quarter of 2020, includes the impact of the ECL transitional arrangement announced by OSFI on March 27, 2020 in response to the onset of the COVID-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 2022.
(2) Comprised of non-viability contingent capital (NVCC) preferred shares and 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, 2021 increased 0.3% from October 31, 2020, driven by the increase in CET1 capital partially offset by the impact of an increase in RWA.

The increase in CET1 capital was primarily the result of internal capital generation (net income less dividends and distributions). The increase in RWA was primarily due to increases in book size, increased market and operational risk levels, and methodology and parameter updates, partially offset by improved credit quality and the impact of foreign exchange translation.

Tier 1 capital ratio

The Tier 1 capital ratio at October 31, 2021 increased 0.5% from October 31, 2020, primarily due to the factors affecting the CET1 ratio noted above, as well as an issuance of Limited Recourse Capital Notes during the fourth quarter of 2021. See the "Capital initiatives" section below for further details.

Total capital ratio

The Total capital ratio at October 31, 2021 increased 0.1% from October 31, 2020. Total capital was favourably impacted by the factors affecting the Tier 1 capital ratio noted above, while being unfavourably impacted by a decrease in the applicable cap related to the inclusion of non-qualifying instruments. The unfavourable impact of a redemption of subordinated indebtedness during the first quarter was offset by the issuance of subordinated indebtedness during the second quarter. 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	2021	2020
CET1 capital		
Balance at beginning of year	**$ 30,876**	$ 27,707
Shares issued in lieu of cash dividends (add back)	**132**	144
Other issue of common shares	**326**	227
Purchase of common shares for cancellation	**–**	(68)
Premium on purchase of common shares for cancellation	**–**	(166)
Net income attributable to equity shareholders	**6,429**	3,790
Preferred and common share dividends and distributions	**(2,780)**	(2,714)
Change in AOCI balances included in regulatory capital		
Net foreign currency translation adjustments	**(1,115)**	180
Net change in securities measured at FVOCI	**(43)**	189
Net change in cash flow hedges	**(137)**	161
Net change in post-employment defined benefit plans	**917**	80
Change in shortfall of allowance to expected losses	**–**	575
Change in goodwill and other intangible assets	**225**	194
Other, including change in regulatory adjustments (1)(2)	**(1,079)**	577
CET 1 capital balance at end of year	**$ 33,751**	$ 30,876
AT1 capital		
Balance at beginning of year	**$ 3,899**	$ 3,144
AT1 eligible capital issues	**750**	750
Phase-out of innovative Tier 1 notes	**(51)**	–
Redeemed	**–**	–
Other, including change in regulatory adjustments (2)	**(5)**	5
AT1 capital balance at end of year	**$ 4,593**	$ 3,899
Tier 2 capital		
Balance at beginning of year	**$ 6,194**	$ 5,003
New Tier 2 eligible capital issues	**1,000**	1,000
Redeemed	**(1,000)**	(32)
Other, including change in regulatory adjustments (2)	**(336)**	223
Tier 2 capital balance at end of year	**$ 5,858**	$ 6,194
Total capital balance at end of year	**$ 44,202**	$ 40,969

(1) Includes the net impact on retained earnings as at November 1, 2019 from the adoption of IFRS 16. See Note 1 to the consolidated financial statements for additional details.

(2) Beginning in the second quarter of 2020, includes the impact of the ECL transitional arrangement announced by OSFI on March 27, 2020 in response to the onset of the COVID-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 2022.

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	2021		2020	
	RWA	**Minimum total capital required** (1)	RWA	Minimum total capital required (1)
Credit risk (2)				
Standardized approach				
Corporate	**$ 43,768**	**$ 3,501**	$ 41,836	$ 3,347
Sovereign	**1,418**	**113**	2,460	197
Banks	**382**	**31**	326	26
Real estate secured personal lending	**2,153**	**172**	2,859	229
Other retail	**976**	**78**	939	75
Trading book	**416**	**33**	787	63
Equity	**654**	**52**	494	40
Securitization	**768**	**61**	1,031	82
	50,535	**4,041**	50,732	4,059
AIRB approach (3)				
Corporate	**92,808**	**7,425**	83,326	6,666
Sovereign (4)	**3,125**	**250**	2,911	233
Banks	**3,711**	**297**	2,995	240
Real estate secured personal lending	**22,508**	**1,801**	20,228	1,618
Qualifying revolving retail	**13,636**	**1,091**	14,484	1,159
Other retail	**9,525**	**762**	9,022	722
Equity	**564**	**45**	423	34
Trading book	**5,484**	**439**	5,200	416
Securitization	**1,246**	**100**	1,704	136
Adjustment for scaling factor	**9,082**	**727**	8,315	665
	161,689	**12,937**	148,608	11,889
Other credit RWA (5)	**12,913**	**1,033**	12,152	972
Total credit risk (before adjustment for CVA phase-in)	**225,137**	**18,011**	211,492	16,920
Market risk (Internal Models and IRB Approach)				
VaR	**1,575**	**126**	1,309	105
Stressed VaR	**3,887**	**311**	1,626	130
Incremental risk charge	**2,583**	**206**	2,192	175
Securitization and other	**1,061**	**85**	731	58
Total market risk	**9,106**	**728**	5,858	468
Operational risk	**31,397**	**2,512**	30,319	2,426
Total RWA before adjustments for CVA phase-in	**$ 265,640**	**$ 21,251**	$ 247,669	$ 19,814
CVA capital charge				
Total RWA	**$ 7,174**	**$ 574**	$ 7,202	$ 576
Total RWA after adjustments for CVA phase-in				
Total RWA	**$ 272,814**	**$ 21,825**	$ 254,871	$ 20,390

(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 1250%, and amounts below the thresholds for deduction that are risk-weighted at 250%.

The increase in credit risk RWA was primarily due to increases in book size, partially offset by improved credit quality, the impact of foreign exchange translations, and methodology and parameter updates.

The increase in market risk RWA was primarily driven by methodology updates, with the COVID-19 relief measures granted in the second quarter of 2020 expiring in the third quarter of 2021 and to a lesser extent by changes and 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 the 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	**2021**	2020
Tier 1 capital	**$ 38,344**	$ 34,775
Leverage ratio exposure	**823,343**	741,760
Leverage ratio	**4.7 %**	4.7 %

The leverage ratio at October 31, 2021 was comparable with the prior year, as the impact of an increase in Tier 1 capital was 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.

Capital initiatives

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. The following were the main capital initiatives undertaken since our 2020 Annual Report:

Normal Course Issuer Bid (NCIB)

We intend to purchase for cancellation up to 10 million common shares, or approximately 2.2% of our outstanding common shares, under a new NCIB, subject to the approval of the TSX. Our previous bid expired on June 3, 2020.

Dividends

On December 1, 2021, the CIBC Board of Directors approved an increase in our quarterly common share dividend from $1.46 per share to $1.61 per share for the quarter ending January 31, 2022.

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, and the terms of the Tier 1 notes issued by CIBC Capital Trust, as explained in Notes 16 and 17 to the consolidated financial statements.

Employee share purchase plan

Pursuant to the employee share purchase plan, we issued 1,180,179 common shares for consideration of $150 million for the year ended October 31, 2021.

Shareholder investment plan

Pursuant to the shareholder investment plan, we issued 1,011,279 common shares for consideration of $132 million for the year ended October 31, 2021.

Limited Recourse Capital Notes Series 2 (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) (the Series 54 Preferred 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 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. 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 that 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.

The LRCN Series 2 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 2 Note holder in the event of non-payment will be limited to that holder's proportionate share of the Series 54 Preferred Shares held in the Limited Recourse Trust. The liability component of the LRCN Series 2 Notes has a nominal value and, as a result, the full proceeds received upon the issuance of the LRCN Series 2 Notes have been presented as equity on the consolidated balance sheet and any interest payments paid thereon are accounted for as equity distributions.

Subordinated indebtedness

On January 26, 2021, we redeemed all $1.0 billion of our 3.42% Debentures due January 26, 2026. In accordance with their terms, the Debentures were redeemed at 100% of their principal amount, plus accrued and unpaid interest thereon.

On April 21, 2021, we issued $1.0 billion principal amount of Debentures due April 21, 2031 (subordinated indebtedness). The Debentures bear interest at a fixed rate of 1.96% per annum (paid semi-annually) until April 21, 2026, and at the three-month Canadian dollar bankers' acceptance rate plus 0.56% per annum (paid quarterly) thereafter until maturity on April 21, 2031.

CIBC Tier 1 Notes

On November 1, 2021, CIBC Capital Trust, a trust wholly owned by CIBC, redeemed all $300 million of its 10.25% CIBC Tier 1 Notes – Series B (the "Tier 1 Notes – Series B") due June 30, 2108. In accordance with their terms, the Tier 1 Notes – Series B were redeemed 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 Notes by CIBC Capital Trust, CIBC redeemed the corresponding senior deposit notes issued by CIBC to CIBC Capital Trust on November 1, 2021.

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 26, 2021	Shares outstanding		Minimum conversion price per common share	Maximum number of common shares issuable on conversion/exercise
	Number of shares	Amount		
Common shares	**450,917,565**	**$ 14,363**		
Treasury shares – common shares	**76,771**	**12**		
Preferred shares [1][2]				
Series 39 (NVCC)	**16,000,000**	**$ 400**	**$ 5.00**	**80,000,000**
Series 41 (NVCC)	**12,000,000**	**300**	**5.00**	**60,000,000**
Series 43 (NVCC)	**12,000,000**	**300**	**5.00**	**60,000,000**
Series 45 (NVCC)	**32,000,000**	**800**	**5.00**	**160,000,000**
Series 47 (NVCC)	**18,000,000**	**450**	**5.00**	**90,000,000**
Series 49 (NVCC)	**13,000,000**	**325**	**5.00**	**65,000,000**
Series 51 (NVCC)	**10,000,000**	**250**	**5.00**	**50,000,000**
Treasury shares – preferred shares [1][2]	**(20)**	**–**		
Limited recourse capital notes [2][3]				
4.375% Limited recourse capital notes Series 1 (NVCC)	**n/a**	**750**	**5.00**	**150,000,000**
4.000% Limited recourse capital notes Series 2 (NVCC)	**n/a**	**750**	**5.00**	**150,000,000**
Subordinated indebtedness [2][4]				
3.45% Debentures due April 4, 2028 (NVCC)	**n/a**	**1,500**	**5.00**	**450,000,000**
2.95% Debentures due June 19, 2029 (NVCC)	**n/a**	**1,500**	**5.00**	**450,000,000**
2.01% Debentures due July 21, 2030 (NVCC)	**n/a**	**1,000**	**5.00**	**300,000,000**
1.96% Debentures due April 21, 2031 (NVCC)	**n/a**	**1,000**	**5.00**	**300,000,000**
Stock options outstanding				**5,134,436**

(1) 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 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). Preferred shareholders do not have the right to convert their shares into common shares.
(2) The maximum number of common shares issuable on conversion excludes the impact of declared but unpaid dividends and accrued interest.
(3) Upon the occurrence of a Trigger Event, the Series 53 and 54 Preferred Shares held in the Limited Recourse Trust in support of the corresponding LRCN Notes 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). See Note 16 to the consolidated financial statements for details on our preferred share and other equity instruments rights and privileges.
(4) 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).
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 84% based on the number of CIBC common shares outstanding as at October 31, 2021. 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, 2021, $32,643 million (2020: $19,925 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 16 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 generally 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 $71 million in 2021 (2020: $65 million). All fees earned in respect of activities with the conduits are on a market basis.

As at October 31, 2021, the amount funded for the various asset types in the multi-seller conduits amounted to $7.5 billion (2020: $8.4 billion). The estimated weighted-average life of these assets was 2.0 years (2020: 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 $35 million (2020: $12 million). Our committed backstop liquidity facilities to these conduits were $10.6 billion (2020: $10.5 billion). We also provided credit facilities of $50 million (2020: $50 million) to these conduits.

We participated in a syndicated facility for a three-year commitment, with two years remaining, of $700 million to the single-seller conduit that provides funding to franchisees of a major Canadian retailer. Our portion of the commitment was $130 million (2020: $130 million), of which $106 million (2020: $95 million) was funded as at October 31, 2021.

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 securitization vehicles. 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.

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 7 to the consolidated financial statements.

$ millions, as at October 31	**2021**			2020		
	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	**$ 141**	**$ 7,539** (3)	**$ –**	$ 107	$ 8,390 (3)	$ –
Third-party structured vehicles	**3,838**	**2,016**	**–**	3,165	2,517	–
Loan warehouse financing	**3,245**	**921**	**–**	395	363	–
Other	**394**	**129**	**87**	343	153	130

(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 (2020: $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 $54 million (2020: $107 million). Notional of $82 million (2020: $123 million) was hedged with credit derivatives protection from third parties. The fair value of these hedges net of CVA was $49 million (2020: $98 million). An additional notional of $5 million (2020: $7 million) was hedged through a limited recourse note.

(3) Excludes an additional $3.0 billion (2020: $2.1 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 $35 million (2020: $12 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 13 and 24 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 22 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 13 and 22 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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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 SBUs and functional groups own the risks and are accountable and responsible for identifying and assessing risks inherent in their activities in accordance with the CIBC risk appetite. In addition, they establish and maintain controls to mitigate such risks. The first line of defence may include governance groups within the relevant area to facilitate the control framework and other risk-related processes. Control groups provide subject matter expertise to the business lines and/or implement and maintain enterprise-wide control programs and activities. While control groups collaborate with the lines of business 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 or rely on subject matter expertise of other groups (e.g., third parties or control groups) to better inform their independent assessments, as appropriate.

(iii) As the third line of defence, CIBC's internal audit function provides 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 controls as a part of its risk-based audit plan and in accordance with its mandate as described in the Internal Audit Charter.

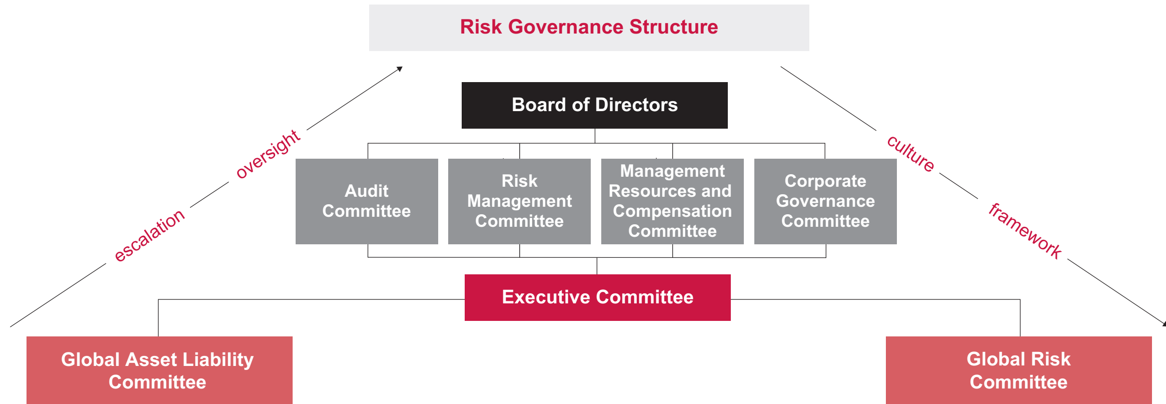
A strong risk culture and communication between the three lines of defence are important characteristics of effective risk management.

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 geo-political 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 the risk management process.

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, monitoring and mitigation 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.

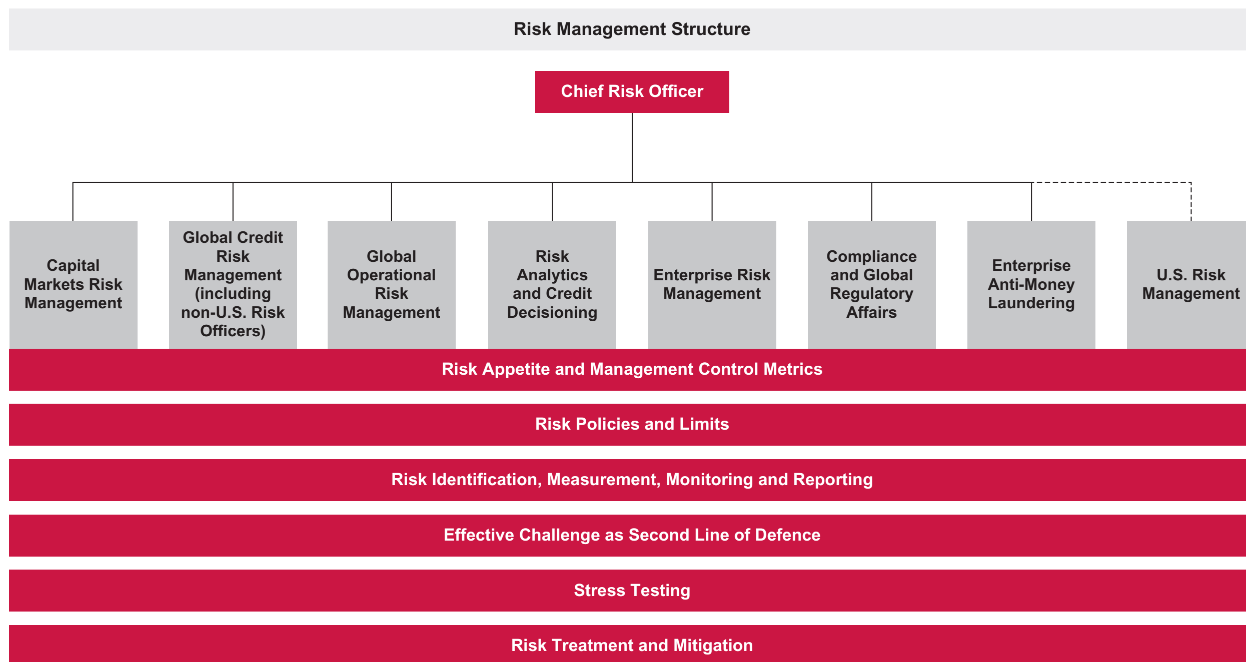
Executive Committee (ExCo): The ExCo, led by the Chief Executive Officer (CEO) and including selected executives reporting directly to the CEO, is responsible for setting business strategy and for monitoring, evaluating and managing risks across CIBC. The ExCo is supported by the following management 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. It also provides strategic direction regarding structural interest rate risk 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.

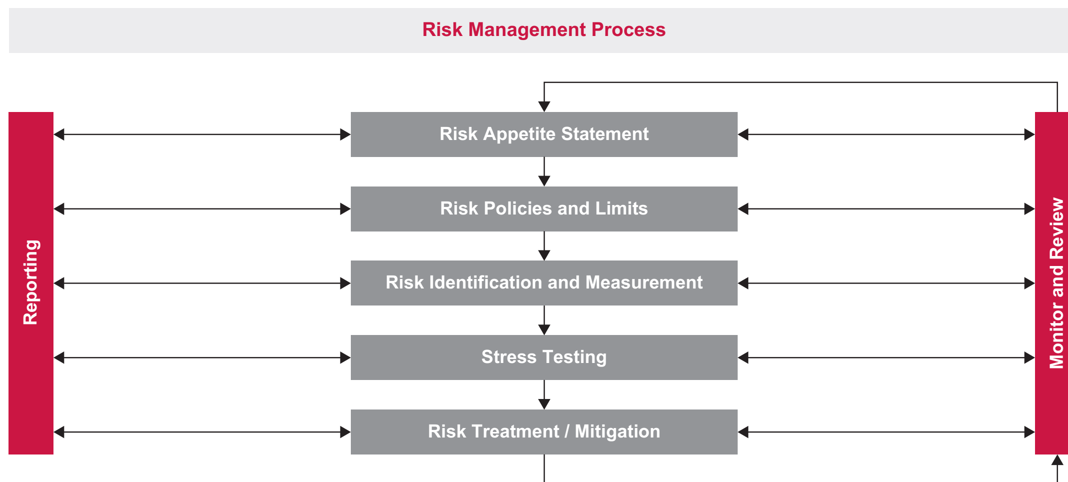
The following key groups within Risk Management, independent of the originating businesses, contribute to our management of risk:

- 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 structural interest rate risk management.
- Global Credit Risk Management – This group is responsible for the adjudication and oversight of credit risks associated with our 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 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, 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), performs effective challenge on compensation plan changes, and conducts examinations on business units/activities using a risk-based approach. 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.
- 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 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. Commercial Banking and Wealth Management SBU.

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 taking. 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 behaviours that are and are not aligned with risk appetite, and reinforcing appropriate 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 develop a 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, compensation plans that will be closed and periodic review of unchanged compensation plans. 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 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;
- 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 limits are illustrated below:

Risk Management Framework

Risk Appetite Statement and Risk Appetite Framework

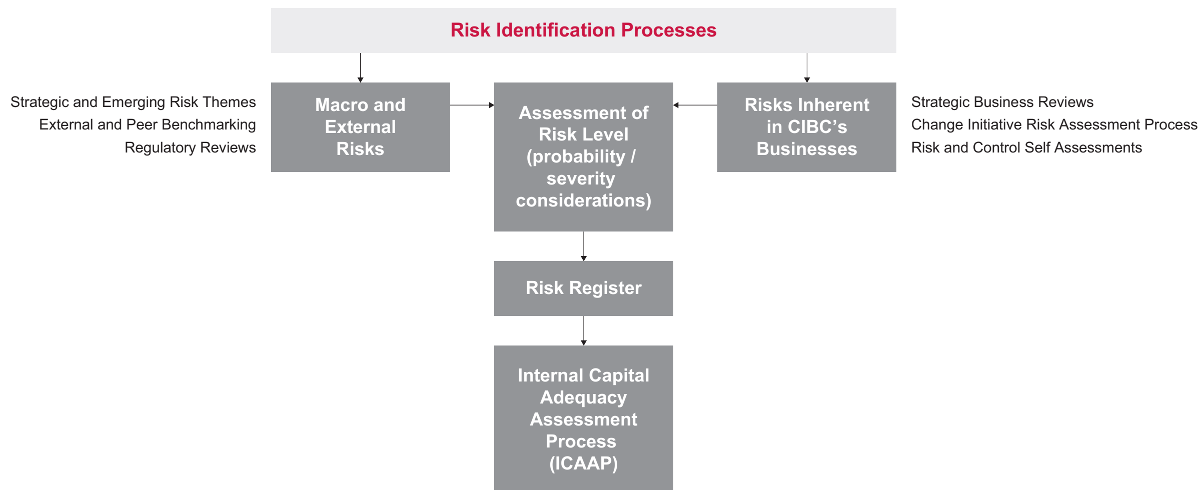
Risk	Overarching Framework / Policy	Risk Limits	Management Oversight
Credit	Credit Risk Management Policy Trading Credit Risk Management Policy	Credit Concentration Limits Delegated Credit Approval Authorities Trading Credit Risk Limits	Credit Committee Personal and Business Banking Credit Risk Committee 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 Policy 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 Corporate Governance Committee Traded Risk Committee Third Party Risk Council Executive Fraud Risk Council
Reputation	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
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 our 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; and
- Regular monitoring of the overall risk profile considering market developments and trends, and external and internal events.

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 a risk assessment through our risk identification processes and includes criteria such as severity, measurability and probability. Furthermore, the decision to hold capital for a new risk is also based on whether the risk is being mitigated, and whether capital is deemed to be a suitable mitigant.

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 and prices. We also use stressed VaR to replicate our VaR over a period when relevant market factors are 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, 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 GRC and is responsible for reviewing and approving proposals for new and/or modified regulatory, economic capital and financial reporting models and provides oversight of CIBC's regulatory, economic capital and financial reporting 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.

Pandemic outbreaks

The COVID-19 pandemic continues to disrupt the global economy, financial markets, supply chains and business productivity in unprecedented and unpredictable ways. While restrictions imposed by governments around the world to limit the impact of the pandemic have eased significantly in most jurisdictions and vaccination rates have climbed sharply in the developed world, resulting in acceleration of the global economy, new and emerging variants of the virus as well as vaccine hesitancy remain a threat to the economic recovery. Our outlook assumes that targeted health measures rather than broader economic closures will be used to contain new waves of infection.

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.

A substantial amount of our business involves extending credit or otherwise providing financial resources to individuals, companies, industries or governments that may have been adversely impacted by the pandemic, hindering their ability to meet original loan terms and potentially impacting their ability to repay their loans. While our estimate of ECL on performing loans considers the likelihood and extent of future defaults and impairments, given the inherent uncertainty caused by COVID-19, actual experience may differ materially from our current estimates. To the extent that business activity or unemployment do not continue to improve in line with our expectations due to the impact of the new and emerging variants, or clients default on loans beyond our current expectations, we may recognize further credit losses beyond those reflected in the current year's ECL allowances. The effectiveness of various government support programs in place for individuals and businesses as well as the efficacy of vaccines in controlling new and emerging variants also impact our expectations. Similarly, because of changing economic and market conditions, we may be required to recognize losses, impairments, or reductions in other comprehensive income (OCI) in future periods relating to other assets that we hold.

Net interest income is significantly impacted by market interest rates. Interest rate cuts by the Bank of Canada and the Federal Reserve in response to COVID-19 have negatively impacted our net interest income. The overall direction of interest rates is difficult to predict and depends on future actions that the Bank of Canada and the Federal Reserve may take to increase or reduce targeted rates in response to COVID-19 or other factors (see the "Outlook for calendar year 2022" section for further discussion on interest rate expectations).

Governments, monetary authorities, regulators and financial institutions have also taken actions to support the economy, increase liquidity, mitigate unemployment, provide temporary financial assistance and regulatory flexibility, and implement other measures intended to mitigate or counterbalance the adverse economic consequences of the pandemic. We continue to work with regulators and governments across the jurisdictions in which we operate to support and facilitate government programs assisting our clients (see the "CIBC client relief programs in response to COVID-19" section for further details).

We continue to adapt our operating model with a focus on the ongoing safety of our team members, including those working on-site since the start of the pandemic. We have a thoughtful plan to return our team members who are currently working remotely to the office when the time is right, depending on the evolving pandemic and public health guidance.

Relevant operational risk metrics continue to track at an acceptable level. Operational resilience and sustainability remain our key areas of focus. We will continue to monitor our risk posture and trends to ensure operational risks are managed appropriately and in a timely manner.

If the COVID-19 pandemic is prolonged beyond our expectations, or if further variants emerge that give rise to similar effects that vaccines are not able to effectively mitigate in a timely manner and if broader economic closures are reinstated to address future waves of infection, the impact on the economy and financial markets could deepen 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.

Geo-political risk

The level of geo-political 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. Geo-political 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:

- Global uncertainty and market repercussions pertaining to the spread of COVID-19 as discussed above;
- Ongoing U.S., Canada and China relations and trade issues;
- 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 geo-political disruption will occur, we 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.

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 include severe weather events, forest fires, floods, heat stresses and rising sea levels, which have the ability to disrupt supply chains and critical infrastructure. Transition risks, which arise as society adjusts towards a low-carbon future, are impacting many sectors of the economy through changes in policy and technology aimed at limiting global warming. 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 reducing the greenhouse gas emissions from our operations by 30% by 2028 (2018 baseline).

In 2021, we launched our Climate Credit Risk Assessment tool to be used by our corporate and commercial businesses which scores companies based on their exposure, preparedness and resiliency to climate-related transition risks. Through this assessment, we will gain a deeper

understanding of our clients' plans to move to a low-carbon economy over the short, medium, and long term, and how this compares with peers in the same sector. This tool will help us manage climate change risks in our portfolio.

There is an increasing demand for disclosure around climate-related risk identification and mitigation. We currently prepare our disclosures based on the disclosure framework developed by the Task Force on Climate-related Financial Disclosures (TCFD). The TCFD reporting framework provides stakeholders with consistent, material climate-related disclosures that are comparable across sectors, industries and countries. We are proactively collaborating with peer banks to ensure consistency and comparability as we continue to improve our TCFD reporting.

We have also joined the Partnership for Carbon Accounting Financials (PCAF), a standardized measurement and reporting framework that can be used to calculate emissions related to a bank's financing. Measuring financed emissions is central to activities that enables CIBC to embed climate action throughout our lending and investment activities.

In the past year, a number of regulators and standard-setting organizations have announced intentions of preparing disclosure frameworks related to climate change risks. Key among them are 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. Its creation will consolidate select existing standard setters, including the Climate Disclosure Standards Board (an initiative of CDP, formerly the Carbon Disclosure Project) and the Value Reporting Foundation (which houses the Integrated Reporting Framework and the Sustainability Accounting Standards Board (SASB) Standards) by mid-2022. In addition, regulators such as the SEC, OSFI and the Canadian Securities Administrators (CSA) have announced a greater focus on climate risk disclosures. Potential divergence among the regulators in disclosure expectations, coupled with the pace at which the regulatory landscape changes pose an operational and non-conformance risk to us. We continue to monitor these developments. Despite our relatively low direct carbon emissions, compliance by many of our clients with new carbon emission standards could result in operational stress for those clients, which in turn may have a negative impact on our results of operations.

See the "Environmental and related social risk" section for additional information.

Canadian consumer debt and the housing market

Regulatory measures that included revised mortgage underwriting guidelines (B-20 guidelines) and taxes on foreign ownership, combined with a previously low unemployment environment, had their intended effect as debt-to-income ratios flattened in 2018–2019. However, to counter the economic impact due to COVID-19, the government put in place several support programs, the Bank of Canada cut interest rates and CIBC and other Canadian banks assisted clients by offering temporary relief across all retail products, including mortgages. While there is still continued economic and employment uncertainty, the housing market has rebounded strongly and prices have surpassed pre-COVID-19 levels giving rise to the risk that our borrowers may be unable to repay loan obligations. As of June 1, 2021, we started to qualify uninsured and insured mortgages at the higher of the mortgage contract rate plus 2%, or 5.25% as part of the updated B-20 guidelines. In addition, we run our enterprise-wide statistical stress tests at lower home prices to determine potential direct losses and have also conducted stress tests to assess the impact of rising unemployment rates on borrowers' ability to repay loan obligations.

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

In the fourth quarter, we have observed high volatility and a continued rally in natural gas prices. The global recovery from the COVID-19 pandemic and higher-than-normal weather-driven demand last winter and this summer have combined with supply-side challenges resulting in below-average storage levels as we approach the winter heating season. In addition, supply and demand fundamentals that are traditionally elastic to prices have broken down, making it difficult for the market to balance any disruptions to supply or increases in demand. Looking forward, temperatures this winter are expected to be a key driver of natural gas prices: colder-than-normal temperatures could push prices higher while milder temperatures could lead to a pullback. Clients in our oil and gas portfolio continue to be assessed on the basis of our enhanced risk metrics that reflect the current environment. In addition, other commodities including raw materials (lumber, iron, ore, etc.) and metals (gold, silver, copper, etc.) continue to exhibit volatility, particularly in front month futures contracts, largely owing to increased demand coupled with ongoing supply chain bottlenecks as the global pandemic recovery continues.

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. Blockchain is one such technology that enables parties to transact with one another without the need for centralized third-party intermediaries such as banks. Cryptocurrencies, such as Bitcoin, are a specific application of blockchain with the potential for disintermediation. However, widespread adoption as a substitute for government-issued currency does not appear to be a near-term prospect as Central Banks around the world explore Central Bank Digital Currencies. Adoption as an investment vehicle poses an opportunity for disintermediation as it enables parties to create investment products and services that financial institutions would normally provide. 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.

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 and ATF in the jurisdictions where we operate and implementing best practices to minimize the impact of such activities. In Canada, amendments to the regulations under the Proceeds of Crime (Money Laundering) and Terrorist Financing Act were published in July 2019 (with provisions coming into force between 2020 and 2024) to improve the effectiveness of Canada's AML/ATF regime. 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 training for all employees to ensure that relevant regulatory obligations are met in each jurisdiction where we operate.

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 (IBOR) transition

Interest rate benchmarks including the London Interbank Offered Rate (LIBOR) and other similar benchmarks, are being reformed and replaced by new risk-free rates that are largely based on traded markets. The U.K.'s Financial Conduct Authority (FCA) originally announced in July 2017 that it would not compel banks to submit LIBOR rates after December 2021. In March 2021, the FCA and the ICE Benchmark Administration (IBA) announced the dates for the cessation or loss of representativeness of various LIBOR rates including that certain non-USD LIBORs will cease on December 31, 2021 and that most USD LIBOR tenors will cease on June 30, 2023. As IBORs are widely referenced by large volumes of derivative, loan and cash products, the transition presents a number of risks to CIBC, 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). We have established a comprehensive enterprise-wide program to manage and coordinate all aspects of the transition, including the identification and mitigation of these risks. 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 2021 Liberal Government Platform in Canada proposed tax measures that could be in effect in January 2022, including a 3% surtax on large banks and a temporary Canada Recovery Dividend that would commence in 2023. Additional proposals would modernize the general anti-avoidance rule (GAAR), increase resources to combat aggressive tax avoidance and implement the global minimum tax discussed below.

In 2021, 130 countries, including Canada and the other G20 nations, agreed on a new framework for global tax reform. If enacted, these proposals would be effective beginning in 2023. The two-pillar framework's stated purpose is to ensure that large Multinational Enterprises (MNEs) pay tax where they operate and earn profit. Pillar I primarily targets MNE technology companies by re-allocating taxing rights to where goods or

services are consumed. Pillar II would introduce a new 15% global minimum corporate tax rate in each country where an MNE operates. Uncertainty persists with regard to the detail of these proposals, which remain subject to due process, and will require approval, ratification and legislation in multiple nations.

In 2021, the U.S. Congress proposed legislation called the Build Back Better Act that includes changes to corporate income tax laws. Proposals include modifications to the Base Erosion Anti-abuse Tax (BEAT), global low-tax intangible income (GILTI) regime, and foreign-derived intangible income (FDII) regime as well as new corporate minimum taxes. If enacted, most of the proposals would be effective for 2022 or later. The proposed legislation remains subject to change and its impact on CIBC is uncertain.

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", "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 32 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, 2021:

CIBC

SBUs	Canadian Personal and Business Banking	Canadian Commercial Banking and Wealth Management	U.S. Commercial Banking and Wealth Management	Capital Markets	Corporate and Other
Business activities	• Deposits • Residential mortgages • Personal loans • Credit cards • Business lending • Insurance	• Commercial banking • Full-service brokerage • Asset management • Private wealth management	• Commercial banking • Asset management • Private wealth management • Personal and small business banking	• Corporate banking • Global markets • Investment banking • Direct financial services	• International banking • Investment portfolios • Joint ventures • Functional and support groups (see page 30)
Balance sheet [1] ($ millions)					
Average assets	272,645	70,070	46,733	255,063	165,110
Average deposits	187,850	83,556	41,370	85,994	199,484
RWA ($ millions)					
Credit risk	51,121	54,845	47,489 [2]	58,291 [3]	20,565 [4]
Market risk	–	–	16	8,800	290
Operational risk	11,569	6,905	3,695	8,325	903
Average allocated common equity [5] (%)					
Proportion of total CIBC	16	17	22	19	26
Comprising:					
Credit risk	76	77	51	76	70
Market risk	–	–	–	12	3
Operational risk	18	10	4	11	8
Other [6]	6	13	45	1	19

Risk profile: We are exposed to credit, market, liquidity, operational, and other risks, which primarily include strategic, insurance, technology, information and cyber security, reputation and legal, regulatory compliance, and environmental and social risks.

(1) Average balances are calculated as a weighted average of daily closing balances.
(2) Includes CCR of $79 million, which comprises derivatives and repo-style transactions.
(3) Includes CCR of $17,733 million, which comprises derivatives and repo-style transactions.
(4) Includes CCR of $237 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 this non-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 over-the-counter (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 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 related 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 13 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 policy

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			2021			2020
	AIRB approach	**Standardized approach**	**Total**	AIRB approach [1]	Standardized approach	Total
Business and government portfolios						
Corporate						
Drawn	**$ 120,417**	**$ 36,321**	**$ 156,738**	$ 102,342	$ 36,603	$ 138,945
Undrawn commitments	**61,417**	**7,583**	**69,000**	49,473	7,339	56,812
Repo-style transactions	**172,827**	**–**	**172,827**	139,677	–	139,677
Other off-balance sheet	**13,644**	**981**	**14,625**	14,085	1,016	15,101
OTC derivatives	**12,914**	**415**	**13,329**	10,858	786	11,644
	381,219	**45,300**	**426,519**	316,435	45,744	362,179
Sovereign						
Drawn	**125,001**	**26,272**	**151,273**	133,077	22,664	155,741
Undrawn commitments	**8,525**	**–**	**8,525**	8,354	–	8,354
Repo-style transactions	**26,746**	**–**	**26,746**	38,904	–	38,904
Other off-balance sheet	**1,613**	**–**	**1,613**	1,553	–	1,553
OTC derivatives	**2,011**	**1**	**2,012**	2,187	2	2,189
	163,896	**26,273**	**190,169**	184,075	22,666	206,741
Banks						
Drawn	**12,291**	**1,565**	**13,856**	12,846	1,241	14,087
Undrawn commitments	**1,554**	**3**	**1,557**	1,552	16	1,568
Repo-style transactions	**42,529**	**–**	**42,529**	24,228	–	24,228
Other off-balance sheet	**64,728**	**–**	**64,728**	59,761	–	59,761
OTC derivatives	**5,765**	**12**	**5,777**	5,805	21	5,826
	126,867	**1,580**	**128,447**	104,192	1,278	105,470
Gross business and government portfolios	**671,982**	**73,153**	**745,135**	604,702	69,688	674,390
Less: collateral held for repo-style transactions	**225,399**	**–**	**225,399**	187,832	–	187,832
Net business and government portfolios	**446,583**	**73,153**	**519,736**	416,870	69,688	486,558
Retail portfolios						
Real estate secured personal lending						
Drawn	**261,531**	**4,835**	**266,366**	231,527	4,799	236,326
Undrawn commitments	**36,631**	**–**	**36,631**	31,390	–	31,390
	298,162	**4,835**	**302,997**	262,917	4,799	267,716
Qualifying revolving retail						
Drawn	**18,181**	**–**	**18,181**	18,701	–	18,701
Undrawn commitments	**54,509**	**–**	**54,509**	53,085	–	53,085
Other off-balance sheet	**327**	**–**	**327**	271	–	271
	73,017	**–**	**73,017**	72,057	–	72,057
Other retail						
Drawn	**15,578**	**1,419**	**16,997**	14,869	1,326	16,195
Undrawn commitments	**2,937**	**26**	**2,963**	2,819	28	2,847
Other off-balance sheet	**40**	**–**	**40**	35	–	35
	18,555	**1,445**	**20,000**	17,723	1,354	19,077
Total retail portfolios	**389,734**	**6,280**	**396,014**	352,697	6,153	358,850
Securitization exposures	**10,823**	**4,556**	**15,379**	12,276	3,509	15,785
Gross credit exposure	**1,072,539**	**83,989**	**1,156,528**	969,675	79,350	1,049,025
Less: collateral held for repo-style transactions	**225,399**	**–**	**225,399**	187,832	–	187,832
Net credit exposure [2]	**$ 847,140**	**$ 83,989**	**$ 931,129**	$ 781,843	$ 79,350	$ 861,193

(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%.

Net credit exposure increased by $69.9 billion in 2021, 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							2021	2020
	0%	20%	35%	50%	75%	100%	150%	Total	Total
Corporate	$ –	$ –	$ –	$ –	$ –	$ 45,164	$ 136	$ 45,300	$ 45,744
Sovereign	22,497	2,884	–	103	–	789	–	26,273	22,666
Banks	–	1,495	–	–	–	85	–	1,580	1,278
Real estate secured personal lending	–	–	3,555	–	1,064	206	10	4,835	4,799
Other retail	–	–	–	–	1,372	70	3	1,445	1,354
	$ 22,497	$ 4,379	$ 3,555	$ 103	$ 2,436	$ 46,314	$ 149	$ 79,433	$ 75,841

(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 1.2% 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 13 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	2021		2020	
	Exposure [1]			
Investment grade	$ 9.87	68.9 %	$ 7.46	74.9 %
Non-investment grade	4.39	30.6	2.40	24.1
Watch list	0.07	0.5	0.07	0.7
Default	–	–	0.03	0.3
Unrated	–	–	–	–
	$ 14.33	100.0 %	$ 9.96	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, 2021	Canada	U.S.	Europe	Other	Total
Drawn	**$ 170,156**	**$ 61,388**	**$ 13,678**	**$ 12,487**	**$ 257,709**
Undrawn commitments	**50,998**	**14,133**	**2,888**	**3,477**	**71,496**
Repo-style transactions	**7,360**	**5,506**	**1,485**	**2,352**	**16,703**
Other off-balance sheet	**63,615**	**8,098**	**7,815**	**457**	**79,985**
OTC derivatives	**9,863**	**6,436**	**2,638**	**1,753**	**20,690**
	$ 301,992	**$ 95,561**	**$ 28,504**	**$ 20,526**	**$ 446,583**
October 31, 2020	$ 295,784	$ 81,982	$ 21,456	$ 17,648	$ 416,870

(1) Classification by country is primarily based on domicile of debtor or customer.

Business and government exposure by industry groups[1]

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	2021 Total	2020 Total
Commercial mortgages	**$ 9,613**	**$ 52**	**$ –**	**$ –**	**$ –**	**$ 9,665**	$ 8,420
Financial institutions	**78,163**	**14,255**	**15,571**	**69,994**	**9,180**	**187,163**	180,045
Retail and wholesale	**7,213**	**4,235**	**–**	**360**	**312**	**12,120**	10,523
Business services	**7,211**	**3,199**	**29**	**592**	**222**	**11,253**	10,656
Manufacturing – capital goods	**2,819**	**2,220**	**–**	**315**	**223**	**5,577**	5,397
Manufacturing – consumer goods	**3,623**	**2,330**	**–**	**247**	**70**	**6,270**	5,816
Real estate and construction	**33,860**	**9,799**	**179**	**1,322**	**310**	**45,470**	40,652
Agriculture	**7,069**	**2,145**	**–**	**35**	**57**	**9,306**	8,760
Oil and gas	**4,693**	**4,770**	**–**	**830**	**5,638**	**15,931**	13,834
Mining	**1,036**	**3,046**	**–**	**691**	**130**	**4,903**	5,131
Forest products	**337**	**636**	**–**	**226**	**21**	**1,220**	1,239
Hardware and software	**2,178**	**1,162**	**–**	**59**	**23**	**3,422**	2,672
Telecommunications and cable	**604**	**2,053**	**–**	**464**	**319**	**3,440**	2,195
Broadcasting, publishing and printing	**431**	**139**	**–**	**1**	**43**	**614**	665
Transportation	**5,822**	**3,492**	**–**	**294**	**1,281**	**10,889**	9,913
Utilities	**13,005**	**10,702**	**–**	**3,434**	**1,068**	**28,209**	26,590
Education, health, and social services	**3,447**	**1,658**	**1**	**196**	**228**	**5,530**	4,742
Governments	**76,585**	**5,603**	**923**	**925**	**1,565**	**85,601**	79,620
	$ 257,709	**$ 71,496**	**$ 16,703**	**$ 79,985**	**$ 20,690**	**$ 446,583**	$ 416,870

(1) In the third quarter of 2021, certain amounts by sector were revised from those previously presented to align with our revised sector definition, or to better match the borrowers' risk profiles with the relevant sectors.

As part of our risk mitigation strategy, we may use credit protection purchases as a hedge against customer or industry sector concentration. As at October 31, 2021, we had credit protection purchased totalling $124 million (2020: $185 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				**2021**	2020
	EAD				
Risk level	**Real estate secured personal lending**	**Qualifying revolving retail**	**Other retail**	**Total**	Total
Exceptionally low	**$ 227,533**	**$ 51,801**	**$ 3,314**	**$ 282,648**	$ 254,621
Very low	**39,417**	**4,599**	**4,465**	**48,481**	40,731
Low	**27,717**	**9,797**	**7,204**	**44,718**	42,353
Medium	**2,777**	**6,138**	**2,636**	**11,551**	12,122
High	**424**	**649**	**880**	**1,953**	2,322
Default	**294**	**33**	**56**	**383**	548
	$ 298,162	**$ 73,017**	**$ 18,555**	**$ 389,734**	$ 352,697

Securitization exposures

The following table provides details on securitization exposures in our banking book, by credit rating.

$ millions, as at October 31	**2021**	2020
	EAD	
Exposures under the AIRB approach		
S&P rating equivalent		
AAA to BBB-	**$ 10,823**	$ 12,276
BB+ to BB-	**–**	–
Below BB-	**–**	–
Unrated	**–**	–
	10,823	12,276
Exposures under the standardized approach	**4,556**	3,509
Total securitization exposures	**$ 15,379**	$ 15,785

CIBC client relief programs in response to COVID-19

During the early stages of the pandemic, we had been actively engaged in lending activities to support our clients who were experiencing financial hardship caused by the COVID-19 pandemic.

For our personal banking clients impacted by the COVID-19 pandemic, various client relief programs were offered at the onset of the pandemic, including lower interest rates of 10.99% on certain credit products, in addition to certain payment deferral options; deferral of regular payments on residential mortgages and certain secured personal loans for up to six months and on certain other loans and lines of credit for up to two months; and early withdrawal from eligible GICs on an exception basis.

For our corporate, commercial and business banking clients in Canada, the U.S. and other regions, client relief programs have also been offered on a case-by-case basis depending on the product and client including new or increased credit facilities to provide additional liquidity; covenant and borrowing base relief to provide financial flexibility; principal and interest deferrals for loans, mortgages, lines of credit, authorized overdraft and credit cards; and early withdrawal of funds held in non-registered GICs.

The number of clients under these payment deferral programs has continued to decline considerably relative to the second and third quarters of 2020. Following the expiry of their payment deferral terms, the majority of these clients have returned to making regular payments on their loans with a relatively small segment of client accounts written off. As at October 31, 2021, the gross outstanding balance of loans for which CIBC provided payment deferrals was not significant for retail loans and products in Canada and the Caribbean (2020: $3.3 billion); and was $0.2 billion for business and government loans (2020: $2.5 billion); including $0.1 billion in Canada and the U.S. (2020: $1.0 billion), and $0.1 billion in the Caribbean (2020: $1.5 billion).

Government lending programs in response to COVID-19

Since the onset of the pandemic, CIBC has engaged in a number of lending programs introduced by the Government of Canada and the U.S. federal government.

The Canada Emergency Business Account (CEBA) program was launched in the second quarter of 2020 by the Government of Canada, which was expanded later in 2020 to provide financial support to certain borrowers that would have not otherwise qualified and increased the loan limit for eligible borrowers from $40,000 to $60,000. The Export Development Canada (EDC) funds all loans advanced under the CEBA program, including any payment defaults and principal forgiveness. The application deadline for the CEBA program ended on June 30, 2021, however, we continue to facilitate this program as the final set of applications are reviewed and funded.

In the second quarter of 2020, the Government of Canada introduced a number of lending programs for businesses, including: (i) the EDC loan guarantee program for small- and medium-sized enterprises and (ii) the BDC co-lending arrangement. Applications for both programs are available until December 31, 2021.

In the first quarter of 2021, the Government of Canada launched the HASCAP, which is 100% guaranteed by the BDC and is available to small- and medium-sized businesses that have been hardest hit by the pandemic. Applications by eligible businesses commenced on February 1, 2021 and the program is available until December 31, 2021.

The PPP, introduced by the U.S. Small Business Administration, was a forgivable loan program that ended on May 31, 2021. PPP loans are guaranteed by the U.S. Small Business Administration.

As at October 31, 2021, loans of $4.5 billion (2020: $2.9 billion), net of repayments, have been provided to our clients under the CEBA, which are not recognized on our consolidated balance sheet. For further details, refer to Note 2 to our consolidated financial statements. In addition, funded loans outstanding on our consolidated balance sheet under the lending programs for businesses were $0.3 billion (2020: $0.2 billion), while loans outstanding under the PPP in the U.S. were US$0.5 billion (2020: US$1.9 billion).

For further details regarding these programs, refer to Note 2 to our consolidated financial statements.

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 low risk, 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:

$ billions, as at October 31, 2021	Residential mortgages (1)				HELOC (2)		Total			
	Insured		Uninsured		Uninsured		Insured		Uninsured	
Ontario (3)	**$ 25.2**	**19 %**	**$ 106.7**	**81 %**	**$ 10.2**	**100 %**	**$ 25.2**	**18 %**	**$ 116.9**	**82 %**
British Columbia and territories (4)	**8.7**	**18**	**40.6**	**82**	**3.9**	**100**	**8.7**	**16**	**44.5**	**84**
Alberta	**12.9**	**49**	**13.6**	**51**	**2.2**	**100**	**12.9**	**45**	**15.8**	**55**
Quebec	**5.6**	**30**	**13.2**	**70**	**1.2**	**100**	**5.6**	**28**	**14.4**	**72**
Central prairie provinces	**3.5**	**46**	**4.1**	**54**	**0.6**	**100**	**3.5**	**43**	**4.7**	**57**
Atlantic provinces	**3.7**	**42**	**5.1**	**58**	**0.7**	**100**	**3.7**	**39**	**5.8**	**61**
Canadian portfolio (5)(6)	**59.6**	**25**	**183.3**	**75**	**18.8**	**100**	**59.6**	**23**	**202.1**	**77**
U.S. portfolio (5)	**–**	**–**	**2.1**	**100**	**–**	**–**	**–**	**–**	**2.1**	**100**
Other international portfolio (5)	**–**	**–**	**2.5**	**100**	**–**	**–**	**–**	**–**	**2.5**	**100**
Total portfolio	**$ 59.6**	**24 %**	**$ 187.9**	**76 %**	**$ 18.8**	**100 %**	**$ 59.6**	**22 %**	**$ 206.7**	**78 %**
October 31, 2020	$ 67.0	31 %	$ 149.0	69 %	$ 19.6	100 %	$ 67.0	28 %	$ 168.6	72 %

(1) Balances reflect principal values.
(2) We did not have any insured HELOCs as at October 31, 2021 and 2020.
(3) Includes $11.7 billion (2020: $13.8 billion) of insured residential mortgages, $67.7 billion (2020: $53.4 billion) of uninsured residential mortgages, and $6.0 billion (2020: $6.1 billion) of HELOCs in the Greater Toronto Area (GTA).
(4) Includes $3.8 billion (2020: $4.5 billion) of insured residential mortgages, $27.9 billion (2020: $22.9 billion) of uninsured residential mortgages, and $2.4 billion (2020: $2.5 billion) of HELOCs in the Greater Vancouver Area (GVA).
(5) Geographic location is based on the address of the property.
(6) 64% (2020: 71%) 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	**2021**		2020	
	Residential mortgages	**HELOC**	Residential mortgages	HELOC
Ontario (2)	**64 %**	**68 %**	63 %	68 %
British Columbia and territories (3)	**61**	**65**	60	65
Alberta	**69**	**73**	68	73
Quebec	**68**	**73**	68	73
Central prairie provinces	**69**	**74**	68	74
Atlantic provinces	**69**	**73**	71	74
Canadian portfolio (4)	**64**	**68**	63	68
U.S. portfolio (4)	**63**	**65**	65	63
Other international portfolio (4)	**75 %**	**n/m**	72 %	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 64% (2020: 62%).
(3) Average LTV ratios for our uninsured GVA residential mortgages originated during the year were 61% (2020: 58%).
(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, 2021 (1)(2)	**51 %**	**49 %**
October 31, 2020 (1)(2)	55 %	52 %

(1) LTV ratios for residential mortgages are calculated based on weighted average. The house price estimates for October 31, 2021 and 2020 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, 2021 and 2020, 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 47% (2020: 48%). Average LTV ratio on our uninsured GVA residential mortgage portfolio was 45% (2020: 46%).

The table below summarizes the remaining amortization profile of our total Canadian, U.S. and other international residential mortgages based upon current customer payment amounts:

	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, 2021	**1 %**	**3 %**	**7 %**	**17 %**	**45 %**	**27 %**	**– %**	**– %**
October 31, 2020	2 %	4 %	7 %	18 %	44 %	25 %	– %	– %
U.S. portfolio								
October 31, 2021	**1 %**	**3 %**	**6 %**	**9 %**	**10 %**	**71 %**	**– %**	**– %**
October 31, 2020	2 %	3 %	7 %	10 %	10 %	68 %	– %	– %
Other international portfolio								
October 31, 2021	**7 %**	**12 %**	**21 %**	**24 %**	**19 %**	**15 %**	**1 %**	**– %**
October 31, 2020	7 %	13 %	22 %	23 %	19 %	14 %	2 %	– %

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, 2021, our Canadian condominium mortgages were $34.7 billion (2020: $28.1 billion), of which 24% (2020: 31%) were insured. Our drawn developer loans were $1.1 billion (2020: $1.4 billion), or 0.7% (2020: 1.0%) of our business and government portfolio, and our related undrawn exposure was $4.9 billion (2020: $4.5 billion). The condominium developer exposure is diversified across 102 projects.

We stress test our mortgage and HELOC portfolio to determine the potential impact of different economic events. Our stress tests may 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 strong capital position should be sufficient to absorb mortgage and HELOC losses.

On May 20, 2021, OSFI and the Department of Finance (Canada) announced that effective June 1, 2021, the minimum qualifying rate for uninsured and insured mortgages is now the higher of the mortgage contract rate plus 2%, or 5.25%, as a minimum floor. The 5.25% replaced the Bank of Canada's five-year benchmark posted mortgage rate that was then being applied. OSFI, as well as the Department of Finance (Canada) will revisit it at least annually to ensure it remains appropriate for risks in the environment.

Credit quality performance

As at October 31, 2021, total loans and acceptances after allowance for credit losses were $462.9 billion (2020: $416.4 billion). Consumer loans (comprising residential mortgages, credit cards, and personal loans, including student loans) constitute 65% (2020: 66%) of the portfolio, and business and government loans (including acceptances) constitute the remainder of the portfolio.

Consumer loans were up $30.0 billion or 11% from the prior year, primarily due to an increase in residential mortgages, offset by a decrease in personal loans and credit cards. Business and government loans (including acceptances) were up $16.5 billion or 12% from the prior year, mainly attributable to financial institutions, real estate and construction, retail and wholesale, and utilities.

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			**2021**			2020
	Business and government loans	**Consumer loans**	**Total**	Business and government loans	Consumer loans	Total
Gross impaired loans						
Balance at beginning of year	**$ 1,359**	**$ 990**	**$ 2,349**	$ 911	$ 955	$ 1,866
Classified as impaired during the year	**750**	**1,686**	**2,436**	1,256	1,933	3,189
Transferred to performing during the year	**(235)**	**(574)**	**(809)**	(109)	(580)	(689)
Net repayments	**(480)**	**(579)**	**(1,059)**	(547)	(543)	(1,090)
Amounts written off	**(279)**	**(707)**	**(986)**	(157)	(778)	(935)
Disposals of loans	**(31)**	**–**	**(31)**	–	–	–
Foreign exchange and other	**(51)**	**(16)**	**(67)**	5	3	8
Balance at end of year	**$ 1,033**	**$ 800**	**$ 1,833**	$ 1,359	$ 990	$ 2,349
Allowance for credit losses – impaired loans	**$ 508**	**$ 264**	**$ 772**	$ 650	$ 264	$ 914
Net impaired loans (1)						
Balance at beginning of year	**$ 709**	**$ 726**	**$ 1,435**	$ 535	$ 687	$ 1,222
Net change in gross impaired	**(326)**	**(190)**	**(516)**	448	35	483
Net change in allowance	**142**	**–**	**142**	(274)	4	(270)
Balance at end of year	**$ 525**	**$ 536**	**$ 1,061**	$ 709	$ 726	$ 1,435
Net impaired loans as a percentage of net loans and acceptances			**0.23 %**			0.34 %

(1) Net impaired loans are gross impaired loans net of stage 3 allowance for credit losses.

Gross impaired loans

As at October 31, 2021, gross impaired loans were $1,833 million, down $516 million from the prior year, primarily due to decreases in the Canadian residential mortgages portfolio and the oil and gas, retail and wholesale, and business services sectors, partially offset by increases in the education, health and social services and real estate and construction sectors.

55% of gross impaired loans related to Canada, of which the residential mortgages and personal lending portfolios, as well as the retail and wholesale and the utilities sectors accounted for the majority.

25% of gross impaired loans related to the U.S., of which the real estate and construction, financial institutions, business services and manufacturing 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 business services and real estate and construction 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 $772 million, down $142 million from the prior year, primarily due to decreases in the oil and gas, business services, and retail and wholesale sectors, partially offset by an increase in the utilities sector.

Loans contractually past due but not impaired

The following table provides an aging analysis of the contractually past due loans that are not impaired. Most risk-rated business and government loans that were contractually past due at the time relief was provided pursuant to payment deferral programs were presented in the aging category that applied at the time deferrals were granted during the period of the deferral. Other business and government loans, credit cards, personal loans and residential mortgages that were subject to a payment deferral program were generally presented in the aging category that applied as at March 31, 2020 during the period of the deferral, which approximated the time when the majority of the deferrals were granted. Loans that have exited a deferral program generally continue to age based on the status that was applied at the beginning of the program to the extent a payment has not been made.

$ millions, as at October 31	31 to 90 days	Over 90 days	2021 Total	2020 Total [1]
Residential mortgages	$ 703	$ –	$ 703	$ 1,152
Personal	146	–	146	222
Credit card	137	66	203	321
Business and government	162	–	162	281
	$ 1,148	$ 66	$ 1,214	$ 1,976

(1) Excludes loans less than 30 days past due as such loans are not generally indicative of the borrowers' ability to repay.

During the year, gross interest income that would have been recorded if impaired loans were treated as current was $96 million (2020: $113 million), of which $55 million (2020: $69 million) was in Canada and $41 million (2020: $44 million) was outside Canada. During the year, interest recognized on impaired loans was $41 million (2020: $45 million), and interest recognized on loans before being classified as impaired was $30 million (2020: $67 million), of which $21 million (2020: $43 million) was in Canada and $9 million (2020: $24 million) was outside Canada.

Exposure to certain countries and regions

Europe

The following table provides our exposure to European countries, both within and outside the Eurozone.

Our direct exposures presented in the tables 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).

Of our total direct exposures to Europe, approximately 43% (2020: 47%) is to entities in countries with Aaa/AAA ratings from at least one of Moody's or S&P.

The following table provides a summary of our positions in this business:

	Direct exposures											
	Funded				Unfunded			Derivative MTM receivables and repo-style transactions [1]				
$ millions, as at October 31, 2021	Corporate	Sovereign	Banks	Total funded (A)	Corporate	Banks	Total unfunded (B)	Corporate	Sovereign	Banks	Net exposure (C)	Total direct exposure (A)+(B)+(C)
Austria	$ –	$ 514	$ 135	$ 649	$ –	$ 2	$ 2	$ –	$ –	$ –	$ –	$ 651
Finland	67	328	758	1,153	97	5	102	–	–	7	7	1,262
France	62	161	152	375	336	103	439	–	–	34	34	848
Germany	432	917	751	2,100	321	130	451	49	–	51	100	2,651
Ireland	206	–	153	359	43	–	43	–	–	226	226	628
Luxembourg	151	1,812	156	2,119	61	108	169	–	–	124	124	2,412
Netherlands	552	730	147	1,429	568	275	843	28	–	12	40	2,312
Norway	187	186	195	568	714	–	714	–	–	–	–	1,282
Spain	87	–	21	108	7	25	32	–	–	–	–	140
Sweden	452	900	174	1,526	137	–	137	17	–	–	17	1,680
Switzerland	234	–	31	265	93	–	93	11	–	84	95	453
United Kingdom	2,655	2,494	1,002	6,151	3,174	349	3,523	690	17	423	1,130	10,804
Other European countries	61	311	55	427	12	83	95	–	127	9	136	658
Total Europe	**$ 5,146**	**$ 8,353**	**$ 3,730**	**$ 17,229**	**$ 5,563**	**$ 1,080**	**$ 6,643**	**$ 795**	**$ 144**	**$ 970**	**$ 1,909**	**$ 25,781**
October 31, 2020 [2]	$ 4,275	$ 5,211	$ 3,544	$ 13,030	$ 5,063	$ 968	$ 6,031	$ 788	$ 92	$ 835	$ 1,715	$ 20,776

(1) The amounts shown are net of CVA and collateral. Collateral on derivative MTM receivables was $1.9 billion (2020: $1.8 billion), collateral on repo-style transactions was $30.5 billion (2020: $30.3 billion), and both comprise cash and investment grade debt securities.
(2) Certain prior period balances have been revised to conform to current year presentation.

We have $2,632 million (2020: $639 million) of indirect exposure to European entities, as we hold debt or equity securities issued by European entities as collateral for derivative transactions and securities borrowing and lending activity from counterparties that are not in Europe.

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 7 to our consolidated financial statements for additional details), or through direct exposure to a client-sponsored special purpose vehicle. 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 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 risk rating 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, dealer floorplan receivables, equipment loans and leases, fleet lease receivables, franchise loans, residential mortgages, and trade receivables.

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 asset/liability management 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	**2021**				2020				
		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	**$ 34,573**	**$ –**	**$ 2,661**	**$ 31,912**	$ 43,531	$ –	$ 2,445	$ 41,086	Foreign exchange
Interest-bearing deposits with banks	**22,424**	**19**	**22,405**	**–**	18,987	75	18,912	–	Interest rate
Securities	**161,401**	**56,028**	**105,373**	**–**	149,046	45,825	103,221	–	Interest rate, equity
Cash collateral on securities borrowed	**12,368**	**–**	**12,368**	**–**	8,547	–	8,547	–	Interest rate
Securities purchased under resale agreements	**67,572**	**–**	**67,572**	**–**	65,595	–	65,595	–	Interest rate
Loans									
Residential mortgages	**251,526**	**–**	**251,526**	**–**	221,165	–	221,165	–	Interest rate
Personal	**41,897**	**–**	**41,897**	**–**	42,222	–	42,222	–	Interest rate
Credit card	**11,134**	**–**	**11,134**	**–**	11,389	–	11,389	–	Interest rate
Business and government	**150,213**	**24,780** [(2)]	**125,433**	**–**	135,546	22,643 [(2)]	112,903	–	Interest rate
Allowance for credit losses	**(2,849)**	**–**	**(2,849)**	**–**	(3,540)	–	(3,540)	–	Interest rate
Derivative instruments	**35,912**	**34,589**	**1,323**	**–**	32,730	31,244	1,486	–	Interest rate, foreign exchange
Customers' liability under acceptances	**10,958**	**–**	**10,958**	**–**	9,606	–	9,606	–	Interest rate
Other assets	**40,554**	**2,977**	**26,743**	**10,834**	34,727	3,364	20,613	10,750	Interest rate, equity, foreign exchange
	$ 837,683	**$ 118,393**	**$ 676,544**	**$ 42,746**	$ 769,551	$ 103,151	$ 614,564	$ 51,836	
Deposits	**$ 621,158**	**$ 609** [(3)]	**$ 548,419**	**$ 72,130**	$ 570,740	$ 484 [(3)]	$ 510,788	$ 59,468	Interest rate
Obligations related to securities sold short	**22,790**	**19,472**	**3,318**	**–**	15,963	13,795	2,168	–	Interest rate
Cash collateral on securities lent	**2,463**	**–**	**2,463**	**–**	1,824	–	1,824	–	Interest rate
Obligations related to securities sold under repurchase agreements	**71,880**	**–**	**71,880**	**–**	71,653	–	71,653	–	Interest rate
Derivative instruments	**32,101**	**30,882**	**1,219**	**–**	30,508	29,436	1,072	–	Interest rate, foreign exchange
Acceptances	**10,961**	**–**	**10,961**	**–**	9,649	–	9,649	–	Interest rate
Other liabilities	**24,961**	**2,705**	**11,344**	**10,912**	22,167	2,386	10,926	8,855	Interest rate
Subordinated indebtedness	**5,539**	**–**	**5,539**	**–**	5,712	–	5,712	–	Interest rate
	$ 791,853	**$ 53,668**	**$ 655,143**	**$ 83,042**	$ 728,216	$ 46,101	$ 613,792	$ 68,323	

(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 beginning from the second quarter of 2020.
(2) Excludes $48 million (2020: $291 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 or 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 2021, our stressed VaR window has been the 2008-2009 Global Financial Crisis period. However, for a four-month period spanning the third and fourth quarters of 2020, our stressed VaR window was the 2019-2020 Pandemic period. These historical periods both 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 is a statistical technique that measures the risk of issuer migration and default over a period of one year by simulating changes in issuer credit rating. Validation of the model included testing of the liquidity horizon, recovery rate, correlation, and PD and migration.

$ millions, as at or for the year ended October 31				**2021**				2020
	High	**Low**	**As at**	**Average**	High	Low	As at	Average
Interest rate risk	**$ 15.0**	**$ 4.1**	**$ 5.7**	**$ 8.7**	$ 10.6	$ 3.5	$ 7.3	$ 6.1
Credit spread risk	**11.8**	**5.8**	**8.4**	**8.5**	12.2	1.3	7.0	5.4
Equity risk	**7.8**	**2.3**	**6.5**	**4.1**	13.5	1.5	3.7	3.8
Foreign exchange risk	**3.8**	**0.4**	**1.6**	**1.4**	7.0	0.4	2.0	1.8
Commodity risk	**6.1**	**1.0**	**1.3**	**3.0**	7.9	1.1	2.4	3.1
Debt specific risk	**5.7**	**2.1**	**2.9**	**3.1**	3.9	1.5	3.0	2.5
Diversification effect (1)	**n/m**	**n/m**	**(18.5)**	**(21.2)**	n/m	n/m	(12.1)	(14.2)
Total VaR (one-day measure)	**$ 13.9**	**$ 4.6**	**$ 7.9**	**$ 7.6**	$ 22.0	$ 3.8	$ 13.3	$ 8.5
Stressed total VaR (one-day measure)	**$ 40.8**	**$ 15.3**	**$ 33.2**	**$ 28.0**	$ 34.1	$ 7.4	$ 30.2	$ 18.9
IRC (one-year measure) (2)	**$ 266.4**	**$ 144.6**	**$ 182.3**	**$ 203.5**	$ 279.5	$ 141.8	$ 175.3	$ 197.9

(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, 2021 was down $0.9 million from the prior year, driven primarily by an increase in the diversification benefit, partially offset by increases in credit spread and interest rate risks.

Average stressed total VaR for the year ended October 31, 2021 was up $9.1 million from the prior year. The increase was primarily due to changes in exposure to interest rate and equity risk.

Average IRC for the year ended October 31, 2021 was up $5.6 million from the prior year due to increases in trading book bond inventory 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 three 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.

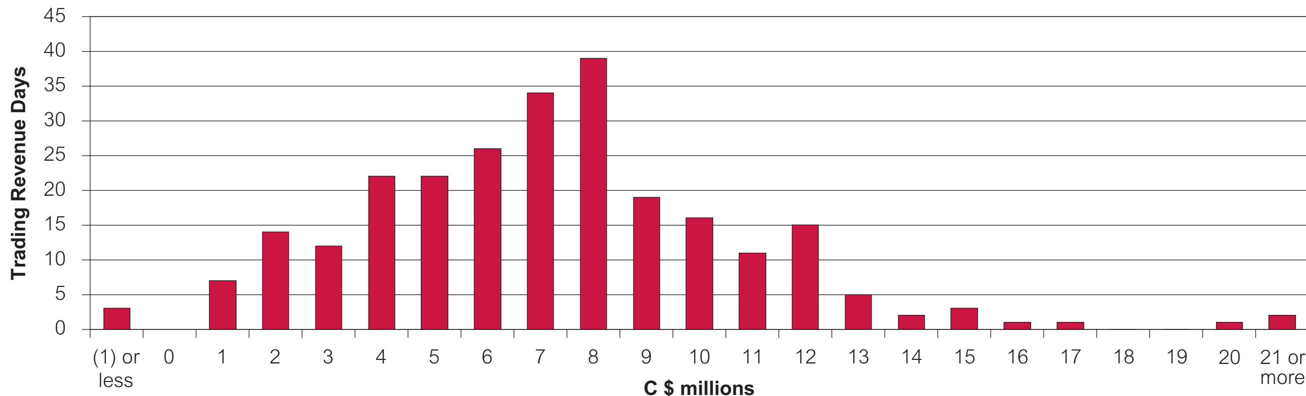
Trading revenue

Trading revenue (TEB) comprises both trading net interest income and non-interest income and excludes underwriting fees and commissions. See "Financial performance overview" for details. Trading revenue (TEB) in the charts below excludes certain exited portfolios.

During the year, trading revenue (TEB) was positive for 98.8% of the days, with the largest loss of $10.9 million occurring on October 27, 2021. Average daily trading revenue (TEB) was $6.7 million during the year, compared to $6.4 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.

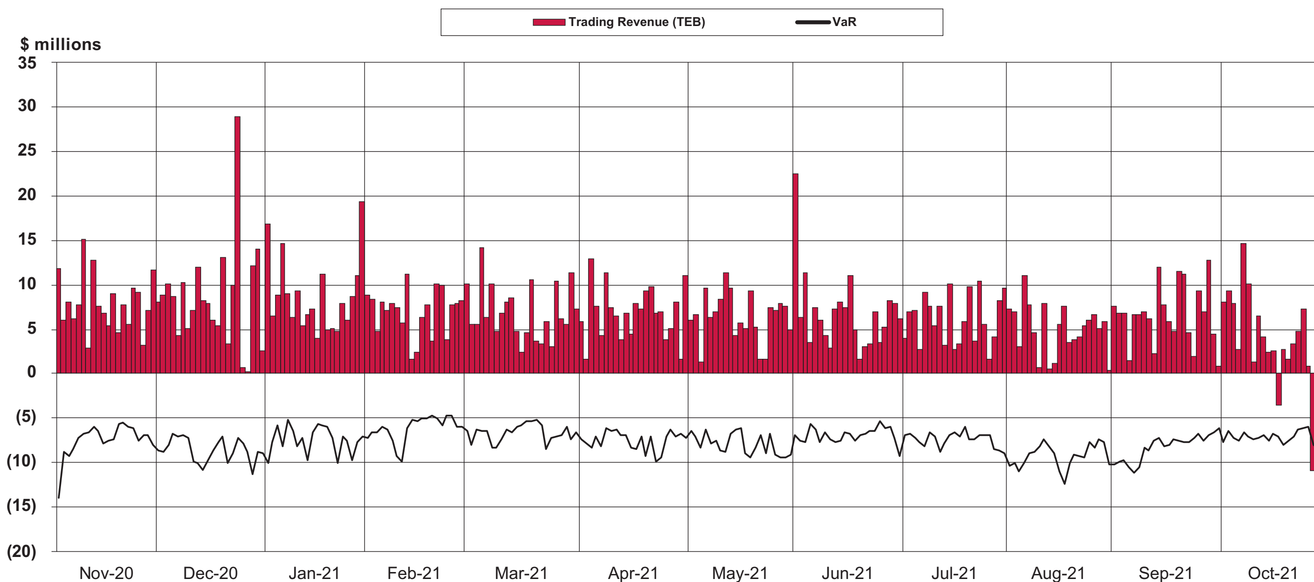
Frequency distribution of daily 2021 trading revenue (TEB) [(1)]

The histogram below presents the frequency distribution of daily trading revenue (TEB) for 2021.



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, beginning from the second quarter of 2020.

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, assuming 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. In August 2020, a Pandemic first wave scenario was incorporated into a suite of our stress scenarios. This scenario was modelled off the largest stress impacts from the first wave of the COVID-19 pandemic that resulted in severe disruption in financial markets.

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 first wave
- 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 asset/liability management (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 25 basis points decrease in interest rates on projected 12-month net interest income and economic value of equity for our structural balance sheet, assuming no subsequent hedging. While an immediate and sustained shock of 100 basis points is typically applied, and notwithstanding the possibility of negative rates, due to the low interest rate environment in both Canada and the U.S. as at October 31, 2021, an immediate downward shock of 25 basis points was applied while maintaining a floor on market and client interest rates at zero.

Structural interest rate sensitivity – measures

$ millions (pre-tax), as at October 31		**2021**		2020
	CAD [1]	**USD**	CAD [1]	USD
100 basis point increase in interest rates				
Increase (decrease) in net interest income	**$ 270**	**$ 134**	$ 317	$ 92
Increase (decrease) in EVE	**(684)**	**(161)**	(556)	(348)
25 basis point decrease in interest rates				
Increase (decrease) in net interest income	**(117)**	**(70)**	(119)	(42)
Increase (decrease) in EVE	**161**	**29**	57	49

(1) Includes CAD and other currency exposures.

Foreign exchange risk

Structural foreign exchange risk primarily consists of the risk inherent in: (a) net investments in foreign operations 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, 2021 by approximately $160 million (2020: $150 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 13 and 14 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
2021	**Equity securities designated at FVOCI**	**$ 730**	**$ 836**
	Equity-accounted investments in associates [1]	**66**	**89**
		$ 796	**$ 925**
2020	Equity securities designated at FVOCI	$ 576	$ 585
	Equity-accounted investments in associates [1]	71	93
		$ 647	$ 678

(1) Excludes our equity-accounted joint ventures. See Note 26 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, 2021, our consolidated defined benefit pension plans were in a net asset position of $1,323 million, compared with $185 million as at October 31, 2020. The change in the net asset position of our pension plans is disclosed in Note 19 to the consolidated financial statements.

Our Canadian pension plans represent approximately 92% 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 19 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, market (investment) risk, and health-care cost inflation risks.

The CIBC Pension Plan principally manages these risk exposures through its liability-driven investment strategy, which includes the use of derivatives for risk management and rebalancing purposes, as well as the ability to enhance returns. The use of derivatives within the CIBC Pension Plan is 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 19 to the consolidated financial statements.

A principal risk for the CIBC Pension Plan is interest rate risk, which it mitigates through 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.

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, Net Stable Funding Ratio (NSFR) and Net Cumulative Cash Flow (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)
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**
2020	Cash and deposits with banks	$ 62,518	$ –	$ 62,518	$ 133	$ 62,385
	Securities issued or guaranteed by sovereigns, central banks, and multilateral development banks	112,403	92,202	204,605	108,425	96,180
	Other debt securities	4,798	4,288	9,086	2,603	6,483
	Equities	27,169	15,924	43,093	21,449	21,644
	Canadian government guaranteed National Housing Act mortgage-backed securities	40,592	895	41,487	13,084	28,403
	Other liquid assets (2)	10,909	2,109	13,018	5,441	7,577
		$ 258,389	$ 115,418	$ 373,807	$ 151,135	$ 222,672

(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	**2021**	2020
CIBC (parent)	**$ 153,971**	$ 170,936
Domestic subsidiaries	**12,271**	12,355
Foreign subsidiaries	**47,557**	39,381
	$ 213,799	$ 222,672

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 decreased by $8.9 billion since October 31, 2020, as a result of asset growth and planned funding repayments that are a part of our ongoing business operations and strategies.

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)	
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**
2020	Cash and deposits with banks	$ –	$ 133	$ 62,385	$ –	$ 62,518
	Securities (3)	127,974	678	132,493	–	261,145
	Loans, net of allowance for credit losses (4)	7,946	42,291	34,103	322,441	406,781
	Other assets	4,950	–	2,731	69,382	77,063
		$ 140,870	$ 43,102	$ 231,712	$ 391,823	$ 807,507

(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 Liquidity Adequacy Requirements (LAR) Guideline, we report the LCR to OSFI on a monthly basis. The ratio is calculated as the total of unencumbered high-quality liquid assets (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, 2021	Total unweighted value [1]	Total weighted value [2]
HQLA			
1	HQLA	**n/a**	**$ 174,728**
Cash outflows			
2	Retail deposits and deposits from small business customers, of which:	**$ 214,521**	**15,759**
3	Stable deposits	**95,749**	**2,872**
4	Less stable deposits	**118,772**	**12,887**
5	Unsecured wholesale funding, of which:	**211,789**	**102,507**
6	Operational deposits (all counterparties) and deposits in networks of cooperative banks	**81,800**	**20,016**
7	Non-operational deposits (all counterparties)	**103,701**	**56,203**
8	Unsecured debt	**26,288**	**26,288**
9	Secured wholesale funding	**n/a**	**4,558**
10	Additional requirements, of which:	**135,763**	**32,528**
11	Outflows related to derivative exposures and other collateral requirements	**20,194**	**11,374**
12	Outflows related to loss of funding on debt products	**2,330**	**2,330**
13	Credit and liquidity facilities	**113,239**	**18,824**
14	Other contractual funding obligations	**3,301**	**3,301**
15	Other contingent funding obligations	**332,834**	**6,435**
16	Total cash outflows	**n/a**	**165,088**
Cash inflows			
17	Secured lending (e.g. reverse repos)	**81,977**	**13,792**
18	Inflows from fully performing exposures	**18,030**	**8,509**
19	Other cash inflows	**4,917**	**4,917**
20	Total cash inflows	**$ 104,924**	**$ 27,218**
			Total adjusted value
21	Total HQLA	**n/a**	**$ 174,728**
22	Total net cash outflows	**n/a**	**$ 137,870**
23	LCR	**n/a**	**127 %**
	$ millions, average of the three months ended July 31, 2021		Total adjusted value
24	Total HQLA	n/a	$ 168,259
25	Total net cash outflows	n/a	$ 133,491
26	LCR	n/a	126 %

(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, 2021 increased to 127% from 126% in the prior quarter, mainly due to higher HQLA, largely 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, 2021	**No maturity**	**<6 months**	**6 months to <1 year**	**>1 year**	**Weighted value**
ASF item						
1	**Capital**	**$ 46,972**	**$ –**	**$ –**	**$ 4,945**	**$ 51,916**
2	Regulatory capital	**46,972**	**–**	**–**	**4,945**	**51,916**
3	Other capital instruments	**–**	**–**	**–**	**–**	**–**
4	**Retail deposits and deposits from small business customers**	**197,887**	**30,121**	**7,967**	**10,103**	**227,177**
5	Stable deposits	**92,198**	**12,748**	**4,797**	**6,530**	**110,785**
6	Less stable deposits	**105,689**	**17,373**	**3,170**	**3,573**	**116,392**
7	**Wholesale funding**	**157,812**	**158,071**	**41,263**	**67,193**	**185,956**
8	Operational deposits	**81,359**	**3,025**	**–**	**–**	**42,192**
9	Other wholesale funding	**76,453**	**155,046**	**41,263**	**67,193**	**143,764**
10	**Liabilities with matching interdependent assets**	**–**	**1,627**	**892**	**14,276**	**–**
11	**Other liabilities**	**–**		**82,324** (1)		**7,469**
12	NSFR derivative liabilities			**7,020** (1)		
13	All other liabilities and equity not included in the above categories	**–**	**49,449**	**145**	**25,710**	**7,469**
14	**Total ASF**					**472,518**
RSF item						
15	**Total NSFR HQLA**					**15,052**
16	**Deposits held at other financial institutions for operational purposes**	**–**	**2,553**	**–**	**5**	**1,282**
17	**Performing loans and securities**	**58,465**	**97,988**	**48,154**	**300,559**	**325,693**
18	Performing loans to financial institutions secured by Level 1 HQLA	**–**	**25,608**	**2,457**	**1,596**	**4,412**
19	Performing loans to financial institutions secured by non-Level 1 HQLA and unsecured performing loans to financial institutions	**698**	**28,233**	**6,338**	**12,324**	**19,288**
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:	**27,221**	**31,121**	**17,718**	**102,108**	**134,812**
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:	**17,910**	**11,503**	**21,036**	**180,548**	**151,991**
23	With a risk weight of less than or equal to 35% under the Basel II standardized approach for credit risk	**17,910**	**11,427**	**20,959**	**176,049**	**148,091**
24	Securities that are not in default and do not qualify as HQLA, including exchange-traded equities	**12,636**	**1,523**	**605**	**3,983**	**15,190**
25	**Assets with matching interdependent liabilities**	**–**	**1,627**	**892**	**14,276**	**–**
26	**Other assets**	**13,137**		**80,203** (1)		**47,512**
27	Physical traded commodities, including gold	**3,005**				**2,554**
28	Assets posted as initial margin for derivative contracts and contributions to default funds of central counterparties			**8,693** (1)		**7,389**
29	NSFR derivative assets			**11,914** (1)		**4,893**
30	NSFR derivative liabilities before deduction of variation margin posted			**15,982** (1)		**799**
31	All other assets not included in the above categories	**10,132**	**38,538**	**83**	**4,993**	**31,877**
32	**Off-balance sheet items**			**336,705** (1)		**11,823**
33	**Total RSF**					**$ 401,362**
34	**NSFR**					**118 %**

	$ millions, as at July 31, 2021	Weighted value
35	Total ASF	$ 454,792
36	Total RSF	$ 389,814
37	NSFR	117 %

(1) No assigned time period per disclosure template design.

Our NSFR as at October 31, 2021 increased to 118% from 117% in the prior quarter, due to an increase in long-term funding largely 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, 2021	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]	**$ 5,642**	**$ 358**	**$ 422**	**$ 304**	**$ 6,726**	**$ –**	**$ –**	**$ 6,726**
Certificates of deposit and commercial paper	**8,566**	**18,998**	**11,808**	**22,349**	**61,721**	**496**	**–**	**62,217**
Bearer deposit notes and bankers' acceptances	**978**	**2,065**	**1,588**	**257**	**4,888**	**–**	**–**	**4,888**
Senior unsecured medium-term notes [2]	**1,485**	**865**	**1,290**	**5,211**	**8,851**	**16,360**	**23,192**	**48,403**
Senior unsecured structured notes	**–**	**–**	**–**	**31**	**31**	**187**	**62**	**280**
Covered bonds/asset-backed securities								
Mortgage securitization	**–**	**352**	**1,279**	**895**	**2,526**	**4,069**	**10,447**	**17,042**
Covered bonds	**–**	**1,058**	**–**	**6,850**	**7,908**	**4,376**	**11,545**	**23,829**
Cards securitization	**–**	**–**	**–**	**–**	**–**	**–**	**1,721**	**1,721**
Subordinated liabilities	**–**	**–**	**–**	**–**	**–**	**–**	**5,539**	**5,539**
Other	**–**	**–**	**–**	**247**	**247**	**–**	**8**	**255**
	$ 16,671	**$ 23,696**	**$ 16,387**	**$ 36,144**	**$ 92,898**	**$ 25,488**	**$ 52,514**	**$ 170,900**
Of which:								
Secured	**$ –**	**$ 1,410**	**$ 1,279**	**$ 7,745**	**$ 10,434**	**$ 8,445**	**$ 23,713**	**$ 42,592**
Unsecured	**16,671**	**22,286**	**15,108**	**28,399**	**82,464**	**17,043**	**28,801**	**128,308**
	$ 16,671	**$ 23,696**	**$ 16,387**	**$ 36,144**	**$ 92,898**	**$ 25,488**	**$ 52,514**	**$ 170,900**
October 31, 2020	$ 17,139	$ 15,400	$ 12,670	$ 35,224	$ 80,433	$ 17,648	$ 54,253	$ 152,334

(1) Includes non-negotiable term deposits from banks.
(2) Includes wholesale funding liabilities which are subject to conversion under bail-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		**2021**		2020
CAD	**$ 48.0**	**28 %**	$ 50.8	33 %
USD	**91.5**	**54**	75.4	50
Other	**31.4**	**18**	26.1	17
	$ 170.9	**100 %**	$ 152.3	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 July 15, 2021, Fitch affirmed CIBC's ratings and revised the outlook to Stable from Negative.

Our credit ratings are summarized in the following table:

As at October 31, 2021	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**	**BBB+**
Subordinated indebtedness	**A(H)**	**A**	**Baa1**	**BBB+**
Subordinated indebtedness – NVCC (4)	**A(L)**	**A**	**Baa1**	**BBB**
Limited recourse capital notes – NVCC (4)	**BBB(H)**	**n/a**	**Baa3**	**BB+**
Preferred shares – NVCC (4)	**Pfd-2**	**n/a**	**Baa3**	**P-3(H)**
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	2021	2020
One-notch downgrade	**$ 0.1**	$ 0.1
Two-notch downgrade	**0.2**	0.2
Three-notch downgrade	**0.3**	0.3

Regulatory developments concerning liquidity

On March 27, 2020, as a COVID-19 support measure, OSFI had allowed a temporary increase to the covered bond limit from 5.5% to 10% of total assets to facilitate greater access to the Bank of Canada facilities. The temporary increase in the limit targeted covered bonds pledged directly to the Bank of Canada, with the limit relating to market instruments remaining at 5.5%. Effective April 6, 2021, as a result of improvements to liquidity and access to term funding, OSFI announced the unwinding of the temporary increase of the covered bond limit for deposit-taking institutions. CIBC remains compliant with the stipulated requirements.

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, 2021	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]	**$ 34,573**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$ 34,573**
Interest-bearing deposits with banks	**22,424**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**22,424**
Securities	**2,453**	**8,440**	**5,830**	**4,596**	**4,632**	**18,937**	**44,911**	**32,562**	**39,040**	**161,401**
Cash collateral on securities borrowed	**12,368**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**12,368**
Securities purchased under resale agreements	**37,147**	**12,451**	**10,728**	**4,580**	**666**	**2,000**	**–**	**–**	**–**	**67,572**
Loans										
Residential mortgages	**1,766**	**4,565**	**9,121**	**13,146**	**12,919**	**40,758**	**161,304**	**7,947**	**–**	**251,526**
Personal	**703**	**695**	**988**	**963**	**862**	**411**	**3,398**	**3,947**	**29,930**	**41,897**
Credit card	**234**	**468**	**701**	**701**	**702**	**2,806**	**5,522**	**–**	**–**	**11,134**
Business and government	**9,366**	**5,488**	**9,341**	**9,907**	**9,791**	**24,422**	**54,542**	**18,719**	**8,637**	**150,213**
Allowance for credit losses	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**(2,849)**	**(2,849)**
Derivative instruments	**2,450**	**5,851**	**3,199**	**1,998**	**1,567**	**6,576**	**6,634**	**7,637**	**–**	**35,912**
Customers' liability under acceptances	**9,801**	**1,109**	**24**	**9**	**15**	**–**	**–**	**–**	**–**	**10,958**
Other assets	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**40,554**	**40,554**
	$ 133,285	**$ 39,067**	**$ 39,932**	**$ 35,900**	**$ 31,154**	**$ 95,910**	**$ 276,311**	**$ 70,812**	**$ 115,312**	**$ 837,683**
October 31, 2020 [2]	$ 131,720	$ 32,390	$ 42,722	$ 34,448	$ 29,883	$ 102,112	$ 226,577	$ 70,961	$ 98,738	$ 769,551
Liabilities										
Deposits [3]	**$ 30,570**	**$ 34,446**	**$ 31,584**	**$ 40,666**	**$ 26,305**	**$ 35,021**	**$ 48,347**	**$ 14,255**	**$ 359,964**	**$ 621,158**
Obligations related to securities sold short	**22,790**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**22,790**
Cash collateral on securities lent	**2,463**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**2,463**
Obligations related to securities sold under repurchase agreements	**45,145**	**17,597**	**8,038**	**563**	**192**	**345**	**–**	**–**	**–**	**71,880**
Derivative instruments	**3,639**	**5,264**	**2,660**	**1,909**	**1,515**	**4,382**	**5,473**	**7,259**	**–**	**32,101**
Acceptances	**9,804**	**1,109**	**24**	**9**	**15**	**–**	**–**	**–**	**–**	**10,961**
Other liabilities	**26**	**49**	**75**	**77**	**80**	**290**	**620**	**916**	**22,828**	**24,961**
Subordinated indebtedness	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**5,539**	**–**	**5,539**
Equity	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**45,830**	**45,830**
	$ 114,437	**$ 58,465**	**$ 42,381**	**$ 43,224**	**$ 28,107**	**$ 40,038**	**$ 54,440**	**$ 27,969**	**$ 428,622**	**$ 837,683**
October 31, 2020	$ 98,552	$ 40,528	$ 58,834	$ 43,919	$ 26,555	$ 33,273	$ 58,938	$ 26,416	$ 382,536	$ 769,551

(1) Cash includes interest-bearing demand deposits with the Bank of Canada.
(2) Restated from amounts previously presented.
(3) Comprises $213.9 billion (2020: $202.2 billion) of personal deposits; $387.1 billion (2020: $351.6 billion) of business and government deposits and secured borrowings; and $20.2 billion (2020: $17.0 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, 2021	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	**$ 2,324**	**$ 10,907**	**$ 4,357**	**$ 4,972**	**$ 5,149**	**$ 24,371**	**$ 57,189**	**$ 3,625**	**$ 188,449**	**$ 301,343**
Securities lending [2]	**43,002**	**4,561**	**3,015**	**–**	**–**	**–**	**–**	**–**	**–**	**50,578**
Standby and performance letters of credit	**3,101**	**2,511**	**2,435**	**3,690**	**2,740**	**609**	**636**	**53**	**–**	**15,775**
Backstop liquidity facilities	**–**	**10,522**	**680**	**658**	**10**	**292**	**12**	**–**	**–**	**12,174**
Documentary and commercial letters of credit	**35**	**63**	**29**	**23**	**3**	**12**	**29**	**–**	**–**	**194**
Other	**978**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**978**
	$ 49,440	**$ 28,564**	**$ 10,516**	**$ 9,343**	**$ 7,902**	**$ 25,284**	**$ 57,866**	**$ 3,678**	**$ 188,449**	**$ 381,042**
October 31, 2020	$ 39,474	$ 24,451	$ 11,188	$ 8,798	$ 6,427	$ 20,638	$ 51,245	$ 1,714	$ 173,157	$ 337,092

(1) Includes $141.5 billion (2020: $131.3 billion) of personal, home equity and credit card lines, which are unconditionally cancellable at our discretion.
(2) Excludes securities lending of $2.5 billion (2020: $1.8 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, 2021 [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]	**$ 124**	**$ 136**	**$ 161**	**$ 259**	**$ 124**	**$ 472**	**$ 661**	**$ 136**	**$ 2,073**
Future lease commitments [1]	**–**	**–**	**2**	**3**	**3**	**11**	**69**	**722**	**810**
Investment commitments	**2**	**1**	**–**	**–**	**–**	**–**	**5**	**329**	**337**
Underwriting commitments	**268**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**268**
Pension contributions [3]	**20**	**39**	**58**	**58**	**58**	**–**	**–**	**–**	**233**
	$ 414	**$ 176**	**$ 221**	**$ 320**	**$ 185**	**$ 483**	**$ 735**	**$ 1,187**	**$ 3,721**
October 31, 2020	$ 211	$ 243	$ 231	$ 239	$ 204	$ 488	$ 795	$ 1,625	$ 4,036

(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.

As part of the normal course of business, CIBC is exposed to operational risks in its business activities and external environment.

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 below), financial reporting risk, legal risk (see the "Reputation and legal risk" section below), model risk, people risk, privacy risk, project risk, physical security risk, regulatory compliance risk (see the "Regulatory compliance risk" section below) and transaction processing risk.

Our comprehensive Operational Risk Management Policy, supported by policies, tools, systems and governance structure, is used to mitigate operational risk. We continuously monitor our operational risk profile to ensure we are operating within CIBC's approved risk appetite.

Governance and management

Operational risk is managed through the three lines of defence model and articulated in the Operational Risk Management Policy. A strong risk culture and communication between the three lines of defence are important characteristics of effective risk management.

(i) As the first line of defence, our SBUs and functional groups own the risks and are accountable and responsible for identifying and assessing risks inherent in their activities in accordance with the CIBC risk appetite. In addition, they establish and maintain controls to mitigate such risks. The first line of defence may include governance groups within the relevant area to facilitate the control framework and other risk-related processes. Control groups provide subject matter expertise to the business lines and/or implement and maintain enterprise-wide control programs and activities. While control groups collaborate with the lines of business 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 the 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 function provides 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.

Global Operational Risk Management (GORM) oversees CIBC's operational risk exposures. The Head of GORM chairs the Operational Risk and Control Committee (ORCC), a subcommittee of the GRC, with representation from the SBUs and functional groups. The ORCC is a management forum providing oversight of CIBC's operational risk and internal control environment. The Chair of the ORCC reports significant operational risk matters to the GRC and RMC.

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 Policy, 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 and measurement

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 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.

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.

Business lines conduct change initiative risk assessment on risks inherent to the initiatives (for example, new product launches or major system changes). Identified inherent risks of the change initiative and related mitigation actions are challenged by GORM and other relevant second line of defence groups, as well as control groups, to ensure residual risks remain within the approved risk appetite.

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

Our primary tool for mitigating operational risk exposure is a robust internal control environment. Our internal 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 management program enables us to achieve operational resilience by delivering critical services to our clients through disruption.

Risk monitoring and reporting

Both forward-looking key risk indicators (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.

Environmental and related social risk

Environmental and related social risk is the risk of financial loss or damage to reputation associated with environmental issues including related social issues, whether arising from our credit and investment activities or related to our own operations. Our corporate environmental policy, originally approved by the Board in 1993, with the most recent biennial update and approval by our CRO in 2021, commits CIBC to responsible conduct in all activities to protect and conserve the environment; safeguard the interests of all stakeholders from unacceptable levels of environmental risk; and support the principles of sustainable development.

As environmental and social risk management requires a multi-disciplinary approach, CIBC's Board and its committees provide ongoing oversight; and CIBC's ESG Council, which comprises senior executives from across Strategic Business Units and Functional Groups, is responsible for bank-wide input and coordination on strategic ESG initiatives in response to CIBC's environmental and social responsibilities. Within CIBC's Risk Management function, the Enterprise Risk Management group provides independent oversight of the measurement, monitoring and control of environmental risk. This group is led by the Senior Vice-President, Enterprise Risk Management, who has direct accountability to the CRO for environmental risk oversight. Our environmental risk management team is responsible for developing environmental strategy, setting environmental performance standards and targets, and reporting on performance.

The corporate environmental policy is addressed by an integrated corporate environmental management program that is under the overall management of the environmental risk management team. 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 and bridge loans are required, in accordance with our commitment to the Equator Principles, which are a voluntary set of guidelines for financial institutions based on the screening criteria of the International Finance Corporation. We adopted the Equator Principles in 2003. 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.

We also conduct ongoing research and benchmarking on environmental issues such as climate change as they may pertain to responsible lending practices. We are a participant in the CDP (formerly Carbon Disclosure Project) climate change program, which promotes corporate disclosure to the investment community on greenhouse gas emissions and climate change management.

We are a supporter of the reporting framework developed by the TCFD, which provides guidance for voluntary, consistent climate-related risk disclosures. In 2019, CIBC published its first climate-related disclosure aligned to the TCFD recommendations and structured around its four core elements. Our TCFD report, available on our website, provides details as to how CIBC is identifying and managing both physical and transition risks associated with climate change.

We keep informed of emerging risks by engaging with stakeholders through established partnerships, such as the United Nations Environment Program – Finance Initiative (UNEP-FI) and the Rocky Mountain Institute (RMI) Center of Climate-Aligned Finance (CCAF). We are also a signatory to external sustainability frameworks such as the Partnership for Carbon Accounting Financials (PCAF), the Global Reporting Initiative (GRI) and the Sustainability Accounting Standards Board (SASB) to ensure comparable sustainability disclosure.

In 2018, CIBC Asset Management Inc. became a signatory to the United Nations-supported Principles for Responsible Investment, which commit signatories to incorporate environmental and social issues into investment analysis and decision making across all investment classes.

The environmental risk management team works closely with our main business units and functional groups to ensure that high standards 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 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.

Our Modern Slavery and Human Trafficking Statement commits CIBC to respecting human rights and standing against slavery and human trafficking in all our business segments and throughout our supply chains.

More information on our environmental governance, policy, management and performance can be found in our Sustainability Report, which is available on our website.

The information provided on our website does not form a part of this document.

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.

Conduct risk

Conduct risk is the risk that the actions or omissions (i.e., behaviour) of the organization, team members and/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 and other business specific and corporate-wide policies, frameworks, programs, processes and procedures. All team members must abide by the code, and CIBC policies 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

As discussed in the "Economic and market environment" section, progress towards containing outbreaks of the COVID-19 pandemic through vaccination campaigns and less restrictive public health measures provided an improving economic backdrop for CIBC. However, the pandemic, fueled by more contagious variants, continues to pose a risk to the recovery. As a result, we continue to operate in an uncertain environment. This gives 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. This particularly impacts estimates relating to the allowance for credit losses.

A summary of significant accounting policies is presented in Note 1 to the consolidated financial statements. 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.

IFRS 16 "Leases"

CIBC adopted IFRS 16 "Leases" (IFRS 16) in place of International Accounting Standards (IAS) 17 "Leases" as of November 1, 2019. We applied IFRS 16 on a modified retrospective basis. As permitted, we did not restate our prior period comparative consolidated financial statements, which were reported under the prior guidance. The impact of adopting IFRS 16 is discussed in Note 1.

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, and any lease payments made or lease incentives received prior to lease commencement. 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 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". In addition, the evaluation of the useful life for depreciation is assessed under IAS 36.

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.

Interest Rate Benchmark Reform: Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16

In response to reforms to interest rate benchmarks, the International Accounting Standards Board (IASB) issued amendments to impacted accounting standards in two phases 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 disclosure requirements related to interest rate benchmark reform. Only the amendments to IAS 39 "Financial Instruments: Recognition and Measurement" (IAS 39) and IFRS 7 "Financial Instruments: Disclosures" (IFRS 7) apply to us because we elected to continue to apply the hedge accounting requirements of IAS 39 upon the adoption of IFRS 9 "Financial Instruments" (IFRS 9). CIBC elected to early adopt the Phase 1 amendments effective November 1, 2019 to prepare for uncertainties that may increase relating to the timing or amount of benchmark-based cash flows of hedged items and hedging instruments.

The relief provided in the Phase 1 amendments allows hedge accounting to continue during the period of uncertainty before the replacement of existing interest rate benchmarks with an alternative rate. The application of this relief will end at the earlier of the discontinuation of the impacted hedge relationship and when the uncertainty arising from the reform is no longer present with respect to the timing and amount of cash flows of the hedged item and hedging instrument, which is expected to occur on the cessation date of the relevant LIBOR rate.

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, the Phase 2 amendments apply to the classification and measurement sections of IFRS 9, the hedge accounting sections of IAS 39 and to IFRS 7, IFRS 4 and IFRS 16 for us. While the Phase 2 amendments are effective for annual periods beginning on or after January 1, 2021, CIBC elected to early adopt the Phase 2 amendments effective November 1, 2020.

The Phase 2 amendments permit modifications of amortized cost financial assets and financial liabilities, and lessee lease 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. The amendments also 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 allow entities to redefine the hedged risk to an alternative rate, and to amend the description of the hedged item, the hedging instrument, and how the entity will assess hedge effectiveness to reflect changes required by the reform without discontinuing the hedge relationship.

The amendments also provide temporary relief that allows entities to designate an alternative rate as a risk component to hedge provided that the entity reasonably expects that the alternative rate will become separately identifiable within 24 months of its first designation. Judgment is involved in our evaluation of whether certain modifications have been made on an economically equivalent basis and in assessing whether an alternative rate will become separately identifiable within 24 months following its designation. Further relief is also provided for cash flow hedges, where the amounts accumulated in the cash flow reserve are deemed to be based on the alternative rates on which the hedged future cash flows are determined. As a result of the adoption of the Phase 2 amendments, 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.

We have established an enterprise-wide transition program to assess the impact of interest rate benchmark reform and manage the process to transition to alternative benchmark rates. For details on this program, refer to the "Other regulatory developments" section.

International Financial Reporting Interpretations Committee 23 "Uncertainty over Income Tax Treatments"

CIBC adopted International Financial Reporting Interpretations Committee 23 "Uncertainty over Income Tax Treatments" (IFRIC 23) as at November 1, 2019. IFRIC 23 clarifies the accounting for uncertainties in income taxes. There was no impact to our consolidated financial statements and no changes in our accounting policies as a result of adopting IFRIC 23.

Conceptual Framework for Financial Reporting

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.

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 3 to the consolidated financial statements.

$ millions, as at October 31	2021		2020	
	Level 3	**Total** (1)	Level 3	Total (1)
Assets				
Securities mandatorily measured and designated at FVTPL and loans mandatorily measured at FVTPL	**$ 1,099**	**1.1 %**	$ 802	0.9 %
Debt securities measured at FVOCI and equity securities designated at FVOCI	**392**	**0.7**	240	0.4
Derivative instruments	**97**	**0.3**	358	1.1
	$ 1,588	**0.8 %**	$ 1,400	0.8 %
Liabilities				
Deposits and other liabilities (2)	**$ 742**	**3.8 %**	$ (4)	– %
Derivative instruments	**267**	**0.8**	298	1.0
	$ 1,009	**1.3 %**	$ 294	0.4 %

(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 3 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, 2021, the total valuation adjustments related to financial instruments carried at fair value on the consolidated balance sheet was $270 million (2020: $358 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.

The uncertainty created by the COVID-19 pandemic has increased the level of judgment applied in respect of all of these elements. During the year ended October 31, 2021, improvements in our economic outlook resulted in moderate reductions in our stage 1 and stage 2 performing ECLs relative to the increases recognized in 2020 as a result of the onset of the COVID-19 pandemic. Significant judgment continued to be inherent in the forecasting of forward-looking information, including with regard to our base case assumption that vaccination programs, including the efficacy of the vaccines and the rate of vaccination, will be able to effectively respond to emerging variants and that the government will respond to subsequent waves of infection with targeted health measures rather than broader economic closures. Significant judgment also continues to be applied in evaluating changes in various credit metrics due to concerns that they may not correlate with losses to the same extent as they may have in prior periods as a result of various government support measures and changes in consumer behaviours that are unique to the current environment. See Note 6 to our consolidated financial statements for more information concerning the high level of judgment inherent in the estimation of ECL allowance under IFRS 9, including the impact of the COVID-19 pandemic.

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 the "Interest Rate Benchmark Reform: Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16" section above 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 structured entities, 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 7 to the consolidated financial statements.

Asset impairment

Goodwill

As at October 31, 2021, we had goodwill of $4,954 million (2020: $5,253 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 2021, we performed our annual impairment test. We concluded that the recoverable amounts of our CGUs were in excess of their carrying amounts.

As discussed in Note 4 to our consolidated financial statements, in the second quarter of 2020 we recognized a goodwill impairment charge of $28 million on our CIBC FirstCaribbean CGU. In the fourth quarter of 2020, we concluded that held for sale accounting was no longer appropriate and we recognized an additional goodwill impairment charge of $220 million based on our revised estimate of the recoverable value of CIBC FirstCaribbean. This reduced the carrying amount of the goodwill relating to the CIBC FirstCaribbean CGU to $35 million (US$26 million) as at October 31, 2020. No additional goodwill impairment loss was recognized for the year ended October 31, 2021.

For additional information, see Note 4 and Note 9 to our consolidated financial statements.

Other intangible assets and long-lived assets

As at October 31, 2021, we had other intangible assets with an indefinite life of $140 million (2020: $142 million). 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 details, see Note 9 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.

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. Deferred tax liabilities are generally recognized for all taxable temporary differences unless the temporary differences relate to our net investments in foreign operations (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 20 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 23 to the consolidated financial statements. The provisions disclosed in Note 23 include all of CIBC's accruals for legal matters as at October 31, 2021, 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 $1.1 billion as at October 31, 2021. 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 and interest. The matters underlying the estimated range as at October 31, 2021 consist of the significant legal matters disclosed in Note 23 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.

Restructuring

During the first quarter of 2020, we recognized a restructuring charge of $339 million in Corporate and Other associated with ongoing efforts to transform our cost structure and simplify our bank. This charge consisted primarily of employee severance and related costs and was recorded in Non-interest expenses – Employee compensation and benefits.

As at October 31, 2021, the remaining provision related to this restructuring charge was $99 million. This amount represents our best estimate as at October 31, 2021 of the amount required to settle the obligation, including obligations related to ongoing payments as a result of the restructuring. For further details on our restructuring provision, see Note 23 to the consolidated financial statements.

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 a long-term disability income replacement plan and associated medical and dental benefits (collectively, other long-term benefit plans). The long-term disability plan was closed to new claims effective June 1, 2004.

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.

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 19 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.

We continue to prepare for the implementation of IFRS 17, which is overseen by an Executive Steering Committee. Significant progress has been made in evaluating the required changes to our accounting and actuarial policies resulting from the adoption of IFRS 17. We plan to implement the required technology solution to support the new requirements in the upcoming year.

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. The U.K.'s Financial Conduct Authority (FCA) originally announced in July 2017 that it would not compel banks to submit LIBOR rates after December 2021. In March 2021, the FCA and the ICE Benchmark Administration (IBA) announced the dates for the cessation or loss of representativeness of various LIBOR rates including that GBP, EUR, CHF and JPY LIBORs will cease on December 31, 2021 and that most USD LIBOR tenors will cease on June 30, 2023. This announcement results in a fixed spread between the LIBOR rate and the alternative rate for a given tenor which will apply on the cessation of the relevant LIBOR rates. The extension for most USD LIBOR tenors until June 30, 2023 is intended to allow for many legacy contracts to mature before the cessation date, although originations of new USD LIBOR linked products would cease after the end of 2021.

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 FCA in March 2021.

In response to the proposed 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.

An IBOR Steering Committee has been established with responsibility for oversight and execution of the Program, including:

- Ensuring key project milestones are met;
- Providing direction and guidance on a holistic basis;
- Reviewing and resolving key issues and risks; and
- Ensuring that our transition strategies and any transition actions remain consistent with CIBC's overall strategy, risk appetite, and control framework.

As a part of the Program, we are transitioning our existing IBOR based contracts to those that reference the new alternative rates, and have developed business processes to support the transition. We are on track to substantially complete the remediation of our non-USD LIBOR referenced contracts by incorporating appropriate fallback language or by replacing the LIBOR referenced rates to the corresponding alternative rates with appropriate spread adjustments. We have ceased the issuance of GBP and JPY LIBOR linked products earlier this year, and expect to cease origination of new USD LIBOR products before the end of calendar year 2021 in a manner consistent with regulatory expectations. We are also working with clearing houses to transition our existing non-USD LIBOR referenced derivatives cleared by them to alternative rates, which is expected to occur in December 2021. We have also started to offer products based upon alternative rates to our clients, and have continued to make information available to them, advising on developments on IBOR transition.

We continue to assess the impact of IBOR reform on our operations, engage with industry associations on ongoing developments on the transition to risk-free rates, and continue to incorporate recent developments into our project plan. The Program provides regular updates to senior management, including the Executive Committee, and the Board.

Current accounting policy changes relating to interest rate benchmark reform

The IASB has addressed interest rate benchmark reform and its effects on financial reporting in two phases. The first phase focuses on issues affecting financial reporting in the period before the interest rate benchmark reform, while the second phase focuses on issues that affect financial reporting once the existing rate is replaced with an alternative rate. See the "Accounting and controls matters" section and Note 1 to our consolidated financial statements for additional details.

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 IIROC 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. We expect to implement the remaining changes to our policies and procedures to comply with the remaining requirements 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 will be effective on April 30, 2022, and will include additional changes such as providing separate coverage for certain registered plans and introducing new requirements for deposits held in trust.

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 18, 19, 25 and 26 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' Auditors" 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, 2021 (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, 2021, 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, 2021, 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, 2021 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

$ millions, for the year ended October 31	Average balance (1) 2021	2020	2019	Interest 2021	2020	2019	Average rate 2021	2020	2019
Domestic assets (2)									
Cash and deposits with banks	**$ 37,527**	$ 30,232	$ 7,156	**$ 95**	$ 150	$ 164	**0.25 %**	0.50 %	2.29 %
Securities	**82,262**	76,063	66,954	**1,567**	1,776	1,852	**1.90**	2.33	2.77
Securities borrowed or purchased under resale agreements	**27,203**	26,498	23,950	**154**	290	496	**0.57**	1.09	2.07
Loans Residential mortgages	**230,606**	208,811	203,575	**5,141**	5,581	6,347	**2.23**	2.67	3.12
Personal and credit card	**50,110**	51,948	53,490	**2,962**	3,433	4,012	**5.91**	6.61	7.50
Business and government	**70,755**	68,072	63,131	**1,712**	2,043	2,434	**2.42**	3.00	3.86
Total loans	**351,471**	328,831	320,196	**9,815**	11,057	12,793	**2.79**	3.36	4.00
Other interest-bearing assets	**8,901**	5,194	3,837	**45**	62	128	**0.51**	1.19	3.34
Derivative instruments	**11,382**	14,334	10,248	**–**	–	–	**–**	–	–
Customers' liability under acceptances	**10,613**	9,560	10,170	**–**	–	–	**–**	–	–
Other non-interest-bearing assets	**21,371**	19,641	17,386	**–**	–	–	**–**	–	–
Total domestic assets	**550,730**	510,353	459,897	**11,676**	13,335	15,433	**2.12**	2.61	3.36
Foreign assets (2)									
Cash and deposits with banks	**30,270**	20,050	13,305	**36**	99	232	**0.12**	0.49	1.74
Securities	**72,870**	62,014	49,059	**574**	792	927	**0.79**	1.28	1.89
Securities borrowed or purchased under resale agreements	**51,157**	42,199	35,491	**165**	552	978	**0.32**	1.31	2.76
Loans Residential mortgages	**4,501**	4,429	3,815	**157**	176	201	**3.49**	3.97	5.27
Personal and credit card	**1,321**	1,309	1,435	**83**	97	105	**6.28**	7.41	7.32
Business and government	**66,677**	66,015	55,443	**1,995**	2,416	2,819	**2.99**	3.66	5.08
Total loans	**72,499**	71,753	60,693	**2,235**	2,689	3,125	**3.08**	3.75	5.15
Other interest-bearing assets	**923**	701	555	**55**	55	2	**5.96**	7.85	0.36
Derivative instruments	**24,186**	20,629	13,419	**–**	–	–	**–**	–	–
Customers' liability under acceptances	**1**	1	–	**–**	–	–	**–**	–	–
Other non-interest-bearing assets	**6,985**	7,792	7,297	**–**	–	–	**–**	–	–
Total foreign assets	**258,891**	225,139	179,819	**3,065**	4,187	5,264	**1.18**	1.86	2.93
Total assets	**$ 809,621**	$ 735,492	$ 639,716	**$ 14,741**	$ 17,522	$ 20,697	**1.82 %**	2.38 %	3.24 %
Domestic liabilities (2)									
Deposits Personal	**$ 189,599**	$ 172,913	$ 157,537	**$ 734**	$ 1,405	$ 1,861	**0.39 %**	0.81 %	1.18 %
Business and government	**198,978**	178,476	153,092	**1,170**	2,019	3,033	**0.59**	1.13	1.98
Bank	**2,220**	2,105	1,915	**3**	13	29	**0.14**	0.62	1.51
Secured borrowings	**37,893**	39,076	39,111	**378**	668	1,037	**1.00**	1.71	2.65
Total deposits	**428,690**	392,570	351,655	**2,285**	4,105	5,960	**0.53**	1.05	1.69
Derivative instruments	**10,621**	14,398	10,790	**–**	–	–	**–**	–	–
Acceptances	**10,614**	9,563	10,171	**–**	–	–	**–**	–	–
Obligations related to securities sold short	**19,018**	16,794	15,412	**229**	251	285	**1.20**	1.49	1.85
Obligations related to securities lent or sold under repurchase agreements	**26,349**	27,374	15,995	**151**	220	477	**0.57**	0.80	2.98
Other liabilities	**20,432**	6,464	14,621	**36**	49	9	**0.18**	0.76	0.06
Subordinated indebtedness	**5,340**	4,891	4,549	**120**	152	193	**2.25**	3.11	4.24
Total domestic liabilities	**521,064**	472,054	423,193	**2,821**	4,777	6,924	**0.54**	1.01	1.64
Foreign liabilities (2)									
Deposits Personal	**16,795**	16,974	15,543	**62**	142	193	**0.37**	0.84	1.24
Business and government	**134,038**	113,877	97,429	**268**	964	2,068	**0.20**	0.85	2.12
Bank	**16,848**	13,891	12,277	**20**	100	197	**0.12**	0.72	1.60
Secured borrowings	**1,883**	1,322	226	**16**	15	4	**0.85**	1.13	1.77
Total deposits	**169,564**	146,064	125,475	**366**	1,221	2,462	**0.22**	0.84	1.96
Derivative instruments	**22,571**	20,718	14,130	**–**	–	–	**–**	–	–
Acceptances	**1**	1	–	**–**	–	–	**–**	–	–
Obligations related to securities sold short	**1,050**	1,047	1,089	**7**	3	6	**0.67**	0.29	0.55
Obligations related to securities lent or sold under repurchase agreements	**50,142**	41,881	35,413	**57**	436	721	**0.11**	1.04	2.04
Other liabilities	**2,395**	13,706	3,014	**29**	34	28	**1.21**	0.25	0.93
Subordinated indebtedness	**96**	152	150	**2**	7	5	**2.08**	4.61	3.33
Total foreign liabilities	**245,819**	223,569	179,271	**461**	1,701	3,222	**0.19**	0.76	1.80
Total liabilities	**766,883**	695,623	602,464	**3,282**	6,478	10,146	**0.43**	0.93	1.68
Shareholders' equity	**42,563**	39,682	37,072	**–**	–	–	**–**	–	–
Non-controlling interests	**175**	187	180	**–**	–	–	**–**	–	–
Total liabilities and equity	**$ 809,621**	$ 735,492	$ 639,716	**$ 3,282**	$ 6,478	$ 10,146	**0.41 %**	0.88 %	1.59 %
Net interest income and net interest margin (3)				**$ 11,459**	$ 11,044	$ 10,551	**1.42 %**	1.50 %	1.65 %
Additional disclosures: Non-interest-bearing deposit liabilities									
Domestic	**$ 76,224**	$ 59,862	$ 48,478						
Foreign	**22,396**	18,430	14,582						

(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) Net interest income as a percentage of average assets.

Volume/rate analysis of changes in net interest income

$ millions		2021/2020			2020/2019		
		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		**$ 36**	**$ (91)**	**$ (55)**	$ 529	$ (543)	$ (14)
Securities		**145**	**(354)**	**(209)**	252	(328)	(76)
Securities borrowed or purchased under resale agreements		**8**	**(144)**	**(136)**	53	(259)	(206)
Loans	Residential mortgages	**583**	**(1,023)**	**(440)**	163	(929)	(766)
	Personal and credit card	**(121)**	**(350)**	**(471)**	(116)	(463)	(579)
	Business and government	**81**	**(412)**	**(331)**	190	(581)	(391)
Total loans		**543**	**(1,785)**	**(1,242)**	237	(1,973)	(1,736)
Other interest-bearing assets		**44**	**(61)**	**(17)**	45	(111)	(66)
Change in domestic interest income		**776**	**(2,435)**	**(1,659)**	1,116	(3,214)	(2,098)
Foreign assets (1)							
Cash and deposits with banks		**50**	**(113)**	**(63)**	118	(251)	(133)
Securities		**139**	**(357)**	**(218)**	245	(380)	(135)
Securities borrowed or purchased under resale agreements		**117**	**(504)**	**(387)**	185	(611)	(426)
Loans	Residential mortgages	**3**	**(22)**	**(19)**	32	(57)	(25)
	Personal and credit card	**1**	**(15)**	**(14)**	(9)	1	(8)
	Business and government	**24**	**(445)**	**(421)**	538	(941)	(403)
Total loans		**28**	**(482)**	**(454)**	561	(997)	(436)
Other interest-bearing assets		**17**	**(17)**	**–**	1	52	53
Change in foreign interest income		**351**	**(1,473)**	**(1,122)**	1,110	(2,187)	(1,077)
Total change in interest income		**$ 1,127**	**$ (3,908)**	**$ (2,781)**	$ 2,226	$ (5,401)	$ (3,175)
Domestic liabilities (1)							
Deposits	Personal	**$ 136**	**$ (807)**	**$ (671)**	$ 182	$ (638)	$ (456)
	Business and government	**232**	**(1,081)**	**(849)**	503	(1,517)	(1,014)
	Bank	**1**	**(11)**	**(10)**	3	(19)	(16)
	Secured borrowings	**(20)**	**(270)**	**(290)**	(1)	(368)	(369)
Total deposits		**349**	**(2,169)**	**(1,820)**	687	(2,542)	(1,855)
Obligations related to securities sold short		**33**	**(55)**	**(22)**	26	(60)	(34)
Obligations related to securities lent or sold under repurchase agreements		**(8)**	**(61)**	**(69)**	339	(596)	(257)
Other liabilities		**106**	**(119)**	**(13)**	(5)	45	40
Subordinated indebtedness		**14**	**(46)**	**(32)**	15	(56)	(41)
Change in domestic interest expense		**494**	**(2,450)**	**(1,956)**	1,062	(3,209)	(2,147)
Foreign liabilities (1)							
Deposits	Personal	**(1)**	**(79)**	**(80)**	18	(69)	(51)
	Business and government	**171**	**(867)**	**(696)**	349	(1,453)	(1,104)
	Bank	**21**	**(101)**	**(80)**	26	(123)	(97)
	Secured borrowings	**6**	**(5)**	**1**	19	(8)	11
Total deposits		**197**	**(1,052)**	**(855)**	412	(1,653)	(1,241)
Obligations related to securities sold short		**–**	**4**	**4**	–	(3)	(3)
Obligations related to securities lent or sold under repurchase agreements		**86**	**(465)**	**(379)**	132	(417)	(285)
Other liabilities		**(28)**	**23**	**(5)**	99	(93)	6
Subordinated indebtedness		**(3)**	**(2)**	**(5)**	–	2	2
Change in foreign interest expense		**252**	**(1,492)**	**(1,240)**	643	(2,164)	(1,521)
Total change in interest expense		**$ 746**	**$ (3,942)**	**$ (3,196)**	$ 1,705	$ (5,373)	$ (3,668)
Change in total net interest income		**$ 381**	**$ 34**	**$ 415**	$ 521	$ (28)	$ 493

(1) Classification as domestic or foreign is based on domicile of debtor or customer.

Analysis of net loans and acceptances[1]

$ millions, as at October 31	Canada [2]					U.S. [2]				
	2021	2020	2019	2018	2017	**2021**	2020	2019	2018	2017
Residential mortgages	**$ 246,581**	$ 216,215	$ 204,383	$ 203,930	$ 203,787	**$ 2,071**	$ 2,000	$ 1,527	$ 1,152	$ 902
Personal	**39,940**	40,317	41,906	41,506	39,533	**542**	409	435	356	326
Credit card	**10,362**	10,550	12,143	12,060	11,805	**22**	27	35	36	35
Total net consumer loans	**296,883**	267,082	258,432	257,496	255,125	**2,635**	2,436	1,997	1,544	1,263
Non-residential mortgages	**6,259**	5,844	6,064	6,426	6,481	**48**	292	115	39	95
Financial institutions	**11,407**	9,434	7,565	6,885	5,403	**13,705**	7,560	8,111	5,529	3,248
Retail and wholesale	**6,549**	5,442	6,548	6,000	5,186	**2,449**	2,089	2,215	2,013	1,904
Business services	**6,663**	6,824	6,975	6,969	6,237	**4,808**	5,095	4,398	3,720	3,567
Manufacturing – capital goods	**2,222**	2,115	2,465	2,318	1,912	**2,500**	2,547	2,399	2,143	1,559
Manufacturing – consumer goods	**3,430**	3,326	3,972	3,294	3,019	**1,283**	1,057	958	695	702
Real estate and construction [3]	**25,151**	20,782	18,465	16,297	13,293	**18,138**	18,750	16,871	14,559	13,761
Agriculture	**7,242**	6,829	6,965	6,011	5,558	**129**	103	124	79	107
Oil and gas	**2,539**	3,627	3,648	3,246	3,159	**1,818**	2,364	2,447	1,852	1,838
Mining	**415**	610	1,024	824	668	**127**	142	154	60	87
Forest products	**283**	474	628	446	464	**165**	141	162	215	209
Hardware and software	**589**	608	713	624	539	**2,275**	1,939	1,387	1,202	883
Telecommunications and cable	**238**	108	191	275	281	**1,196**	1,015	314	887	756
Publishing, printing, and broadcasting	**343**	406	557	527	291	**71**	99	92	102	117
Transportation	**2,526**	2,218	2,193	1,880	1,818	**1,255**	1,283	1,263	893	602
Utilities	**4,397**	3,783	3,027	3,328	2,840	**3,654**	3,332	2,353	1,650	1,713
Education, health and social services	**3,664**	3,333	3,221	2,870	2,937	**3,927**	4,203	2,941	3,040	3,099
Governments	**1,666**	1,173	857	954	869	**229**	216	127	92	7
Others	**–**	–	–	–	–	**–**	–	–	–	12
Stage 1 and 2 allowance for credit losses (2017: Collective allowance allocated to business and government loans) [3][4]	**(245)**	(341)	(144)	(98)	(195)	**(282)**	(536)	(138)	(108)	(83)
Total net business and government loans, including acceptances	**85,338**	76,595	74,934	69,076	60,760	**57,495**	51,691	46,293	38,662	34,183
Total net loans and acceptances	**$ 382,221**	$ 343,677	$ 333,366	$ 326,572	$ 315,885	**$ 60,130**	$ 54,127	$ 48,290	$ 40,206	$ 35,446

Analysis of net loans and acceptances (continued)[1]

$ millions, as at October 31	Other [2]					Total				
	2021	2020	2019	2018	2017	**2021**	2020	2019	2018	2017
Residential mortgages	**$ 2,594**	$ 2,587	$ 2,531	$ 2,453	$ 2,379	**$ 251,246**	$ 220,802	$ 208,441	$ 207,535	$ 207,068
Personal	**647**	664	757	715	583	**41,129**	41,390	43,098	42,577	40,442
Credit card	**125**	145	157	159	152	**10,509**	10,722	12,335	12,255	11,992
Total net consumer loans	**3,366**	3,396	3,445	3,327	3,114	**302,884**	272,914	263,874	262,367	259,502
Non-residential mortgages	**268**	252	258	266	218	**6,575**	6,388	6,437	6,731	6,794
Financial institutions	**3,896**	2,227	2,103	2,043	841	**29,008**	19,221	17,779	14,457	9,492
Retail and wholesale	**596**	517	510	618	706	**9,594**	8,048	9,273	8,631	7,796
Business services	**1,789**	1,758	1,801	1,675	1,736	**13,260**	13,677	13,174	12,364	11,540
Manufacturing – capital goods	**93**	49	128	125	432	**4,815**	4,711	4,992	4,586	3,903
Manufacturing – consumer goods	**91**	97	61	92	111	**4,804**	4,480	4,991	4,081	3,832
Real estate and construction [3]	**1,264**	1,312	1,529	1,624	1,325	**44,553**	40,844	36,865	32,480	28,379
Agriculture	**36**	147	104	25	22	**7,407**	7,079	7,193	6,115	5,687
Oil and gas	**238**	346	28	74	185	**4,595**	6,337	6,123	5,172	5,182
Mining	**490**	507	642	710	784	**1,032**	1,259	1,820	1,594	1,539
Forest products	**–**	–	–	–	–	**448**	615	790	661	673
Hardware and software	**130**	107	21	–	20	**2,994**	2,654	2,121	1,826	1,442
Telecommunications and cable	**130**	140	185	208	301	**1,564**	1,263	690	1,370	1,338
Publishing, printing, and broadcasting	**95**	58	81	85	89	**509**	563	730	714	497
Transportation	**2,909**	3,033	2,012	1,642	1,847	**6,690**	6,534	5,468	4,415	4,267
Utilities	**3,519**	2,945	1,926	833	878	**11,570**	10,060	7,306	5,811	5,431
Education, health and social services	**23**	27	34	28	29	**7,614**	7,563	6,196	5,938	6,065
Governments	**1,736**	1,817	1,657	1,598	1,662	**3,631**	3,206	2,641	2,644	2,538
Others	**–**	–	–	–	–	**–**	–	–	–	12
Stage 1 and 2 allowance for credit losses (2017: Collective allowance allocated to business and government loans) [3][4]	**(141)**	(151)	(73)	(90)	(73)	**(668)**	(1,028)	(355)	(296)	(351)
Total net business and government loans, including acceptances	**17,162**	15,188	13,007	11,556	11,113	**159,995**	143,474	134,234	119,294	106,056
Total net loans and acceptances	**$ 20,528**	$ 18,584	$ 16,452	$ 14,883	$ 14,227	**$ 462,879**	$ 416,388	$ 398,108	$ 381,661	$ 365,558

(1) In the third quarter of 2021, certain amounts by sector were revised from those previously presented to align with our revised sector definition, or to better match the borrowers' risk profiles with the relevant sectors.
(2) Classification by country is primarily based on domicile of debtor or customer.
(3) Stage 3 allowance for credit losses (2017: individual allowance under IAS 39) is allocated to business and government loans, including acceptances, by category above.
(4) Stage 1 and 2 allowance (2017: collective allowance under IAS 39) are primarily allocated 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	2021	2020	2019	2018 [1]	2017
Balance at beginning of year under IAS 39	**n/a**	n/a	n/a	$ 1,737	$ 1,813
Impact of adopting IFRS 9 at November 1, 2017	**n/a**	n/a	n/a	63	n/a
Balance at beginning of year under IFRS 9	**$ 3,722**	$ 2,044	$ 1,741	1,800	n/a
Provision for credit losses	**158**	2,489	1,286	870	829
Write-offs					
Domestic [2]					
Residential mortgages	**26**	15	22	19	21
Personal and credit card	**663**	755	897	866	869
Other business and government	**126**	43	30	37	51
Foreign [2]					
Residential mortgages	**1**	1	7	35	17
Personal and credit card	**17**	7	14	14	19
Other business and government	**153**	114	160	79	80
Total write-offs	**986**	935	1,130	1,050	1,057
Recoveries					
Domestic [2]					
Personal and credit card	**185**	170	173	174	168
Other business and government	**5**	4	6	6	15
Foreign [2]					
Residential mortgages	**3**	6	2	–	–
Personal and credit card	**4**	7	6	4	5
Other business and government	**9**	5	7	6	5
Total recoveries	**206**	192	194	190	193
Net write-offs	**780**	743	936	860	864
Interest income on impaired loans	**(41)**	(45)	(40)	(23)	(26)
Foreign exchange and other	**(89)**	(23)	(7)	(46)	(15)
Balance at end of year	**$ 2,970**	$ 3,722	$ 2,044	$ 1,741	$ 1,737
Comprises:					
Loans	**$ 2,849**	$ 3,540	$ 1,915	$ 1,639	$ 1,618
Undrawn credit facilities and other off-balance sheet exposures	**121**	182	129	102	119
Ratio of net write-offs during the year to average loans outstanding during the year	**0.18 %**	0.19 %	0.25 %	0.24 %	0.26 %

(1) Effective November 1, 2017, all loans that are contractually 90 days in arrears are automatically classified as impaired and as stage 3 under IFRS 9, 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. The determination of impairment was generally the same under IAS 39, except (i) residential mortgages guaranteed or insured by a Canadian government (federal or provincial) or a Canadian government agency were not classified as impaired until payments were contractually 365 days in arrears, and (ii) residential mortgages guaranteed or insured by a private insurer, or loans that were fully secured and in the process of collection were not classified as impaired until payments were contractually 180 days in arrears.
(2) Classification as domestic or foreign is primarily based on domicile of debtor or customer.
n/a Not applicable.

Allowance for credit losses on impaired loans as a percentage of gross impaired loans

	Allowance for credit losses [1]					Allowance as a % of gross impaired loans				
$ millions, as at October 31	2021	2020	2019	2018 [2]	2017 [3]	2021	2020	2019	2018 [2]	2017 [3]
Domestic [4]										
Residential mortgages	**$ 54**	$ 69	$ 61	$ 54	$ 22	**12.7 %**	10.8 %	10.5 %	10.9 %	7.5 %
Personal loans	**64**	80	98	79	110	**61.5**	60.2	62.4	57.7	94.8
Business and government	**344**	406	217	56	43	**72.9**	62.6	45.8	41.5	41.7
Total domestic	**462**	555	376	189	175	**46.2**	39.1	31.0	24.6	34.2
Foreign [4]										
Residential mortgages	**104**	82	79	89	123	**48.8**	47.7	46.5	49.4	55.7
Personal loans	**42**	33	30	30	31	**72.4**	68.8	63.8	66.7	56.4
Business and government	**164**	244	159	174	148	**29.2**	34.4	36.4	35.8	28.3
Total foreign	**310**	359	268	293	302	**37.3**	38.6	41.0	41.2	37.8
Total allowance	**$ 772**	$ 914	$ 644	$ 482	$ 477	**42.1 %**	38.9 %	34.5 %	32.6 %	36.4 %

(1) Excludes allowance on undrawn credit facilities and other off-balance sheet exposures.
(2) Effective November 1, 2017, all loans that are contractually 90 days in arrears are automatically classified as impaired and as stage 3 under IFRS 9, 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. The determination of impairment was generally the same under IAS 39, except (i) residential mortgages guaranteed or insured by a Canadian government (federal or provincial) or a Canadian government agency were not classified as impaired until payments were contractually 365 days in arrears, and (ii) residential mortgages guaranteed or insured by a private insurer, or loans that were fully secured and in the process of collection were not classified as impaired until payments were contractually 180 days in arrears.
(3) Under IAS 39, comprises individual allowance, and collective allowance related to personal, scored small business, and mortgage impaired loans that are greater than 90 days delinquent.
(4) Classification as domestic or foreign is primarily based on domicile of debtor or customer.

Allowance on performing loans as a percentage of net loans and acceptances

$ millions, as at October 31	Allowance for credit losses (1)(2) 2021	2020	2019	2018 (3)	2017	Allowance as a % of net loans and acceptances 2021	2020	2019	2018 (3)	2017
Domestic										
Residential mortgages	**$ 65**	$ 89	$ 38	$ 29	$ 34	**– %**	– %	– %	– %	– %
Personal loans	**647**	697	415	362	345	**1.6**	1.7	1.0	0.9	0.9
Credit cards	**619**	659	413	415	383	**6.0**	6.2	3.4	3.4	3.2
Business and government	**245**	341	144	98	187	**0.3**	0.4	0.2	0.1	0.3
Total domestic	**1,576**	1,786	1,010	904	949	**0.4**	0.5	0.3	0.3	0.3
Foreign										
Residential mortgages	**57**	123	33	42	24	**1.2**	2.7	0.8	1.2	0.7
Personal loans	**15**	22	10	10	9	**1.3**	2.1	0.8	0.9	1.0
Credit cards	**6**	8	7	3	3	**4.1**	4.7	3.6	1.5	1.6
Business and government	**423**	687	211	198	156	**0.6**	1.0	0.4	0.4	0.3
Total foreign	**501**	840	261	253	192	**0.6**	1.2	0.4	0.5	0.4
Total stage 1 and 2 allowance (2017: total allowance)	**$ 2,077**	$ 2,626	$ 1,271	$ 1,157	$ 1,141	**0.4 %**	0.6 %	0.3 %	0.3 %	0.3 %

(1) Excludes allowance on undrawn credit facilities and other off-balance sheet exposures.
(2) Stage 1 and 2 allowance (2017: collective allowance under IAS 39) are primarily allocated based on the geographic location where they are recorded.
(3) Effective November 1, 2017, all loans that are contractually 90 days in arrears are automatically classified as impaired and as stage 3 under IFRS 9, 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. The determination of impairment was generally the same under IAS 39, except (i) residential mortgages guaranteed or insured by a Canadian government (federal or provincial) or a Canadian government agency were not classified as impaired until payments were contractually 365 days in arrears, and (ii) residential mortgages guaranteed or insured by a private insurer, or loans that were fully secured and in the process of collection were not classified as impaired until payments were contractually 180 days in arrears.

Net loans and acceptances by geographic location[1]

$ millions, as at October 31	2021	2020	2019	2018	2017
Canada					
Atlantic provinces	**$ 14,898**	$ 14,685	$ 14,578	$ 14,036	$ 14,194
Quebec	**35,092**	30,916	30,113	28,598	27,027
Ontario	**202,789**	176,915	169,073	165,592	157,987
Prairie provinces	**15,092**	14,710	14,680	13,947	13,746
Alberta, Northwest Territories and Nunavut	**46,816**	46,133	45,103	44,896	44,354
British Columbia and Yukon	**69,110**	62,104	60,829	60,407	59,479
Stage 1 and 2 allowance (2017: collective allowance) allocated to Canada (2)	**(1,576)** (3)	(1,786) (3)	(1,010) (3)	(904) (3)	(902) (4)
Total Canada	**382,221**	343,677	333,366	326,572	315,885
U.S.	**60,130**	54,127	48,290	40,206	35,446
Other countries	**20,528**	18,584	16,452	14,883	14,227
Total net loans and acceptances	**$ 462,879**	$ 416,388	$ 398,108	$ 381,661	$ 365,558

(1) Classification by country is primarily based on domicile of debtor or customer.
(2) Stage 1 and 2 allowance (2017: collective allowance under IAS 39) are primarily allocated based on the geographic location where they are recorded.
(3) Stage 3 allowance for credit losses (2017: individual allowance under IAS 39) is allocated to provinces above, including acceptances.
(4) Under IAS 39, relates to collective allowance, except for: (i) residential mortgages greater than 90 days delinquent; and (ii) personal loans and scored small business loans greater than 30 days delinquent.

Net impaired loans

$ millions, as at October 31	Canada [1]					U.S. [1]				
	2021	2020	2019	2018 [2]	2017	**2021**	2020	2019	2018 [2]	2017
Gross impaired loans										
Residential mortgages	**$ 425**	$ 637	$ 581	$ 497	$ 292	**$ 18**	$ 17	$ 16	$ 13	$ 9
Personal	**104**	133	157	137	116	**3**	5	5	2	2
Total gross impaired consumer loans	**529**	770	738	634	408	**21**	22	21	15	11
Non-residential mortgages	**2**	15	3	3	7	**–**	–	–	–	–
Financial institutions	**4**	8	2	5	–	**70**	34	37	65	8
Retail, wholesale and business services	**192**	383	283	62	38	**55**	98	89	44	52
Manufacturing – consumer and capital goods	**24**	5	6	7	6	**51**	65	35	14	1
Real estate and construction	**16**	39	38	39	33	**239**	169	46	90	137
Agriculture	**10**	27	53	8	9	**–**	–	–	–	–
Resource-based industries	**50**	124	46	1	2	**7**	135	69	54	114
Telecommunications, media and technology	**4**	1	2	2	3	**6**	6	2	2	2
Transportation	**6**	4	4	3	2	**–**	–	–	1	–
Utilities	**93**	38	32	–	–	**–**	34	–	–	–
Other	**71**	5	5	5	3	**8**	21	23	56	45
Total gross impaired – business and government loans	**472**	649	474	135	103	**436**	562	301	326	359
Total gross impaired loans	**1,001**	1,419	1,212	769	511	**457**	584	322	341	370
Other past due loans [3]	**64**	127	96	100	337	**–**	–	–	–	–
Total gross impaired and other past due loans	**$ 1,065**	$ 1,546	$ 1,308	$ 869	$ 848	**$ 457**	$ 584	$ 322	$ 341	$ 370
Allowance for credit losses										
Residential mortgages	**$ 54**	$ 69	$ 61	$ 54	$ 22	**$ 5**	$ 3	$ 3	$ 2	$ –
Personal	**64**	80	98	79	110	**2**	2	1	–	–
Total allowance – consumer loans	**118**	149	159	133	132	**7**	5	4	2	–
Non-residential mortgages	**–**	–	–	–	2	**–**	–	–	–	–
Financial institutions	**1**	4	1	–	–	**15**	8	1	14	–
Retail, wholesale and business services	**177**	289	151	26	18	**19**	24	28	27	16
Manufacturing – consumer and capital goods	**9**	3	4	4	5	**3**	29	–	1	–
Real estate and construction	**8**	11	16	15	9	**62**	58	28	41	41
Agriculture	**7**	22	24	4	–	**–**	–	–	–	–
Resource-based industries	**33**	56	11	1	2	**1**	48	34	5	8
Telecommunications, media and technology	**3**	–	–	1	2	**1**	2	–	–	–
Transportation	**3**	2	2	2	2	**–**	–	–	–	–
Utilities	**79**	17	5	–	–	**–**	5	–	–	–
Other	**24**	2	3	3	3	**–**	1	10	–	–
Total allowance – business and government loans	**344**	406	217	56	43	**101**	175	101	88	65
Total allowance	**$ 462**	$ 555	$ 376	$ 189	$ 175	**$ 108**	$ 180	$ 105	$ 90	$ 65
Net impaired loans										
Residential mortgages	**$ 371**	$ 568	$ 520	$ 443	$ 270	**$ 13**	$ 14	$ 13	$ 11	$ 9
Personal	**40**	53	59	58	6	**1**	3	4	2	2
Total net impaired consumer loans	**411**	621	579	501	276	**14**	17	17	13	11
Non-residential mortgages	**2**	15	3	3	5	**–**	–	–	–	–
Financial institutions	**3**	4	1	5	–	**55**	26	36	51	8
Retail, wholesale and business services	**15**	94	132	36	20	**36**	74	61	17	36
Manufacturing – consumer and capital goods	**15**	2	2	3	1	**48**	36	35	13	1
Real estate and construction	**8**	28	22	24	24	**177**	111	18	49	96
Agriculture	**3**	5	29	4	9	**–**	–	–	–	–
Resource-based industries	**17**	68	35	–	–	**6**	87	35	49	106
Telecommunications, media and technology	**1**	1	2	1	1	**5**	4	2	2	2
Transportation	**3**	2	2	1	–	**–**	–	–	1	–
Utilities	**14**	21	27	–	–	**–**	29	–	–	–
Other	**47**	3	2	2	–	**8**	20	13	56	45
Total net impaired – business and government loans	**128**	243	257	79	60	**335**	387	200	238	294
Total net impaired loans	**$ 539**	$ 864	$ 836	$ 580	$ 336	**$ 349**	$ 404	$ 217	$ 251	$ 305

(1) Classification by country is primarily based on domicile of debtor or customer.
(2) Effective November 1, 2017, all loans that are contractually 90 days in arrears are automatically classified as impaired and as stage 3 under IFRS 9, 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. The determination of impairment was generally the same under IAS 39, except (i) residential mortgages guaranteed or insured by a Canadian government (federal or provincial) or a Canadian government agency were not classified as impaired until payments were contractually 365 days in arrears, and (ii) residential mortgages guaranteed or insured by a private insurer, or loans that were fully secured and in the process of collection were not classified as impaired until payments were contractually 180 days in arrears.
(3) Represents loans where repayment of principal or payment of interest is contractually in arrears between 90 and 180 days.

Net impaired loans (continued)

$ millions, as at October 31	Other (1) 2021	2020	2019	2018 (2)	2017	Total 2021	2020	2019	2018 (2)	2017
Gross impaired loans										
Residential mortgages	**$ 195**	$ 155	$ 154	$ 167	$ 212	**$ 638**	$ 809	$ 751	$ 677	$ 513
Personal	**55**	43	42	43	53	**162**	181	204	182	171
Total gross impaired consumer loans	**250**	198	196	210	265	**800**	990	955	859	684
Non-residential mortgages	**11**	11	17	15	17	**13**	26	20	18	24
Financial institutions	**1**	1	–	1	2	**75**	43	39	71	10
Retail, wholesale and business services	**53**	49	43	52	57	**300**	530	415	158	147
Manufacturing – consumer and capital goods	**16**	3	4	4	5	**91**	73	45	25	12
Real estate and construction	**42**	55	59	72	78	**297**	263	143	201	248
Agriculture	**–**	–	–	1	1	**10**	27	53	9	10
Resource-based industries	**–**	27	–	–	–	**57**	286	115	55	116
Telecommunications, media and technology	**–**	–	–	–	–	**10**	7	4	4	5
Transportation	**2**	2	2	3	4	**8**	6	6	7	6
Utilities	**–**	–	–	–	–	**93**	72	32	–	–
Other	**–**	–	11	12	–	**79**	26	39	73	48
Total gross impaired – business and government loans	**125**	148	136	160	164	**1,033**	1,359	911	621	626
Total gross impaired loans	**375**	346	332	370	429	**1,833**	2,349	1,866	1,480	1,310
Other past due loans (3)	**2**	5	3	3	3	**66**	132	99	103	340
Total gross impaired and other past due loans	**$ 377**	$ 351	$ 335	$ 373	$ 432	**$ 1,899**	$ 2,481	$ 1,965	$1,583	$1,650
Allowance for credit losses										
Residential mortgages	**$ 99**	$ 79	$ 76	$ 87	$ 123	**$ 158**	$ 151	$ 140	$ 143	$ 145
Personal	**40**	31	29	30	31	**106**	113	128	109	141
Total allowance – consumer loans	**139**	110	105	117	154	**264**	264	268	252	286
Non-residential mortgages	**2**	2	5	7	9	**2**	2	5	7	11
Financial institutions	**1**	1	–	1	–	**17**	13	2	15	–
Retail, wholesale and business services	**33**	21	18	28	29	**229**	334	197	81	63
Manufacturing – consumer and capital goods	**4**	2	2	3	3	**16**	34	6	8	8
Real estate and construction	**22**	29	30	39	39	**92**	98	74	95	89
Agriculture	**–**	–	–	1	1	**7**	22	24	5	1
Resource-based industries	**–**	13	–	–	–	**34**	117	45	6	10
Telecommunications, media and technology	**–**	–	–	–	–	**4**	2	–	1	2
Transportation	**1**	1	1	2	2	**4**	3	3	4	4
Utilities	**–**	–	–	–	–	**79**	22	5	–	–
Other	**–**	–	2	5	–	**24**	3	15	8	3
Total allowance – business and government loans	**63**	69	58	86	83	**508**	650	376	230	191
Total allowance	**$ 202**	$ 179	$ 163	$ 203	$ 237	**$ 772**	$ 914	$ 644	$ 482	$ 477
Net impaired loans										
Residential mortgages	**$ 96**	$ 76	$ 78	$ 80	$ 89	**$ 480**	$ 658	$ 611	$ 534	$ 368
Personal	**15**	12	13	13	22	**56**	68	76	73	30
Total net impaired consumer loans	**111**	88	91	93	111	**536**	726	687	607	398
Non-residential mortgages	**9**	9	12	8	8	**11**	24	15	11	13
Financial institutions	**–**	–	–	–	2	**58**	30	37	56	10
Retail, wholesale and business services	**20**	28	25	24	28	**71**	196	218	77	84
Manufacturing – consumer and capital goods	**12**	1	2	1	2	**75**	39	39	17	4
Real estate and construction	**20**	26	29	33	39	**205**	165	69	106	159
Agriculture	**–**	–	–	–	–	**3**	5	29	4	9
Resource-based industries	**–**	14	–	–	–	**23**	169	70	49	106
Telecommunications, media and technology	**–**	–	–	–	–	**6**	5	4	3	3
Transportation	**1**	1	1	1	2	**4**	3	3	3	2
Utilities	**–**	–	–	–	–	**14**	50	27	–	–
Other	**–**	–	9	7	–	**55**	23	24	65	45
Total net impaired – business and government loans	**62**	79	78	74	81	**525**	709	535	391	435
Total net impaired loans	**$ 173**	$ 167	$ 169	$ 167	$ 192	**$ 1,061**	$ 1,435	$ 1,222	$ 998	$ 833

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(3) 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) 2021	2020	2019	Interest 2021	2020	2019	Rate 2021	2020	2019
Deposits in domestic bank offices (2)									
Payable on demand									
Personal	**$ 12,820**	$ 11,945	$ 9,939	**$ 5**	$ 14	$ 17	**0.04 %**	0.12 %	0.17 %
Business and government	**67,233**	50,683	43,539	**164**	305	585	**0.24**	0.60	1.34
Bank	**8,881**	5,761	4,517	**–**	1	3	**–**	0.02	0.07
Payable after notice									
Personal	**130,636**	109,856	99,859	**194**	460	855	**0.15**	0.42	0.86
Business and government	**64,661**	56,758	44,691	**390**	659	927	**0.60**	1.16	2.07
Bank	**351**	276	256	**2**	2	4	**0.57**	0.72	1.56
Payable on a fixed date									
Personal	**50,479**	55,164	51,522	**552**	969	1,040	**1.09**	1.76	2.02
Business and government	**105,251**	102,953	85,978	**684**	1,358	2,063	**0.65**	1.32	2.40
Bank	**2,167**	2,078	1,161	**2**	20	23	**0.09**	0.96	1.98
Secured borrowings	**37,893**	39,076	39,111	**378**	668	1,037	**1.00**	1.71	2.65
Total domestic	**480,372**	434,550	380,573	**2,371**	4,456	6,554	**0.49**	1.03	1.72
Deposits in foreign bank offices									
Payable on demand									
Personal	**2,213**	1,971	1,687	**1**	2	2	**0.05**	0.10	0.12
Business and government	**24,156**	20,454	15,687	**8**	32	70	**0.03**	0.16	0.45
Bank	**37**	31	13	**1**	1	–	**2.70**	3.23	–
Payable after notice									
Personal	**8,305**	8,119	6,909	**33**	66	82	**0.40**	0.81	1.19
Business and government	**16,623**	12,825	9,544	**26**	83	185	**0.16**	0.65	1.94
Payable on a fixed date									
Personal	**1,941**	2,832	3,164	**11**	36	58	**0.57**	1.27	1.83
Business and government	**55,092**	48,680	51,082	**166**	546	1,271	**0.30**	1.12	2.49
Bank	**7,632**	7,850	8,245	**18**	89	196	**0.24**	1.13	2.38
Secured borrowings	**1,883**	1,322	226	**16**	15	4	**0.85**	1.13	1.77
Total foreign	**117,882**	104,084	96,557	**280**	870	1,868	**0.24**	0.84	1.93
Total deposits	**$ 598,254**	$ 538,634	$ 477,130	**$ 2,651**	$ 5,326	$ 8,422	**0.44 %**	0.99 %	1.77 %

(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 $51.9 billion (2020: $42.2 billion; 2019: $29.3 billion).

Short-term borrowings

$ millions, as at or for the year ended October 31	2021	2020	2019
Amounts outstanding at end of year			
Obligations related to securities sold short	**$ 22,790**	$ 15,963	$ 15,635
Obligations related to securities lent or sold under repurchase agreements	**74,343**	73,477	53,623
Total short-term borrowings	**$ 97,133**	$ 89,440	$ 69,258
Obligations related to securities sold short			
Average balance (1)	**$ 20,068**	$ 17,841	$ 16,501
Maximum month-end balance	**22,790**	22,467	18,448
Average interest rate	**1.18 %**	1.42 %	1.76 %
Obligations related to securities lent or sold under repurchase agreements			
Average balance (1)	**$ 76,491**	$ 69,255	$ 51,408
Maximum month-end balance	**83,664**	81,349	57,346
Average interest rate	**0.27 %**	0.95 %	2.33 %

(1) Average balances are calculated as a weighted average of daily closing balances.

Fees paid to the shareholders' auditor

$ millions, for the year ended October 31	2021	2020	2019
Audit fees (1)	**$ 23.1**	$ 24.0	$ 22.3
Audit-related fees (2)	**2.3**	2.2	1.7
Tax fees (3)	**1.3**	1.4	1.9
All other fees (4)	**–**	–	0.1
Total	**$ 26.7**	$ 27.6	$ 26.0

(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 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, 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. Expected credit loss 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.

Under IAS 39, allowance for credit losses generally represented an allowance set up in the financial statements sufficient to absorb specifically identified and inherent credit-related losses in CIBC's portfolio of loans, acceptances, letters of credit and guarantees. This allowance can be "collective", assessed by reviewing a portfolio of loans with similar characteristics, or "individual", assessed by reviewing the characteristics of an individual exposure.

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.

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 the Office of the Superintendent of Financial Institutions (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 counterparty credit risk (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 over-the-counter (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). While OSFI currently permits exposures arising from central bank reserves and sovereign-issued securities that qualify as High Quality Liquid Assets (HQLA) to be excluded from the exposure measure for leverage ratio purposes, the exclusion will no longer be available for sovereign-issued securities after December 31, 2021.

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 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 expected credit loss (ECL) purposes.

Market risk
The risk of economic 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 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, accumulated other comprehensive income (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, 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 adjustments and limitations until fiscal year 2022. AT1 capital primarily includes NVCC preferred shares, Limited Recourse Capital Notes, qualifying instruments issued by a consolidated subsidiary to third parties, and non-qualifying innovative Tier 1 notes which are subject to phase-out rules for capital instruments. Tier 1 capital is comprised of CET1 plus AT1. Tier 2 capital includes NVCC subordinated indebtedness, non-qualifying subordinated indebtedness subject to phase-out rules for capital instruments, 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; non-qualifying capital instruments were excluded from regulatory capital at a rate of 10% per annum commencing January 1, 2013 through to November 1, 2021.

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 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 structured entities (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 due to the failure of organic growth initiatives or failure to respond appropriately to changes in the business environment.

Stressed Value-at-Risk (VaR)
A value-at-risk 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 primarily consists of the risk 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 that have a residual maturity greater than one year. Bail-in eligible liabilities include long-term (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 NVCC. Consumer deposits, secured liabilities (for example, covered bonds), eligible financial contracts (for example derivatives) and certain structured notes are excluded from the bail-in power.

Total loss absorbing capacity ratio
Defined as TLAC measure divided by risk-weighted assets determined in accordance with guidelines issued by OSFI, which are based on BCBS standards.

Total loss absorbing capacity leverage ratio
Defined as TLAC measure divided by leverage ratio exposure measure determined in accordance with guidelines issued by OSFI, which are based on BCBS standards.

Transitional arrangements for capital treatment of expected loss provisioning
On March 27, 2020, OSFI introduced transitional arrangements for expected credit loss 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 internal ratings-based (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.